bike facilities profile 2001-2008

NYC Dept of City Planning | Transportation Division

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INTRODUCTION

The Transportation Division of the New York City Department of City Planning (NYCDCP) has been conducting bicycle ridership counts since 1999. Data related to the usage of the city's bicycle lanes and greenway paths are collected each year during the fall season. This information assists planners in addressing issues related to cycling in New York City and supports ongoing and future bicycle planning studies.

Bicycle ridership counts are broken up into two categories: on-street facilities and off-street facilities. Bicycle infrastructure is categorized into three classes: Class I (bicycle paths), Class II (bicycle lanes), and Class III (signed bicycle routes). This study is only concerned with the first two. Bicycle paths (Class I) consist of off-street separated facilities, either in parks, along the right-of-way or the waterfront. Bicycle lanes (Class II) are on-street striped routes and sometimes have a buffer zone between the bike lane and the vehicular travel lane. Bicycle routes (Class III) are on-street signed routes that remind drivers to share the road but do not have a dedicated space for cyclists on the road.

Using data collected from 2001 to 2008, in the borough of Manhattan this study will profile and analyze several on-street bicycle lanes and greenway paths. Notable trends and patterns in usage such as helmet use, user gender, and lane use are highlighted to construct a portrait of on- and off-street bicycle facilities. These profiles can be used as descriptive guides to bicycle riders and planners by offering valuable information about how the bicycle lanes and greenway paths are being used.

MAJOR FINDINGS

The data presented in this report highlights the interesting trends discovered when examining the data that has been compiled over the last several years. The appendix at the end of the document provides tables of the initial data collected by staff.

This report is divided into sections which discuss each individual bicycle lane or bicycle path surveyed in Manhattan. The most interesting characteristics of the bicycle facility are highlighted in each section. However, some general trends may be found among the bicycle routes and users when looking at the data collectively. Based on the data analyzed for Manhattan collectively the following trends and patterns were observed:

On-Street Bicycle Lanes

- The volume of cyclists increased 30 percent between 2001 and 2008.
- The volumes of cyclists south of 60th Street averaged two and a half times higher than the volumes of cyclists north of 60th Street.
- Fifty-four percent of cyclists were observed using the bicycle lanes when they were available.
- Cyclists were more likely to use the bicycle lane on streets with heavy vehicular traffic, such as Sixth Avenue.
- Cyclists south of 60th Street were less likely to use the bicycle lanes on streets with many obstacles in the bicycle lane, such as delivery trucks double parked in the lanes on commercial thoroughfares.
- Helmet usage increased from 22 percent in 2001 to 40 percent in 2008.
- The percentage of women using helmets is double the percentage of men with helmets.
- Over the study-period, there were nearly six times as many males using the bicycle facilities as females.
- The volume of females is increasing more rapidly than the volume of males and the male to female ratio has dropped every year since 2003.

Off-Street Bicycle Paths

- The volume of users on the greenways has increased 26 percent between 2002 and 2008.
- The volume of users on the greenways is higher on weekends than during the week, implying that it is used to a great extent for recreation and not commuting.
- More than 50 percent of cyclists on the greenways were observed using helmets.
- Cyclists riding on the weekend were more likely to be observed using helmets than cyclists riding during the week.
- Almost 65 percent of the users are male.
- The Route 9A Greenway and the East River Greenway have different use patterns. Fifty-eight percent of Route 9A users were cyclists, while only 22 percent of the East River Greenway users were cyclists.

Cyclists may use the Route 9A Greenway to reach other cycling destinations outside of New York via the George Washington Bridge, such as Fort Lee in New Jersey and the East Coast Greenway Route. The East River Greenway does not link to routes outside of the city. However, it can take cyclists via the East River Bridges to the boroughs of Brooklyn and Queens.

Comparison of On-Street Bicycle Lanes and Off-Street Bicycle Paths

- Cyclists on the greenway paths are more likely to be observed using helmets than cyclists using the on-street bicycle lanes.
- As a percentage of total users, females are twice more likely to use the greenway than to use the on-street bicycle lanes.
- The male to female ratio averages about 6 males per female on the on-street bicycle lanes, while averaging 1.7 males per female on the off-street bicycle paths.

DATA COLLECTION

The data to be analyzed in this report was generally collected for eight consecutive years: 2001 to 2008. Typically, the Transportation Division conducted annual manual counts of bicycle ridership and usage in the fall season in mid-September and the beginning of October. Due to limited resources, Manhattan has been the focus of these counts over the years.

On-Street Bicycle Lanes

Type of Data

In an effort to survey cyclists' behavior along the on-street bicycle lanes, the following information was recorded with each bicycle count:

Where and in which direction the cyclist was traveling:

- In the bicycle lane
- In the travel lane adjacent to the bicycle lane
- In any of the other travel lanes
- Counterflow in the bicycle lane
- Counterflow out of the bicycle lane
- On the sidewalk

Moreover, it was noted whether the cyclist was:

- Male or female
- Wearing a helmet or not
- A child under 16 years of age

With the growing popularity of rollerblading and scooter/skateboard riding on the bicycle facilities, information about these types of users was also gathered. It was noted if the user was:

- In the bicycle lane
- Out of the bicycle lane
- Counterflow on the roadway

The surveyors also included a description of observed conditions that affected the use of the on-street bicycle lane. For example, vehicles double parked in the bicycle lane, or trucks blocking the lane while loading or unloading goods and merchandise.

Count Period

The on-street bicycle lane counts were conducted for each location during a weekday over a period of twelve consecutive hours from 7:00 am to 7:00 pm.

Off-Street Bicycle Paths

Type of Data

Those who make use of the off-street bicycle routes or greenway paths were also observed. They included:

- Cyclists
- Rollerbladers
- Joggers
- Walkers

The data collection also included a record of the cyclist's gender and use of a helmet. In each category, the user's direction of travel on the greenway path was noted and any conditions that could have an impact on the use of the path were also documented.

Count Period

For each location along the off-street bicycle paths weekday counts were conducted during the three peak periods of the day: 7:30-9:30am, 12:00-2:00pm, and 4:30-6:30pm. Weekend counts were also conducted either on a Saturday or Sunday for 6 consecutive hours from 10:00am to 4:00pm. The number of count locations selected along each greenway depended on its length.

The Department of Transportation (DOT) also conducts annual bicycle counts in New York City using a methodology that is significantly different from DCP. While DOT's "screenline" counts are taken at major entry points to Manhattan's Central Business District (along the 50th Street corridor, at the East River bridges and Staten Island Ferry Terminal), DCP conducts counts for a select group of bike facilities in Manhattan (including greenways and on-street bicycle lanes). Furthermore, DOT historically performed 12-hour counts during the summer (with 18-hour triennial counts beginning in 2007), whereas DCP conducts counts in the fall for 12 consecutive hours for on-street bicycle lanes and during the peak periods of the day for off-street paths (including six-hour counts on weekends). Despite these differences in methodology, both agencies report a significant increase in cycling since 2001.

STUDY AREA


NEW JERSEY
BRONX
MANHATTAN
QUEENS
BROOKLYN
FORT WASHINGTON AVENUE
ADAM CLAYTON POWELL BLVD
CENTRAL PARK WEST
FIRST AVENUE
ROUTE 9A GREENWAY
BROADWAY
EAST RIVER GREENWAY
SIXTH AVENUE
FIFTH AVENUE
HUDSON STREET
LAFAYETTE STREET
SECOND AVENUE

Lafayette Street Bicycle Lane
South of Houston Street

ON-STREET BICYCLE LANES

DATA ANALYSIS

The on-street bicycle lanes surveyed represent a portion of the proposed 909-mile citywide bicycle network recommended in the New York City Bicycle Master Plan, released jointly in 1997 by NYCDCP and New York City Department of Transportation (NYCDOT). All of the lanes studied are Class II bicycle lanes, defined by on-street striping.

Ten locations in total were selected for surveying at the approximate midpoint of each bicycle lane of the following streets:

- Hudson Street
- Lafayette Street
- Second Avenue
- Broadway
- First Avenue
- Fifth Avenue
- Sixth Avenue
- Central Park West
- Fort Washington Avenue
- Adam Clayton Powell Boulevard

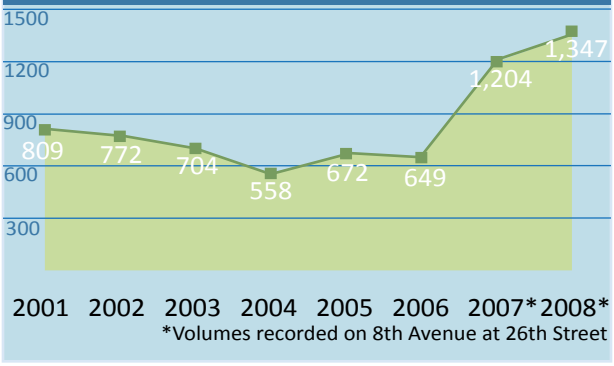
This analysis will focus on ridership data collected from the year 2001 to 2008.

HUDSON STREET/ EIGHTH AVENUE

The Hudson Street/Eighth Avenue bicycle lane starts at Dominick Street and ends at West 57th Street. The Hudson Street lane travels northbound through the West Village area, and the Eighth Avenue section connects the Village to Midtown. The Eighth Avenue section of this bicycle facility was striped in 2007. This facility is approximately two miles long with a five-foot wide bicycle lane and a buffer. It is one of three north-south dedicated bicycle lanes in the West Village. Nearby Greenwich Street and Washington Street both had striped Class II bicycle lanes installed in April 2008.

The daily bicycle volumes on Hudson Street at Christopher Street are available for the study years 2001-2006 (Figure 1). On Hudson Street, the bicycle volumes decreased every year from 2001 to 2004, dropping from 809 cyclists to 558 cyclists. Then slightly increasing above 600 in 2005 and in 2006. The daily volumes in 2007 and 2008 were recorded on Eighth Avenue at 26th Street to capture cyclists

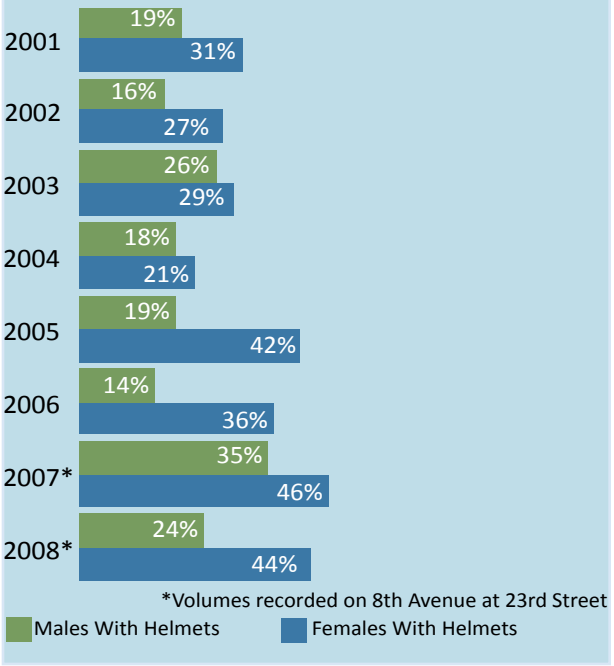
FIGURE 1: CYCLIST VOLUME



using the new lane extension. The volumes at this location were significantly higher and reached 1,204 in 2007 and 1,347 in 2008.

Over the study period, an average of 52 percent of cyclists was observed riding in the bicycle lane with the flow of traffic. This trend has been steady throughout the years, ranging from 46 percent in 2007 to 55 percent in 2005. The percentage of cyclists riding counter-flow in the bicycle lane ranges

FIGURE 2: HELMET USE BY GENDER



from 11 to 18 percent of cyclists over the study period. The buffer adjacent to the bicycle lane of Hudson Street is a convenient and safe space that is often used by cyclists going in the opposite direction. The percentage of cyclists traveling in another lane ranged from 17 to 27.

From 2001 to 2008, the number of male cyclists traveling on Hudson Street/ Eighth Avenue represented approximately 6 times the number of female cyclists, comparable to the city-wide trend of 6.0 male cyclists per 1 female cyclist.

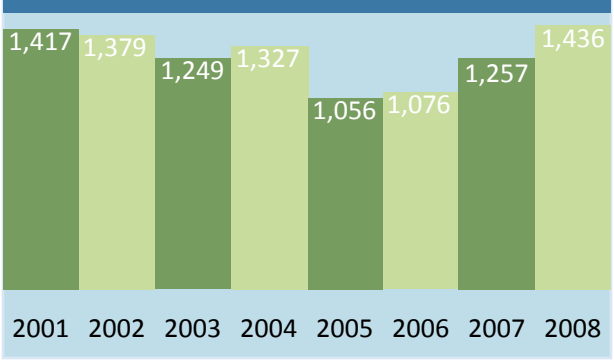
Looking at helmet usage by gender, females on Hudson Street were at least one-third more likely to be wearing helmets as males (see Figure 2). From 2001 to 2008, the average percentage of female cyclists using helmets was 36 percent, slightly lower than the survey-wide average of 40 percent. During the same period, the average percentage of male cyclists using helmets was 23 percent, in line with the study-wide average of 22 percent.

Hudson Street/ Eighth Avenue shows the highest number of rollerbladers, skateboarders and scooters to total users compared to the other on-street bicycle routes. The number and percentage of rollerbladers, skateboarders and scooters peaked in 2003 at nine percent, and has since leveled off to four to six percent of total street users.

Hudson Street Bicycle Lane
Near Christopher Street

LAFAYETTE STREET

FIGURE 3: CYCLIST VOLUME



The Lafayette Street bicycle lane runs from Chambers Street to East 14th Street. Like the general direction of traffic on Lafayette Street, it runs north from Spring Street to East 14th Street, and south from Spring Street to Chambers Street. This count focuses on the northbound section of the Lafayette Street lane, which runs for one mile. This lane is five feet wide, with an additional three-foot wide buffer, and is located on the west side of the street. This route provides access to Union Square and the East Village.

The daily volume of cyclists on Lafayette Street at Astor Place is the second highest of the study, only surpassed by the volumes recorded on Sixth Avenue (see Figure 3 and Appendix A.1 pg. 57).

The intersection of Lafayette Street and Astor Place has data about on-street usage for the years 2001 through 2008. Overall, an average of 58 percent of cyclists ride with the flow of traffic in the bicycle lane, which is higher than the study-wide average of 54 percent. The percentage of cyclists riding within the striped bicycle lane has increased throughout the study period. From 2006 to 2008, more than 60 percent of cyclists were in the bicycle lane of Lafayette Street.

Though the Lafayette Street lane also features a buffer zone, only seven to eleven percent of cyclists were observed riding counter-flow in the Lafayette Street bicycle lane.

Sixteen to 21 percent of cyclists were observed riding in another lane of traffic, keeping in line with the New York City average of 23 percent.

A sample survey of the different types of cyclists riding on Lafayette Street/Fourth Avenue on a typical weekday was completed to observe the types of cyclists using the bicycle lane (Table 1). In October 2004, cyclists' classification counts were completed for two periods of peak bicycle volumes on Lafayette Street/Fourth Avenue. The two periods of peak volume that were surveyed were from 12:00pm to 2:00pm and from 4:30pm to 6:30pm.

In general, cyclists were classified based on their clothing and any items being carried or pulled by his or her bicycle. Cyclists wearing clothes generally worn to work, such as a uniform, a suit, or casual to semi-formal attire, or carrying a briefcase or backpack were classified as commuters. Cyclists who appeared to be students traveling to or from school were also marked as commuters. Neigh-

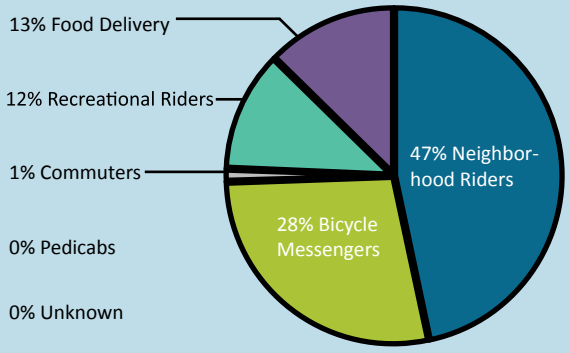
TABLE 1: CYCLIST CLASSIFICATION	Male		Female		Helmet		In Bicycle Lane		Child Under 16 Years Old		Total	
	12:00 - 2:00	4:30-6:30	12:00 - 2:00	4:30-6:30	12:00 - 2:00	4:30-6:30	12:00 - 2:00	4:30-6:30	12:00 - 2:00	4:30-6:30	12:00 - 2:00	4:30-6:30
Commuter	0	3	1	1	0	0	1	2	0	0	1	4
Neighborhood Rider	112	32	29	15	19	2	102	19	0	0	141	47
Recreational Rider	6	34	0	7	0	7	3	16	0	0	6	41
Messenger	78	30	0	4	12	4	51	13	0	0	78	34
Food Delivery Cyclist	44	7	0	0	5	0	25	3	0	0	44	7
Pedicab	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	240	106	30	27	36	13	181	53	0	0	270	133

borhood riders were identified by casual attire and evidence of running an errand, such as a grocery bag, small household items being pulled by a cart, or stopping to enter a retail establishment. Cyclists wearing bicycling specific attire who appeared to be riding for fun—alone, with a group or with children—were classified as recreational riders. Messengers were identified as cyclists who appeared to be experienced riders, comfortable in heavy traffic, who were carrying large bags with items such as envelopes, documents and rolled up drawings. Cyclists who carried food while riding and/or wore the emblem of a food establishment were classified as food delivery cyclists. Pedicab drivers were categorized by riding a bicycle with an attached carriage to accommodate passengers. All cyclists that could not be categorized were marked as "unknown." According to the data collected, nearly half of the cyclists on Lafayette Street are neighborhood riders, another 40 percent are messengers or food delivery cyclists, and the remaining 13 percent is shared between recreational riders and very few commuters (see Figure 4).

The Lafayette Street bicycle lane has some of the highest daily volumes of female cyclists observed, and a lower average ratio of male cyclists to female cyclists. Over the course of the study period, the ratio of males to females was 4.7 male cyclists to 1 female cyclist, compared with the study-wide average of 6.0 male cyclists to 1 female cyclist.

Female cyclists on Lafayette Street were one-third more likely to be using a helmet than male cyclists. Over a eight year period, from 2001 to 2008, female cyclists used helmets 33 percent of the time, while male cyclists only used them 22 percent of the time. In 2007 and 2008, however, helmet usage for both genders increased dramatically. The female helmet use average, from 2001 to 2006, is 29 percent, while from 2007 to 2008, it is 45 percent. The male average from 2001 to 2006 is 19 percent, while from 2007 to 2008 it is 32 percent.

FIGURE 4: COMBINED CYCLIST CLASSIFICATION

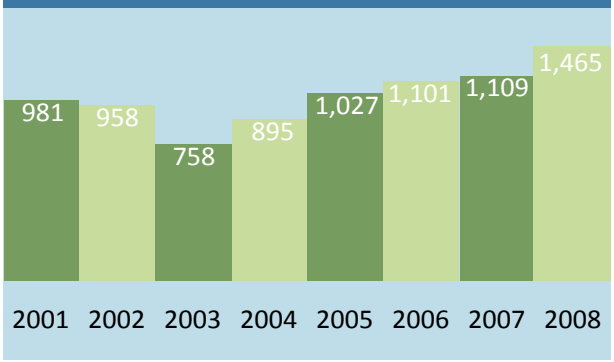


SECOND AVENUE

The Second Avenue bicycle lane travels for 0.75 miles between Houston Street and East 14th Street and is five feet wide with a three-foot wide buffer. Traffic on this street travels in the southbound direction.

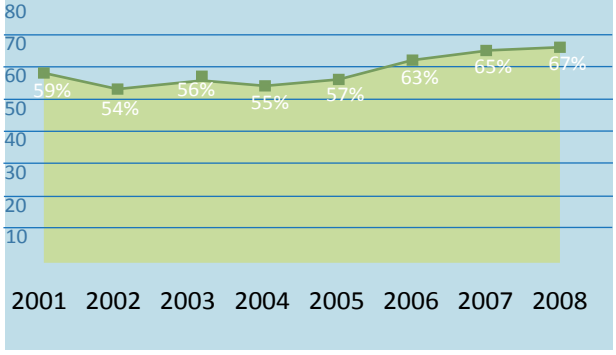
In the eight year study period from 2001 to 2008, the average daily volume of cyclists on Second Avenue at Seventh Street was 1,037. From 2001 to 2003, the number of cyclists decreased. The numbers from 2004 to 2008, on the other hand, has increased steadily each year, with a jump of 356 cyclists between 2007 and 2008 (Figure 5).

FIGURE 5: CYCLIST VOLUME



The bicycle lane usage has increased annually, with one exception between 2001 and 2002, when it decreased by five percent. Cyclists riding in the bicycle lane of Second Avenue represented 54 percent of the cyclists in 2002 and 67 percent of the cyclists in 2008—a 13 percent jump in six years (Figure 6).

FIGURE 6: CYCLISTS IN THE BICYCLE LANE

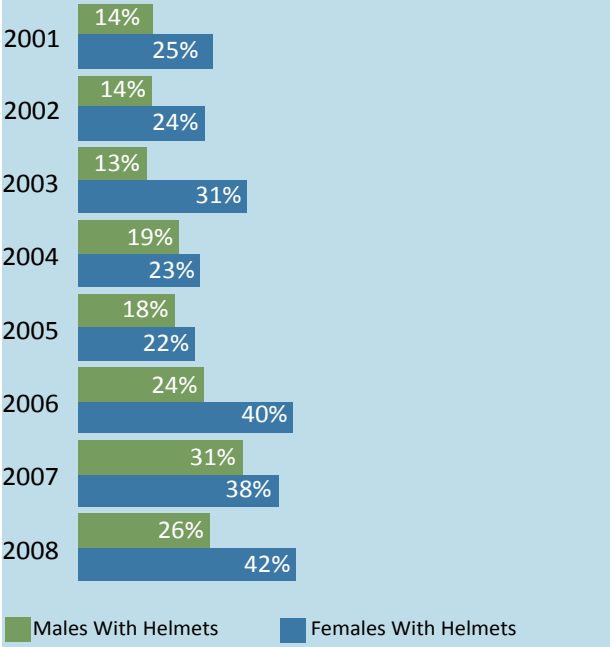


Seven to 13 percent of cyclists were observed riding counter-flow in the bicycle lane. This behavior is often observed along bicycle facilities with a buffer, which provides a convenient space for many cyclists who use it when traveling in the opposite direction of traffic.

The percentage of cyclists traveling in other lanes ranged from 25 percent in 2002 to 17 percent in 2008. While the percentage increased between 2001 and 2002, it has dropped gradually every year since and is now down eight percentage points from the 2002 high.

The number of cyclists who were observed riding on the sidewalk has decreased dramatically over the study period. In 2001 eight percent of cyclists used the sidewalk. In 2004, that number decreased to four percent, and by 2008 it was two percent.

FIGURE 7: HELMET USE BY GENDER

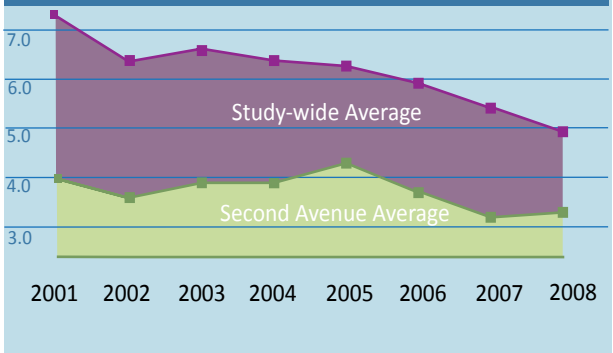


The percentage of female cyclists wearing helmets was lowest overall on Second Avenue, averaging just 32 percent compared to the study-wide average of 40 percent. Nevertheless, the percentage of females using helmets increased dramatically—18 percent—from 22 percent to 40 percent between 2005 and 2006. It has hovered around 40 percent each subsequent year. The percentage of males using helmets, on the other hand, is consistent with the study-wide trend. On average, 20 percent of males wore helmets at this location. The study-wide average is 22 percent (see Figure 7).

The ratio of male to female cyclists was lowest at this location, with 3.7 male cyclists to every female cyclist (Figure 8).

Second Avenue Bicycle Lane
At 7th Street

FIGURE 8: NUMBER OF MALES PER FEMALE



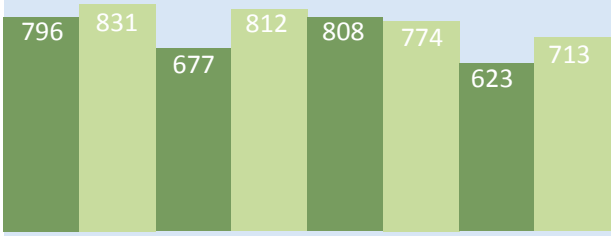
BROADWAY

Broadway features a bicycle lane from 17th Street to 59th Street that travels in the southbound direction through midtown Manhattan. It has a width of five feet and a length of 2.6 miles. It is the second longest on-street bicycle lane in Manhattan.

Counts were done on Broadway at 28th Street and at 48th Street from 2001 to 2006. Daily volume counts were conducted for the years 2007 and 2008 only on Broadway at 48th Street. The daily volumes are about the same at both locations and did not change much over the years (Figure 9). They range from 665 to 885 cyclists at 28th Street and from 622 to 852 cyclists at 48th Street.

The volumes recorded at these two locations, however, are much lower than the volumes collected at two other bicycle facilities which also provide a link to midtown Manhattan (Sixth Avenue bicycle lane: daily volumes are over 1,500 and Fifth Avenue bicycle lane: daily volumes are close to 1,000 cyclists).

FIGURE 9: CYCLIST VOLUME



Cyclist volume averaged between 28th Street and 48th Street count locations for years 2001 - 2006.

On average, less than half of the cyclists—38 percent—on Broadway were observed riding in the bicycle lane which is lower than the percentage of cyclists observed riding in the bicycle lane at the other bicycle facilities (Figure 10). A contributing factor is the illegal use of the bicycle lane by vehicles, taxis, delivery vans and trucks. Theses vehicles often double park or stand illegally in the bicycle lane blocking its access to cyclists who are forced to ride in the other travel lanes. A selection of field observations presented in Table 2 supports this trend.

Ten percent more cyclists were observed riding in the lane adjacent to the bicycle lane on Broadway compared to the study-wide average of eight percent.

FIGURE 10: CYCLISTS IN THE BICYCLE LANE

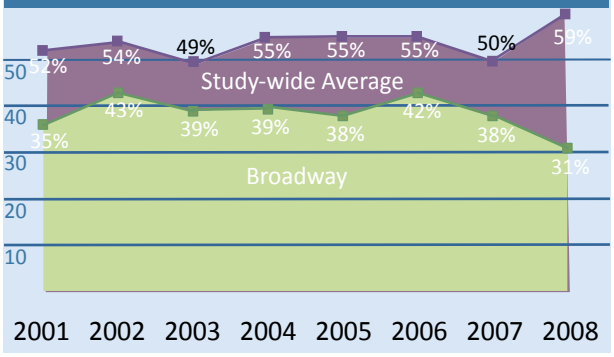


TABLE 2: FIELD OBSERVATIONS: BICYCLE LANE OBSTRUCTIONS ON BROADWAY			
Year	**Time**	**Location**	**Observation**
2001	1:30 – 1:45pm	28th Street	Taxis/trucks in bicycle lane
2001	Various times	48th Street	Car in bicycle lane
2002	2:15 – 2:30pm	28th Street	A truck (>3 axle) parks in the bicycle lane
2002	2:15 – 2:45pm	28th Street	A traffic control vehicle parks in bicycle lane while traffic officer gives out a violation ticket
2002	2:45 – 3:00pm	28th Street	A delivery truck parks in bicycle lane to make a delivery
2003	1:00 – 3:00pm	28th Street	Frequent double parked cars block the bicycle lane
2003	5:00 – 5:30pm	28th Street	Truck blocks bicycle lane
2004	9:30 – 9:45am	28th Street	Merchants sometimes push dollies down the bicycle lane and block the lane to cyclists
2004	12:00 – 12:30pm	48th Street	Truck delivering beer partially parked in bicycle lane near 49th Street
2005	2:00 – 2:15pm	28th Street	Fire at 1186 Broadway; bicycle lane blocked
2005	3:30 – 3:45pm	48th Street	A police check point was placed on the bicycle lane at this location forcing cyclists to use the adjacent lane instead
2006	9:15 – 9:30am	48th Street	Two joggers observed running in the bicycle lane
2006	11:00 – 11:30am	28th Street	Truck parks in bicycle lane
2006	5:45 – 6:00pm	28th Street	NYPD vehicle parks in bicycle lane for a few minutes
2007	10:00am	48th Street	3 vehicles park in bicycle lane
2007	1:00pm	48th Street	Taxi drops off passenger in bicycle lane
2007	1:45pm	48th Street	Ambulette drops off passenger in bicycle lane
2008	9:00 – 9:15am	48th Street	Bicycle lane blocked by double parked vehicle
2008	12:45 – 1:00pm	48th Street	Some vehicles are blocking the bicycle lane

The number of male cyclists traveling on Broadway represented approximately 13 times the number of female cyclists on Broadway, more than double the study-wide male to female ratio average of 6 male cyclists per 1 female cyclist. However the percentage of female cyclists wearing helmets is slightly higher than the other locations studied: 45 percent of female cyclists wore a helmet on Broadway compared to the study-wide average of 40 percent.

FIRST AVENUE

The First Avenue bicycle lane runs 2.7 miles from East 72nd Street to East 125th Street. It is four feet wide, and travels northbound.

The bicycle counts were recorded at East 85th Street and have remained steady throughout the study period with the exception of 2001 (see Table 3). This may be due to the fact that the counts in 2001 were collected at 91st Street, six blocks further north than the counts of the following years. The First Avenue lane has one of the lowest average cyclist volumes of the study areas.

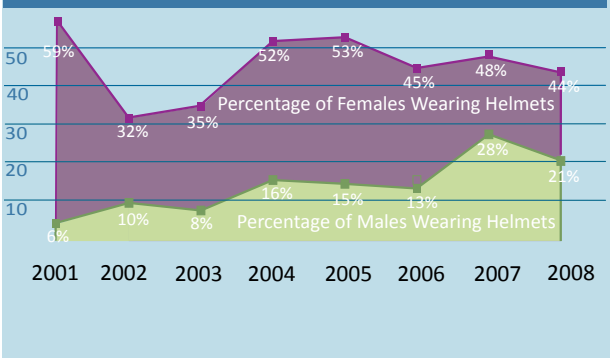
Over the course of the study period, the majority of cyclists were observed using the bicycle lane (see Figure 12). However, in 2001, a very low volume of cyclists used the bicycle lane. During that year only 77 of the 299 cyclists counted were located in the bicycle lane. This trend may be a result of how the bicycle lane was used by motorists during that year. For the majority of the time from 10:00am to 7:00pm the bicycle lane at 91st Street was blocked either by a double parked vehicle or a truck which forced many cyclists to ride in the travel lanes.

TABLE 3: CYCLIST VOLUME

Year	Number of Cyclists
2001*	299
2002	404
2003	430
2004	418
2005	491
2006	463
2007	383
2008	419

*Volumes recorded on 1st Avenue at 91st Street

FIGURE 11: HELMET USE BY GENDER



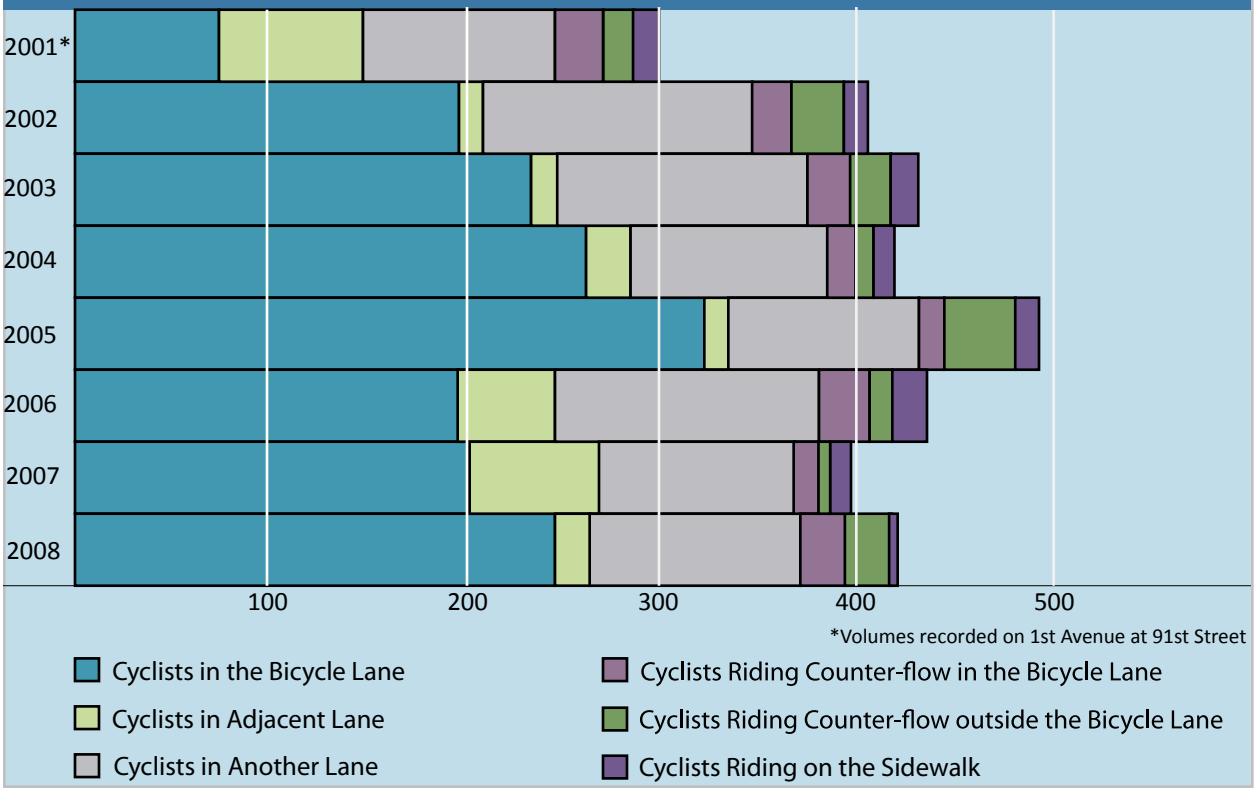
On First Avenue, the percentage of male cyclists using helmets is the lowest of the study. The average percentage of males using helmets was 14, compared to the study-wide average of 22 percent. The percentage was especially low at this location from 2001 to 2003, when, on average, just eight percent were observed using helmets. In 2004, however, the percentage almost doubled to 16 percent, and in 2007 it jumped another 12 percentage points to its highest, at 28 percent. By comparison, the average percentage of males using helmets study-wide was 18 percent in 2001 to 2003 and 34 percent in 2007.

First Avenue Bicycle Lane
At 85th Street

Female helmet usage was on par with the city averages in 2002 and 2003 of 32 and 35 percent respectively. It spiked 17 percentage points in 2004 and 2005 to more than 50 percent, and has since leveled off, hovering around 45 percent. However, this high percentage of female helmet usage was observed in 2001 when counts were done on First Avenue at 91st Street. Overall, it averages 46 percent, slightly higher than the study-wide average of 40 percent (see Figure 11).

The male to female ratio is highest at this location, with an average of 18 males per 1 female. The male to female ratio is nearly triple the study-wide average of 6.0 males per 1 female. The number of males per female spiked in 2005, at 25, and has since fallen to less than half that amount. In 2008, there were 12 males per 1 female.

FIGURE 12: CYCLIST MODAL SPLIT

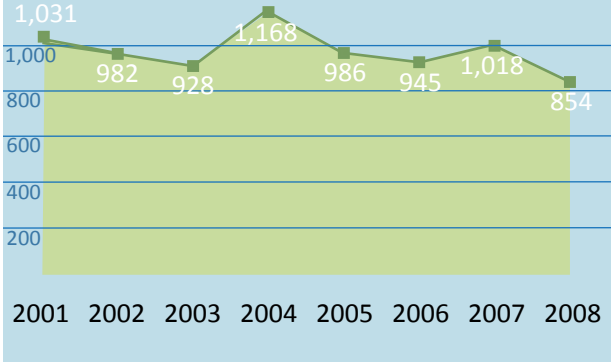


FIFTH AVENUE

The Fifth Avenue bicycle lane runs 0.8 miles southbound from 23rd Street to Washington Square North. It runs in an area between lower and midtown Manhattan.

The number of cyclists riding on Fifth Avenue at 14th Street has remained fairly constant, ranging from 854 in 2008 to 1,168 in 2004, with an average of 989 cyclists over the study period (Figure 13).

FIGURE 13: CYCLIST VOLUME



The percentage of cyclists using the bicycle lane has historically been lower than the rest of the studied bicycle lanes (Figure 14). From 2001 to 2006, cyclists on Fifth Avenue at 14th Street were observed riding in the bicycle lane just 38 to 51 percent of the time. By comparison, the study-wide average is 54 percent. The data for 2007 is unavailable because the bicycle lane was not yet restriped after repaving of the road; however a total of 1,018 cyclists were counted on Fifth Avenue for the day; in 2008 the number peaked at 58 percent of cyclists using the

Fifth Avenue Bicycle Lane
At 14th Street

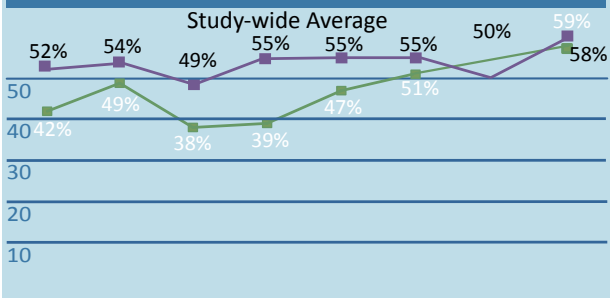
TABLE 4: FIELD OBSERVATIONS: BICYCLE LANE OBSTRUCTIONS ON FIFTH AVENUE		
Year	Time	Observation
2001	9:52 – 9:58am	Truck in bicycle lane
2001	2:00 – 2:15pm	Cars in bicycle lane
2001	2:15 – 2:30pm	Taxis in bicycle lane
2002	12:00 – 12:15pm	A delivery truck double parks and blocks bicycle lane
2002	12:15 – 12:30pm	A sports utility vehicle blocks the bicycle lane
2002	1:30 – 3:00pm	Extensive double parking forces many cyclists to ride outside of the bicycle lane
2003	11:35am – 12:25pm	Truck blocks bicycle lane
2004	11:45am – 12:15pm	Five cyclists use the adjacent lane instead because the bicycle lane is blocked by a double parked vehicle
2004	11:15 – 11:30pm	One man is seen pushing a cart in the bicycle lane
2004	12:15 – 12:30pm	One woman is seen pushing a cart in the bicycle lane
2004	1:00 – 1:15pm	A taxi is standing in bicycle lane
2004	1:45 – 2:15pm	Two vans park in the bicycle lane
2004	2:30 – 2:45pm	Van double parked in bicycle lane
2004	3:00 – 5:00pm	Occasionally cars block bicycle lane, impeding cyclists' use of bicycle lane
2004	6:10 – 6:15pm	Garbage truck temporarily blocks bicycle lane
2006	6:15 – 6:30pm	One jogger observed in the bicycle lane
2007	7:15am	A homeless man with a shopping car in the bicycle lane
2008	11:00 – 11:15am	Many double parked trucks in the bicycle lane
2008	12:00 – 12:15pm	Truck in bicycle lane

bicycle lane.

A lower use of the bicycle lane on Fifth Avenue is probably due to some extent to the fact that delivery and private vehicles occasionally blocked the bicycle lane during the day, impeding the use of the facility by cyclists. Based on the data collected, vehicles, taxis and delivery vans double park or stand in the bicycle lane mainly during the hours of 11:00am and 7:00pm (see Table 4).

Generally, both male and female cyclists on Fifth Avenue are less likely to be wearing helmets than the study-wide averages of 22 percent for males and 40 percent for females. On average, 20 percent of males and 35 percent of females were observed using a helmet while cycling on Fifth Avenue.

FIGURE 14: CYCLISTS IN THE BICYCLE LANE



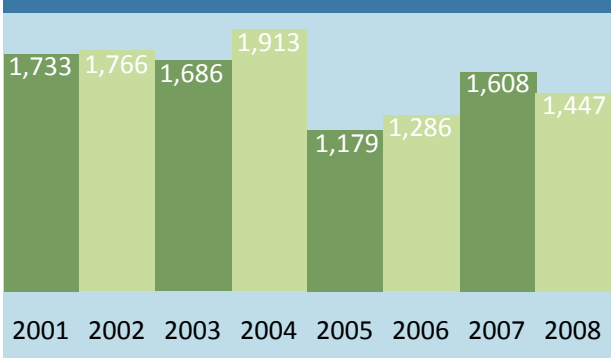
SIXTH AVENUE

The Sixth Avenue bicycle lane runs north from West 8th Street to West 40th Street, connecting downtown and midtown. With a four-foot width, it is one of the narrowest bicycle lanes in the city. It was striped according to the "1978 Bikeway Planning and Policy Guidelines for New York City" which recommended a minimum width of three feet six inches for a bicycle lane. This roadway is busy with high vehicular traffic volumes traveling northbound to Midtown Manhattan.

The daily bicycle volumes on Sixth Avenue at 23rd Street are the highest among all streets surveyed in Manhattan over the last 8 years and range from 1,179 to 1,913 cyclists (Figure 15). Ridership has fluctuated from year to year, peaking in 2004 only to drop to its lowest in 2005 and 2006. The Sixth Avenue bicycle lane ranks in this study as the most used or traveled by cyclists in the city.

For all years analyzed, the highest volumes on Sixth Avenue were observed in the afternoon between

FIGURE 15: CYCLIST VOLUME

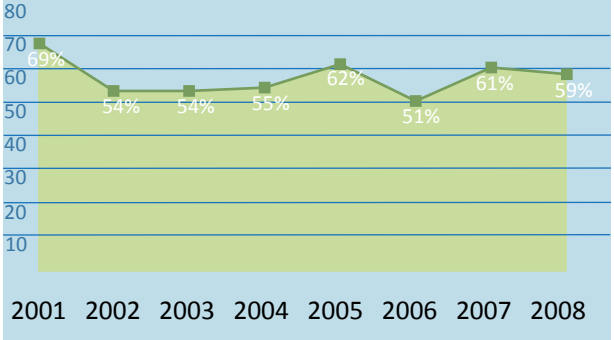


1:00 and 6:00 pm. This may be due to the type of cyclists that were observed riding on Sixth Avenue during that time period. Based on two cyclist classification sample surveys that were completed in September of 2004, messengers on bicycles represent, on average, 51 percent of the cyclists on Sixth Avenue. The first survey was completed from 12:00pm to 2:00pm and the other from 2:00pm to 4:00pm on typical weekdays during the peak period of bicycling activities (see Tables 5 and 6). The messengers are followed by food delivery riders who represent about 12.5 percent of the bicycle traffic. Together these two types of cyclists represent two-thirds of the afternoon bicycle volumes on Sixth Avenue. The fact that the bicycle lane is located in the heart of the Midtown Central Business District, which generates delivery and pick-up activities, reinforces this assumption.

Over the study period, the average percentage of cyclists riding in the bicycle lane on Sixth Avenue is 58 percent, slightly higher than the study-wide average of 54 percent (see Figure 16). The tendency of more than half of the cyclists who use Sixth Avenue to ride in the bicycle lane might be due to the presence of heavy vehicular traffic volumes in the travel lanes. Many cyclists may be forced to stay in the bicycle lane to avoid vehicular traffic and congestion in the travel lanes.

Males were about 8 times more likely to be observed riding on Sixth Avenue than females, com-

FIGURE 16: CYCLISTS IN THE BICYCLE LANE



pared to the study-wide average of 6.0. The type of cycling activity that occurs on this avenue—package and food delivery, which was observed to be mainly occupied by men—might contribute to this male to female ridership ratio on Sixth Avenue.

While this facility had the highest daily volumes of male cyclists in Manhattan, an average of just 21 percent of them were wearing helmets. An average of 41 percent of women wore a helmet while cycling here. The percentage of women wearing helmets rose steadily, peaking at 59 percent in 2008.

TABLE 5: CYCLIST CLASSIFICATION 12:00 - 2:00 pm	Male	Female	Helmet	In Bicycle Lane	Child Under 16 Years Old	Total
Commuter	14	8	8	15	0	22
Neighborhood Rider	71	25	17	55	0	96
Recreational Rider	4	0	4	2	0	4
Messenger	166	2	13	87	0	168
Food Delivery Cyclist	45	0	5	22	0	45
Pedicab	0	0	0	0	0	0
Unknown	0	0	0	0	0	0
TOTAL	300	35	47	181	0	335

TABLE 6: CYCLIST CLASSIFICATION 2:00 - 4:00 pm	Male	Female	Helmet	In Bicycle Lane	Child Under 16 Years Old	Total
Commuter	22	19	8	27	0	41
Neighborhood Rider	2	6	1	3	0	8
Recreational Rider	3	4	0	2	0	7
Messenger	206	1	31	116	0	207
Food Delivery Cyclist	47	0	2	32	0	47
Pedicab	12	1	0	8	0	13
Unknown	60	8	5	48	0	68
TOTAL	352	39	47	236	0	391

CENTRAL PARK WEST

The bicycle lane on Central Park West lies between West 62nd and West 110th Streets. The bicycle lane continues further north on Frederick Douglass Boulevard from 110th Street to 121st Street. This arterial is a two-way street. However, a bicycle lane was striped only in the northbound direction. The bicycle lane is 3.5 miles long (including the segment on Frederick Douglass Boulevard). It was striped in November 2001. Data only for the years 2002 to 2008 will be analyzed for this bicycle facility.

Bicycle ridership volumes on Central Park West at 93rd Street ranged greatly, from 407 cyclists in 2003 to 793 cyclists in 2008 (Table 7). The volumes increased as the years progressed, except in 2003, when the number of cyclists dropped by 95 from the previous year and in 2006 by 86 from the year 2005. In comparison to the other count locations, the volumes remained low.

In general, from 2003 to 2004, the percentage of cyclists who were observed riding in the bicycle lane

TABLE 7: CYCLIST VOLUME

Year	Number of Cyclists
2001	---
2002	501
2003	407
2004	471
2005	764
2006	678
2007	692
2008	793

was higher than the citywide average of 54 percent, reaching 70 percent in 2004. From 2005 to 2008, the percentages dropped below 50 percent, to as low as 39 percent in 2005 (see Appendix A.I, pg. 57).

The percentage of cyclists riding counter-flow (southbound) in the bicycle lane is significantly higher on Central Park West than on the other bicycle lanes, perhaps because there is only one bicycle lane on this two-way street and more than a few cyclists are uncomfortable moving with southbound traffic (Figure 17). However, a significant number of cyclists were also observed traveling in the southbound lane with traffic (identified as "counter-flow out of bicycle lane" in adjacent modal split graph), supporting the fact that having a bicycle lane along the southbound travel lanes would accommodate many of the counter-flow cyclists on this street.

The sidewalks on Central Park West are often used by cyclists (children as well as adults) who are entering nearby Central Park. Sidewalk riding, however, has dropped steadily since 2003.

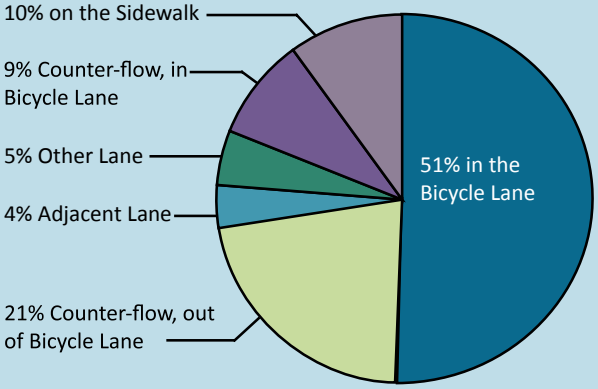
Because of the park, this particular area attracts many children. More children were observed riding their bicycles on Central Park West either in the bicycle lane or on the sidewalk than any other study location, with the exception of 2004.

The percentage of cyclists observed wearing hel-

mets along Central Park West is slightly higher overall than the study-wide average. Males were observed wearing helmets about 27 percent of the time (compared to the study-wide average of 22 percent), while females were observed wearing helmets more than twice as often—55 percent of the time (compared to the study-wide average of 40 percent).

Central Park West has the second highest percentages of rollerbladers, skateboarders and scooters in relation to total users due to its proximity to Central Park. The percentage has remained fairly steady, ranging from three percent in 2006 and 2008 to six percent in 2002 and 2005.

FIGURE 17: CYCLIST MODAL SPLIT

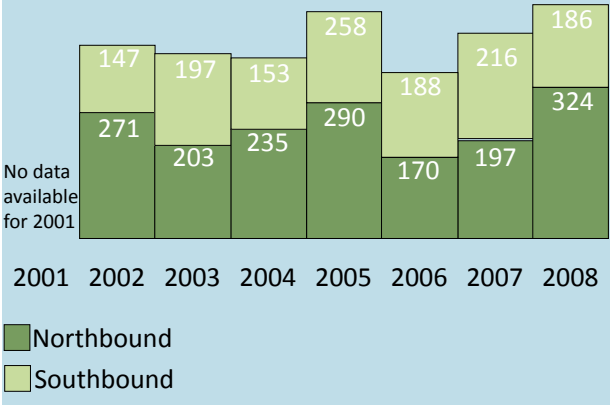


Children under 16 represented three to six percent of the total users on Central Park West, compared to the study-wide average of two percent.

Central Park West Bicycle Lane At 75th Street

FORT WASHINGTON AVENUE

FIGURE 18: CYCLIST VOLUME



The Fort Washington Avenue bicycle lane is broken up into three segments. The first segment runs from West 160th Street to West 165th Street. It then continues at West 168th Street until West 177th Street. The last segment extends from West 179th Street to the Cloister Museum. The bicycle lane is two-way only between West 172nd Street and West 177th Street and between 183rd Street and the Cloisters. The bicycle lane is 1.67 miles long and was striped in November 2001. Data is available from 2002 to 2008.

The bicycle volumes are low, comparable to the volumes of other bicycle facilities north of 60th Street, such as First Avenue and Adam Clayton Powell Boulevard. Low ridership volumes have been a persistent trend along bicycle facilities that extend north of Central Park. The volume of cyclists on Fort Washington Avenue at West 173rd Street are close for each year surveyed, ranging from 358 in 2006 to 548 in 2005 (Figure 18). A significant number of cyclists—close to half of the daily volumes—were observed using the facilities between 4:00pm and 7:00pm.

Fort Washington Avenue has a very low percentage of cyclists who ride counter-flow in the bicycle lane. Over the seven year study period, an average of just two percent of cyclists were observed riding counter-flow in both the north- and southbound lanes.

Fort Washington Avenue Bicycle Lane - Northbound At 173rd Street

Moreover, Fort Washington Avenue also had a very low percentage of cyclists traveling in other lanes - six percent of travelers in 2002, but only one percent in 2007 and 2008. For the other years no cyclists were reported travleing in other lanes.

Over the study period, Fort Washington Avenue had a noticeably higher average percentage of cyclists who use helmets—almost double the study-wide average percentage (see Figures 19 and 20). An average of 48 percent of male cyclists used helmets and 73 percent of female cyclists used helmets on Fort Washington Avenue, compared to the citywide trend of 22 percent of male cyclists and 40 percent of female cyclists using helmets.

The ratio of males to females was high at this location. The number of males per 1 female fluctuated from 5 to 19, with an average of 10 males per female. By comparison, the study-wide average of males per female is 6.0.

Fort Washington Avenue Bicycle Lane - Southbound At 173rd Street

FIGURE 19: AVERAGE MALE HELMET USE

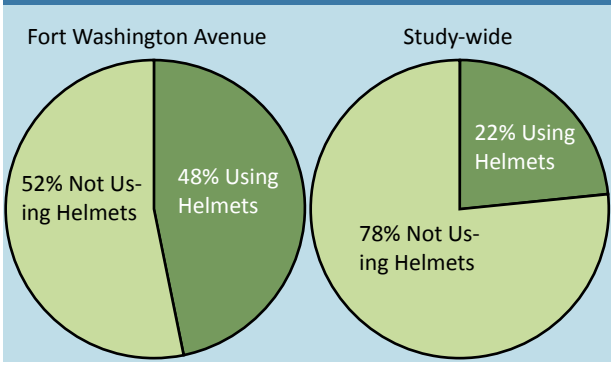
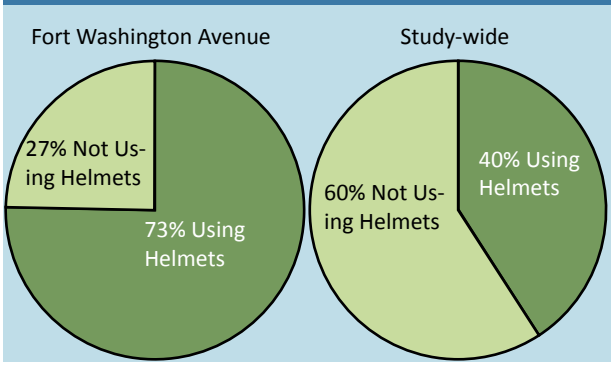


FIGURE 20: AVERAGE FEMALE HELMET USE



ADAM CLAYTON POWELL BOULEVARD

Adam Clayton Powell Boulevard has a bicycle lane from West 110th Street to West 153rd Street. Being a two-way street, a five-foot wide bicycle lane has been striped in each direction of traffic. Each bicycle lane stretches for slightly more than two miles.

Bicycle counts were conducted at West 113th Street in both northbound and southbound directions. Among the studied on-street bicycle facilities, Adam Clayton Powell Boulevard has the lowest volumes of cyclists (Figure 21).

Excluding 2003, over the eight year study period, more than 70 percent of the cyclists recorded on Adam Clayton Powell Boulevard were observed riding with the flow of traffic in the bicycle lane (see Figure 22). In 2003, as a result of the repaving of the street, the pavement markings were covered with asphalt including the bicycle lane. This made it difficult to determine where cyclists were riding on Adam Clayton Powell Boulevard. Most cyclists traveling in the appropriate direction on the right side of the street were recorded in the "other travel lane" column and represented 79 percent of the volume for that day. This year has not been factored into the percentage above.

In terms of cyclists using the sidewalks to get to their destination, Adam Clayton Powell Boulevard had the highest percentages of cyclists using the sidewalks in 2001 and 2002, with 17 percent and 19 percent of trips, respectively. Since 2003, Central Park West has seen the highest percentages of cyclists riding on the sidewalk and Adam Clayton Powell Boulevard has had the second highest percentages. However, the percentage generally declined each year, with six percent of cyclists using the sidewalk in 2008 compared to eleven percent in 2003 (Figure 22).

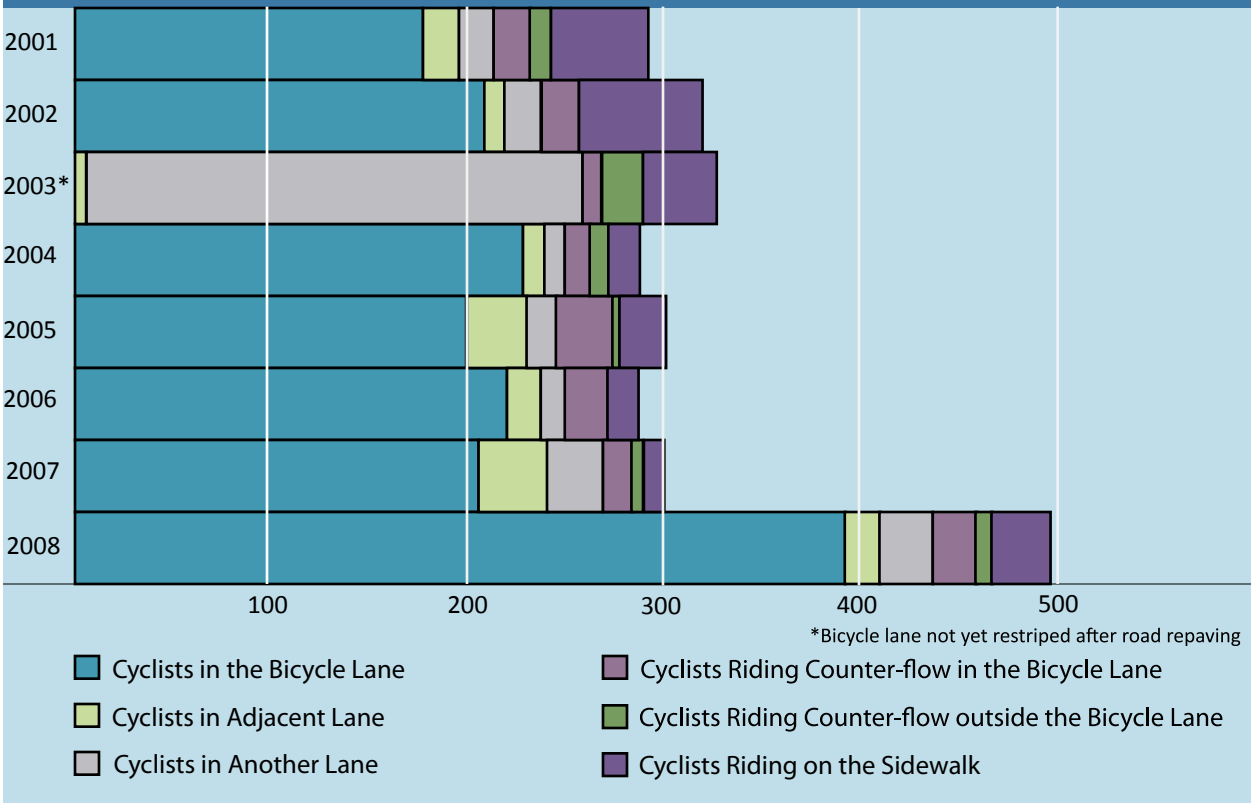
The percentage of cyclists on Adam Clayton Powell Boulevard observed wearing helmets is the second highest in the city, only surpassed by Fort Washington Avenue. (Adam Clayton Powell Boulevard and Central Park West are the second highest in terms of male helmet usage.) Twenty-five percent of males were observed riding with helmets—a rate slightly higher than the study-wide average of 22 percent and 60 percent of females used helmets—a rate much higher than the city-wide average of 40 percent.

FIGURE 21: CYCLIST VOLUME

Adam Clayton Powell Blvd - Northbound
At 113th Street

Adam Clayton Powell Blvd - Southbound
At 113th Street

FIGURE 22: CYCLIST MODAL SPLIT



Route 9A Greenway Path
South of the George Washington Bridge

OFF-STREET BICYCLE PATHS

DATA ANALYSIS

The Manhattan Waterfront Greenway is a 32-mile off-street path that circumnavigates the island of Manhattan. It is generally located directly on the waterfront, reclaiming the shoreline for pedestrians, bicyclists, rollerbladers, and other forms of non-motorized transportation. Some greenway sections have multiple paths—one for wheeled transportation modes and another for walkers and joggers—in order to minimize conflicts between different types of use. The greenways have transformed the Manhattan waterfront. In particular, it has renovated the industrial waterfronts of the West Village and Chelsea into Hudson River Park and has opened up the previously inaccessible Harlem River Speedway.

The Manhattan Waterfront Greenway is divided into three sections, the Hudson River Greenway (Route 9A), the East River Greenway, and the Harlem River Greenway. The Hudson River Greenway runs uninterrupted along the west side waterfront from Battery Park to Dyckman Street. The East River Greenway travels along the east side waterfront from Battery Park to East 124th Street, except between East 25th Street and East 29th Street, where it is interrupted by Bellevue Hospital Center, and between East 38th Street and East 59th Street, where it is interrupted by the United Nations Complex. The greenway connection route linking the greenway segments to the north and south of the United Nations runs on-street north on First Avenue and south on Second Avenue; both streets have heavy vehicular traffic. The Harlem River Greenway extends uninterrupted from East 155th Street to Dyckman Street.

Bicycle counts were conducted on the Harlem River Greenway in the year 2004, when it first opened, but were not included in this study. In the future, other surveys will be done in order to assess its usage by cyclists.

Seven locations along the greenway were selected and surveyed in total:

- Route 9A Greenway at Chambers Street
- Route 9A Greenway at 11th Street
- Route 9A Greenway at 34th Street
- Route 9A Greenway at 80th Street
- Route 9A Greenway at 125th Street
- East River Park Greenway at Houston Street
- East River Greenway North of 85th Street

Each greenway location profile has two subsections: one for weekday counts and one for weekend counts. The weekday analysis will cover the years 2002 through 2008, while the weekend analysis will compare the data collected in 2002 with the data collected in 2008. Any particular count location featuring a separate pedestrian and jogging path will note whether or not those users were included in the data.

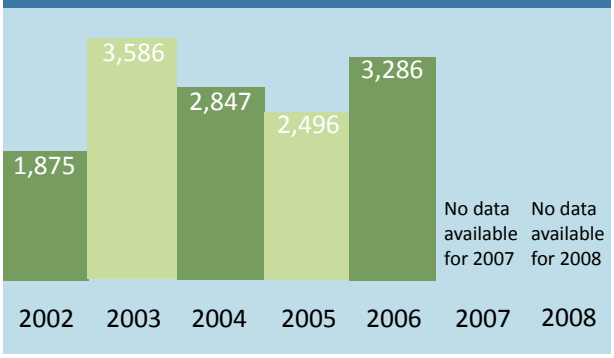
ROUTE 9A AT CHAMBERS STREET

The Route 9A Greenway at Chambers Street connects the West Village and Battery Park, and is located on the western edge of Tribeca near various attractions, including the World Financial Center, Stuyvesant High School, CUNY Manhattan Community College and the Washington Market Park.

Weekday Analysis

Data regarding the Route 9A Greenway at Chambers Street is available from 2002 to 2006. The total number of users at this location jumped dramatically between 2002 and 2003, which is due to the extension of the greenway path south of Chambers Street and the opening of the Hudson River Park in the area of Greenwich Village. Weekday volumes from 2002 to 2003 nearly doubled. Volumes from 2004 to 2006 range from 2,496 to 3,286; these volumes are consistent with the average daily weekday volume which, over the study period, is approximately 2,818 users/day. This location has the highest average volume of weekday users despite the volume of users dropping between 2003 and 2004 and never recovering to 2003 levels (Figure 23).

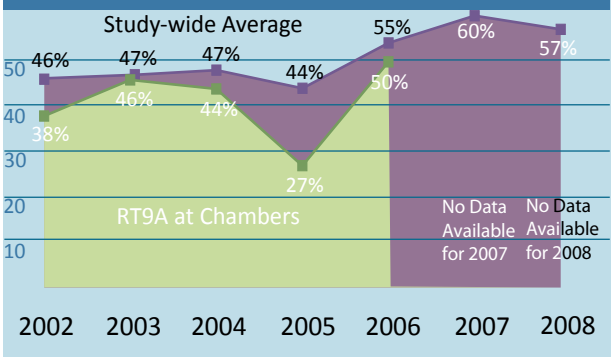
FIGURE 23: WEEKDAY USER VOLUME



Cyclists represented an average of 37 percent of the total users at this location (see Appendix A.II, pg.64) which is 13 percentage points lower than the study-wide average of 50 percent. However the year 2005 had the highest percentage of cyclists to total users: 66 percent.

Cyclists on the greenway at Chambers Street were observed wearing a helmet only 40 percent of the time, compared to the study-wide average of 51 percent helmet usage on greenway facilities (Figure 24). The percentage of cyclists observed using helmets stayed fairly steady from 2002 to 2004, ranging from 38 to 46 percent, but dropped sharply in 2005 to a mere 27 percent. The percentage recovered in 2006, with 50 percent of cyclists observed using helmets.

FIGURE 24: WEEKDAY CYCLIST HELMET USE



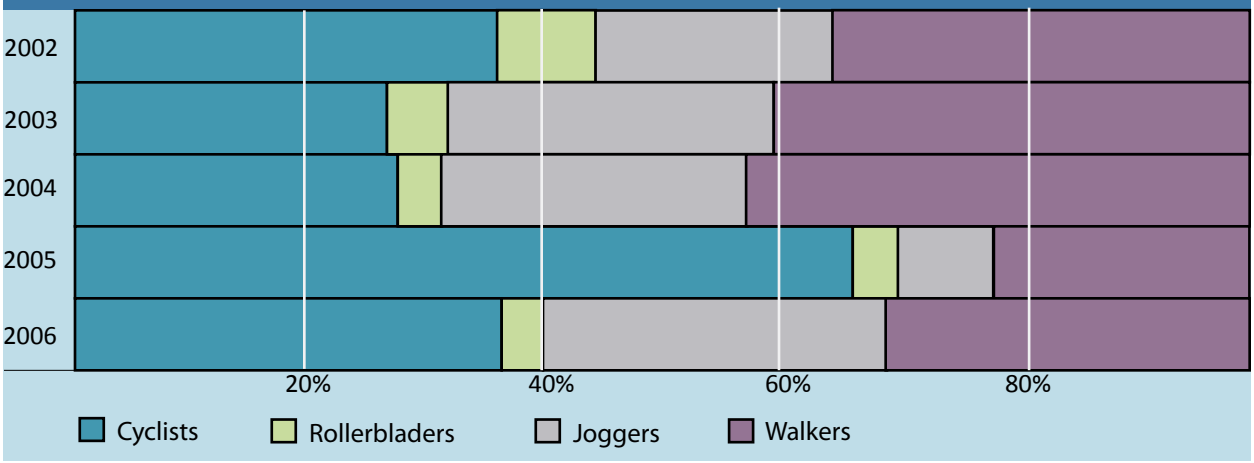
The percentage of rollerbladers to total users has declined every year during the week, from eight percent in 2002 to four percent in 2006 (Figure 25). Even so, Route 9A at Chambers Street has the second highest average percentage of users rollerblading, and is higher than the study-wide average of four percent.

The percentage of joggers as total users has remained fairly constant during the week—averaging 23 percent—and only straying from that range in 2005, when the percentage dropped to eight percent (see Figure 25). This percentage is consistent with the study-wide average of 23 percent of weekday greenway users jogging.

During the week, 35 percent of users walk. The percentage of users walking during the week has remained fairly steady throughout the study period of 2002 to 2006—the notable exception is 2005, when only 22 percent of users were walking (see Figure 25). The average percentage of users who are walking on Route 9A at Chambers Street is higher than the study-wide average of 24 percent during the week.

Route 9A at Chambers Street

FIGURE 25: WEEKDAY GREENWAY USER MODAL SPLIT



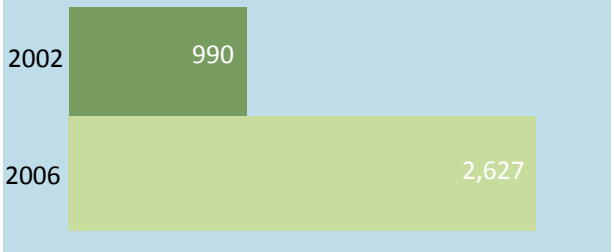
ROUTE 9A AT CHAMBERS STREET

Weekend Analysis

For this location, the year 2002 is compared with the year 2006, the last year that Route 9A at Chambers Street was surveyed. The volume of users at this location increased more than two and a half times from 2002 to 2006 (Figure 26). However weekend volumes were much lower than weekday volumes.

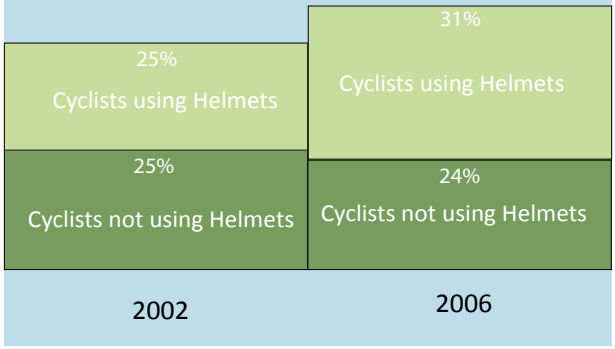
Cycling increased at this location between 2002 and 2006. On the weekends, cyclists represent 54 percent of total users on average — thirteen percent more than the average of 37 percent during the week at this location. The helmet usage percentage also increased on the weekends from 50 percent in 2002 to 55 percent in 2006 (Figure 27).

FIGURE 26: WEEKEND USER VOLUME



Rollerblading was most popular at this study location and the percentage of users rollerblading was almost double the study-wide average of 7 percent in 2002 and 4 percent in 2006. Mirroring the study-wide trend, both the volume and percentage of rollerbladers declined from 2002 to 2006 (Figure 28).

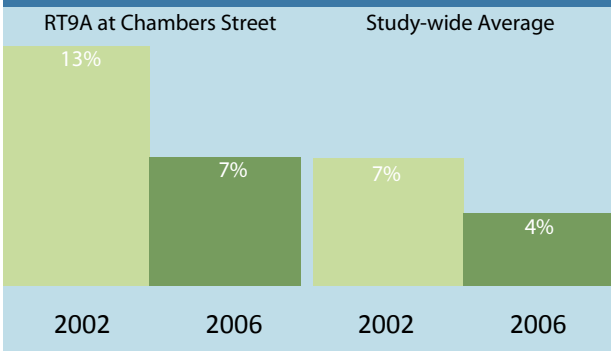
FIGURE 27: CYCLISTS AND HELMET USE



Jogging as a percentage of total greenway use at this location decreased between 2002 and 2006, from 24 percent to 13 percent. Furthermore, the average percentage of users jogging at this location is 19 percent—8 percentage points lower than the study-wide average of 27 percent.

The percentage of walkers at this location varied from 12 percent in 2002 to 23 percent in 2006. On average the percentage of walkers on Route 9A at Chambers Street (18 percent) is lower on the weekends than during the week (35 percent).

FIGURE 28: ROLLERBLADERS AS A PERCENTAGE OF USERS



This section of the greenway is adjacent to a high density residential location and boasts a wide bicycle way. Moreover, the nearby Battery Park City esplanade with landscaped areas make it a destination for recreational users.


Route 9A at Chambers Street

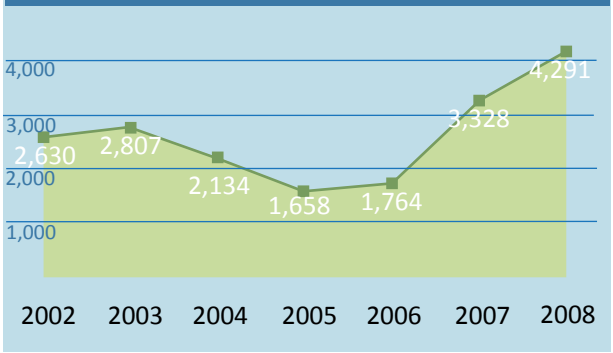
ROUTE 9A AT 11TH STREET

Weekday Analysis

Data regarding the Route 9A Greenway at 11th Street is available from 2002 to 2008 for weekday counts. In 2003, the Hudson River Park segment of Greenwich Village opened to the public. Since then, cyclists have continued to use the greenway path, while walkers and joggers mainly use the esplanade. Data regarding the esplanade has been included with the greenway data. However, due to limited resources, counts on the esplanade were not done from 2004 to 2006.

The average weekday volume at this location is 2,659 users, close to 42 percent higher than the study-wide average of 1,874 weekday users. The volume of weekday users increased from 2002 to 2003, but fell to almost half the 2003 total in 2005 and 2006, which is during the period when volumes on the esplanade were not collected. In 2007 and in 2008, the esplanade volumes were counted and in comparison to the year 2003 the volume of users more than doubled to reach 3,328

FIGURE 29: WEEKDAY USER VOLUME



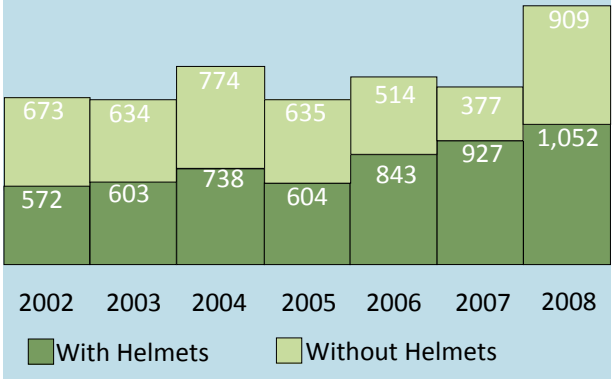
in 2007 and 4,291 in 2008, (see Figure 29).
The percentage of users who were observed riding bicycles at this location—53 percent— is similar to the study-wide average, which is 50 percent, but as indicated in Figure 30 the percentage of users on bicycles has fluctuated through the years.

The average percentage of cyclists observed using a helmet is 54. This percentage is slightly higher than the study-wide average of 51 percent.

The average of six percent of weekday greenway users on rollerblades is the highest of the study locations. The percentage of users on rollerblades has decreased steadily from one year to the next since the study began in 2002. Overall, the percentage has decreased in 2008 to two percent—less than a third of its 2002 high of ten percent.

The percentage of users observed jogging is about

FIGURE 30: WEEKDAY CYCLIST VOLUME



the same as the study-wide average: 24 percent. The yearly percentage of users jogging has spanned from 14 to 30 percent. However, in 2004 - 2006, as mentioned before the esplanade users were not included in the study, meaning that those years are artificially low compared to the other years.

The percentage of users observed walking on this section of the greenway is consistently lower than the study-wide average of 24 percent. The percentage of users walking during the week was 15 and 25 percent in 2002 and 2003, respectively. It dropped to three to five percent from 2004 to 2006 (period where no counts were collected for the esplanade), then multiplied to 27 percent in 2007, and 24 percent in 2008.

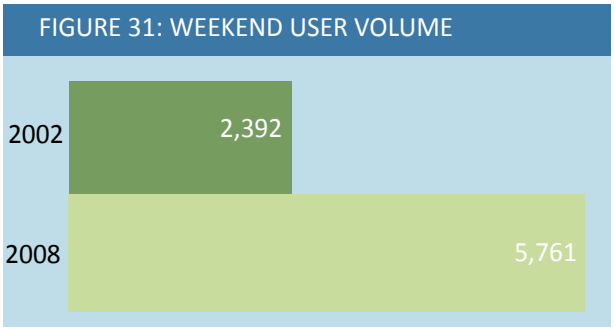
Weekend Analysis

Between 2002 and 2008, the volume of users has increased by more than 200 percent (Figure 31). In general, the weekend volume at this location averaged higher than the weekday volumes.

Both the volume and percentage of users riding bicycles at this location has increased dramatically. The volume has more than tripled, while the percentage has increased from 36 to 52 percent. The average percentage of cyclists observed using a helmet on weekends, 51 percent, is slightly lower than the study-wide average of 53 percent. Cyclists were more likely to be observed using helmets in 2008 than in 2002 by seven percentage points.

The second highest average of weekend rollerbladers was observed at this location. At seven percent, the average percentage of users rollerblading is nearly double the study-wide average of four percent. However, like the study-wide trend, the percentage of users who rollerblade has decreased at this location between 2002 and 2008.

FIGURE 31: WEEKEND USER VOLUME



The percentage of users observed jogging has decreased between 2002 and 2008. However, the average of 31 percent of users jogging at this location is still close to the study-wide average of 27 percent.

In 2002, the percentage of walkers remained the same as in 2008 with 20 percent. This location is comparable to the study-wide trend, where the percentage of users walking between 2002 and 2008 did not change significantly—hovering at 22 to 25 percent.

ROUTE 9A AT 34TH STREET

Thirty-Fourth Street is a major east-west corridor that connects the greenway to the south end of Midtown, the Jacob K. Javits Convention Center, and to Penn Station/Madison Square Garden. Route 9A at 34th Street features a separate pedestrian and jogging path; those users have been included in the data and analysis of this location.

Weekday Analysis

The volume of weekday users at this location has generally been stable (Figure 32). From 2002 to 2006, the number of weekday users ranged from 1,790 to 2,095, with a 305 person difference between the lowest volume year (2006) and the highest volume year (2004). Since 2006, the daily volume has been rising, to 2,483 in 2007 and 2,617 in 2008.

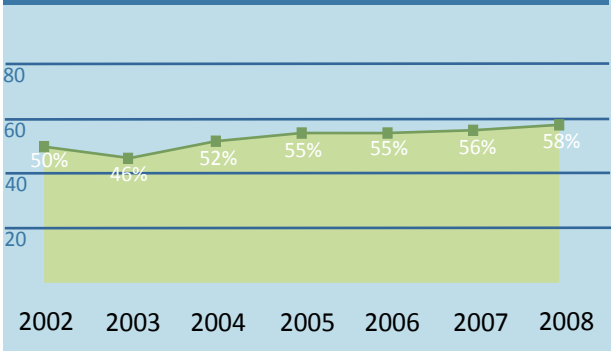
During the week, the percentage of total users on bicycles is much higher than the study wide average. Sixty-five to 76 percent of users were observed

FIGURE 32: WEEKDAY USER VOLUME

on bicycles from 2002 to 2008, compared with the study-wide average of 50 percent (see Figure 34).

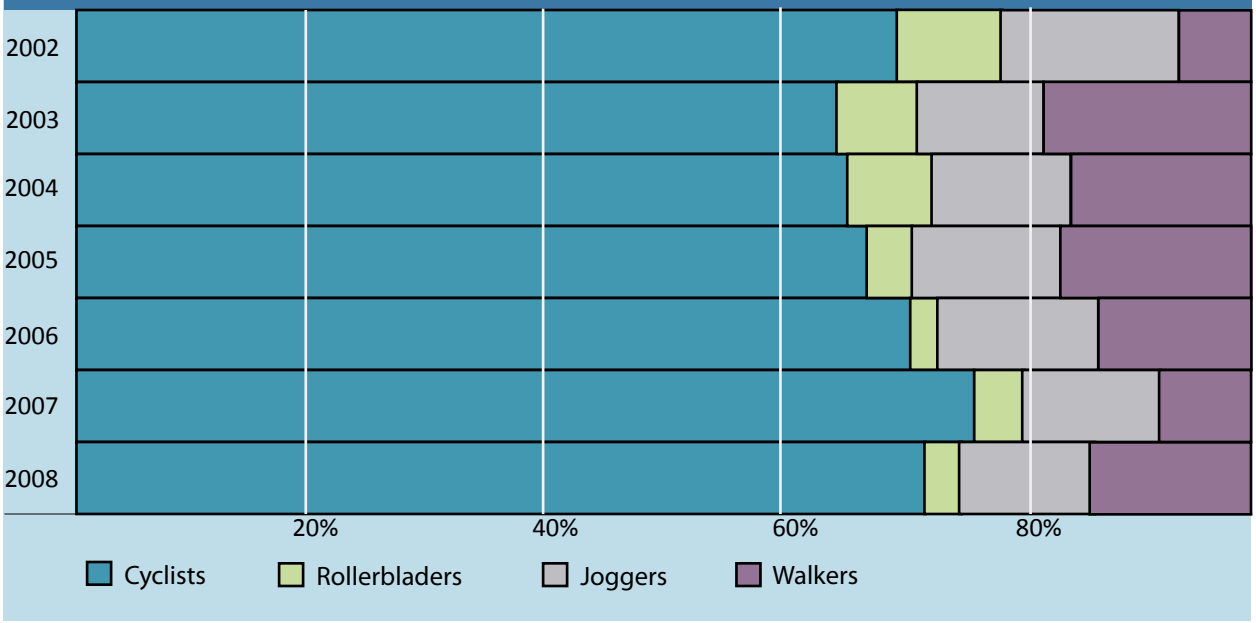
At least half of cyclists were observed wearing a helmet (Figure 33). The only exception was in 2003, when only 46 percent were observed using a helmet. Moreover, the average percentage of cyclists observed using helmets at this location is higher than the study-wide average. Fifty-four percent of cyclists used helmets, compared to the study-wide average of 51 percent of greenway weekday cyclists using helmets.

FIGURE 33: WEEKDAY CYCLIST HELMET USE



Yearly, the percentage of users rollerblading is generally slightly higher at this location than the study-wide averages. The trend, however, has been a decreasing percentage of users observed rollerblading each year at this location, falling from nine percent to three percent between 2002 and 2008 (see Figure 34). The decreasing trend persists at all study

FIGURE 34: WEEKDAY GREENWAY USER MODAL SPLIT



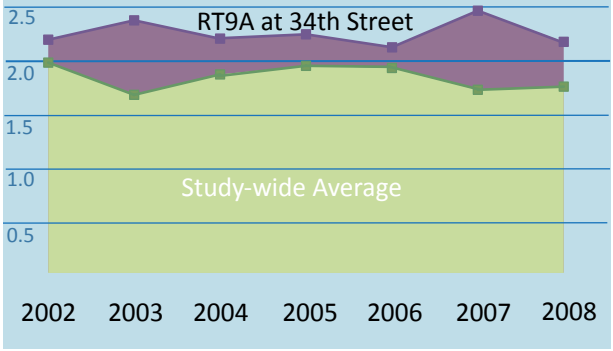
locations.

At 12 percent, the average percentage of weekday users observed jogging at this location is about half the study-wide average of 23 percent of users who were jogging. The percentage of users jogging has remained fairly constant from 2002 to 2008, oscillating from 11 percent to 15 percent (see Figure 34).

During the week, an average of only 13 percent of users were observed walking at this location, compared to the study-wide average of 24 percent. The percentage of users walking is significantly lower than the study-wide averages.

The 34th Street location has more male users and fewer female users than the study-wide average (Figure 35). During the week, 69 percent of users are males, compared with an average of 64 percent throughout the study locations. Conversely, 31 percent of users are females, compared with the study-wide average of 36 percent. These percentages have remained steady from 2002 to 2008, only

FIGURE 35: NUMBER OF MALES PER FEMALE



fluctuating by a percentage point here and there.

ROUTE 9A AT 34TH STREET

Weekend Analysis

The weekend volume at this location has risen steadily, nearly quadrupling between 2002 and 2008 (Figure 36). Moreover, Route 9A at 34th Street has the second highest average weekend volume of all the study locations.

Bicycle usage at this location has almost doubled from a low of 43 percent in 2002 to 66 percent in 2008 (Figure 37). Bicycle usage at this location is higher than the study-wide trend, averaging 55 percent of users compared with the study-wide average of 45 percent. Helmet usage at this location averaged 56 percent. However, the percentage actually varied slightly between 2002 and 2008 from 54 to 58 percent.

FIGURE 36: WEEKEND USER VOLUME

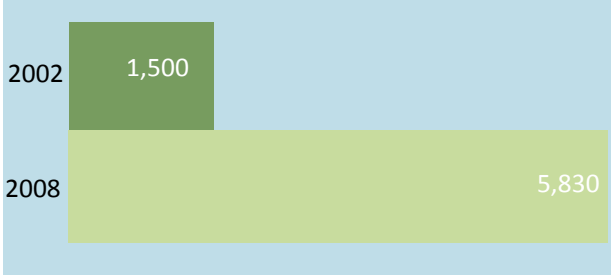
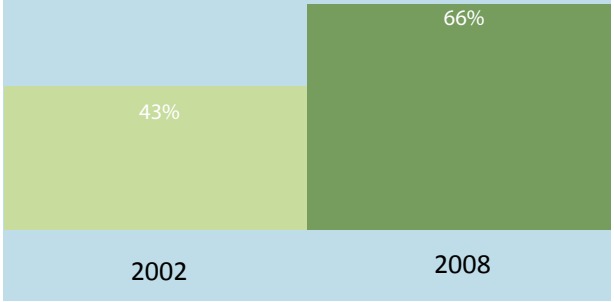


FIGURE 37: CYCLISTS AS A PERCENTAGE OF USERS

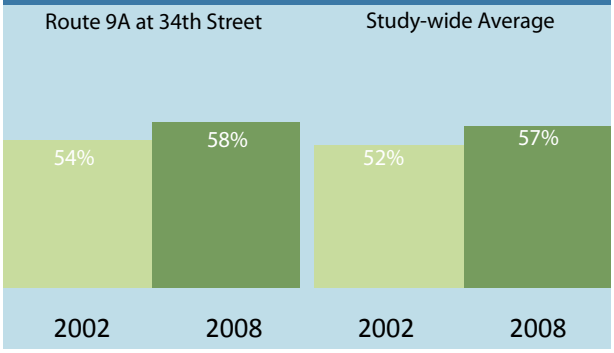


Rollerblading at this location on weekends has decreased from nine percent of users in 2002 to four percent of users in 2008. This decline follow the study-wide trend. However, the percentage of users rollerblading at this location is higher than the study-wide average (see Appendix A.II, pg. 71 for details).

Though averaging 24 percent—comparable to the study-wide average —the percentage of users jogging has decreased between 2002 and 2008. A higher percentage of users jog at this location on weekends than during the week.

The ratio of males to females is lower on weekends than during the week, mirroring the study-wide trend, and has not changed significantly from 2002 to 2008 at this location.

FIGURE 38: WEEKEND CYCLIST HELMET USE



Route 9A at 34th Street

ROUTE 9A AT 80TH STREET

The bicycle and pedestrian greenway at West 80th Street runs through Riverside Park. The pedestrian and bicycle path in this area travels directly along the waterfront, while the Route 9A Highway/Henry Hudson Parkway is elevated further inland. The two are not only physically separated, but also visually separated by the foliage in Riverside Park.

Weekday Analysis

The volume of users at this location remained constant from 2002 to 2004, ranging from 1,638 users to 1,748 users, with one spike in 2005 (Figure 39). The number of users increased in 2007 and 2008, but did not surpass the number of users in 2005.

The percentage of users observed riding a bicycle has been fairly constant from 2002 to 2008, wavering between 46 and 57 percent (Figure 40). The location's average of 52 percent of users on bicycles is within range of the study-wide average of 50 percent. The percentage of cyclists using helmets has risen steadily, from 52 percent in 2002 to 62 percent in 2008. The average of 57 percent is slightly higher than the study-wide average of 51 percent.

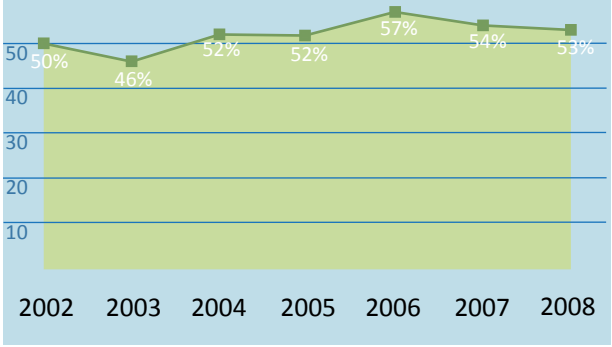
FIGURE 39: WEEKDAY USER VOLUME

On average, three percent of users were observed using rollerblades, which is similar to the study-wide average of four percent. The percentage of greenway users observed rollerblading has declined from 2002 to 2008, keeping in line with the greater study-wide trends.

The percentage of weekday users observed jogging at this location has remained fairly constant, ranging from 18 percent in 2007 to 23 percent in 2003 and 2005. The average percentage of users observed jogging at this location is 21 percent — lower than the study-wide average of 23 percent.

The percentage of users walking at this location during the week has remained steady, ranging from 21 percent to 27 percent.

FIGURE 40: CYCLISTS AS A PERCENTAGE OF USERS



Weekend Analysis

Between 2002 and 2008, the number of users at this location on weekends has more than tripled (Figure 41).

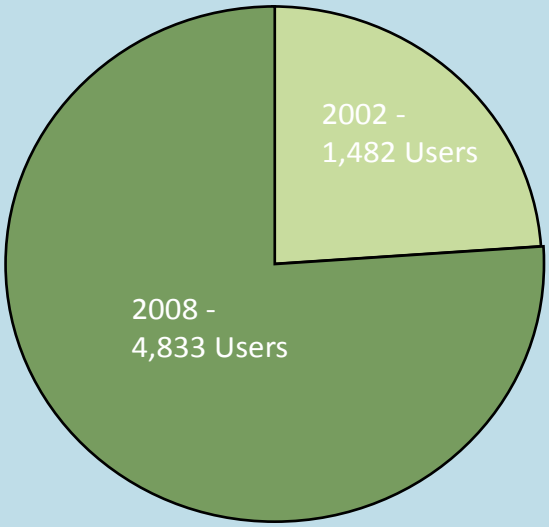
The percentage of users riding a bicycle has increased by fivefold in volume from 515 in 2002 to 2,588 in 2008. This increase mirrors the study-wide trend. The percentage observed using helmets has, likewise, increased, averaging 62 percent of users. This percentage is higher than the study-wide average of 53 percent of users observed using helmets on weekends.

The percentage of users rollerblading has declined from 2002 to 2008, from five percent to two percent. The decline in rollerblade usage is a trend study-wide.

The percentage of users who jog has declined between 2002 and 2008 by six percentage points. The percentage of users who jog on weekends is slightly higher than the percentage during the week.

Walking, as a percentage of total uses has decreased by a third, from 34 percent in 2002 to 23 percent in 2008, but is still higher at this location than the study-wide average of 24 percent.

FIGURE 41: WEEKEND USER VOLUME



Route 9A travels through Riverside Park

ROUTE 9A AT 125TH STREET

Route 9A at 125th Street is just north of Riverside Park in Manhattanville. The bicycle and pedestrian path runs adjacent to the elevated Henry Hudson Parkway.

Weekday Analysis

Route 9A at 125th Street has the lowest user volume in the study during the week, with an average of 563 users (Figure 42).

Seventy-six percent of weekday users were observed on bicycles. Cyclist volumes swung between 310 and 595 users, representing 66 to 82 percent of the total volume (see Figure 43). The percentage of users observed riding bicycles is significantly higher at this location than the study-wide average of 50 percent. Overall, the percentage of cyclists using helmets averages 52 percent, just a point more than the study-wide average of 51 percent. However, the percentage of weekday cyclists using helmets has been several percentage points or higher than the study-wide averages each year surveyed except 2004, which lowered the overall helmet usage.

The number of weekday users observed rollerblading has decreased each year, from 30 users in 2002 to 5 in 2007 (see Figure 43). This location averages two percent of users rollerblading compared to the study-wide average of four percent. In keeping with the study-wide trend, the percentage has also decreased each year, from five percent to one percent over the study period.

From 2002 to 2007, the percentage of users jogging dropped from 17 percent to 8 percent, and averaged 12 percent (Figure 43). The percentage of users jogging is much lower at this location than the study-wide average of 24 percent.

The percentage of users walking has remained steady—between 10 and 12 percent—every year except 2004, when it was particularly low (Figure 43). Similar to the jogging trend, the walkers represent less than half the study-wide average of 24 percent.

The percentage of male users is higher at this location than the study-wide average; conversely, the percentage of female users is lower. This difference is most pronounced during the week, when an average of 74 percent of users are male, and 26 percent are female. This location has 10 percent more males and 10 percent fewer females than the study-wide weekday averages.

FIGURE 42: WEEKDAY USER VOLUME

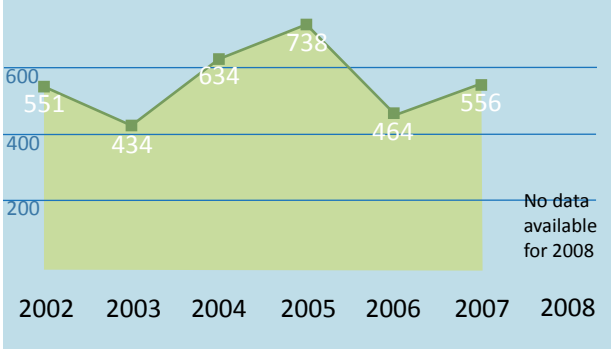
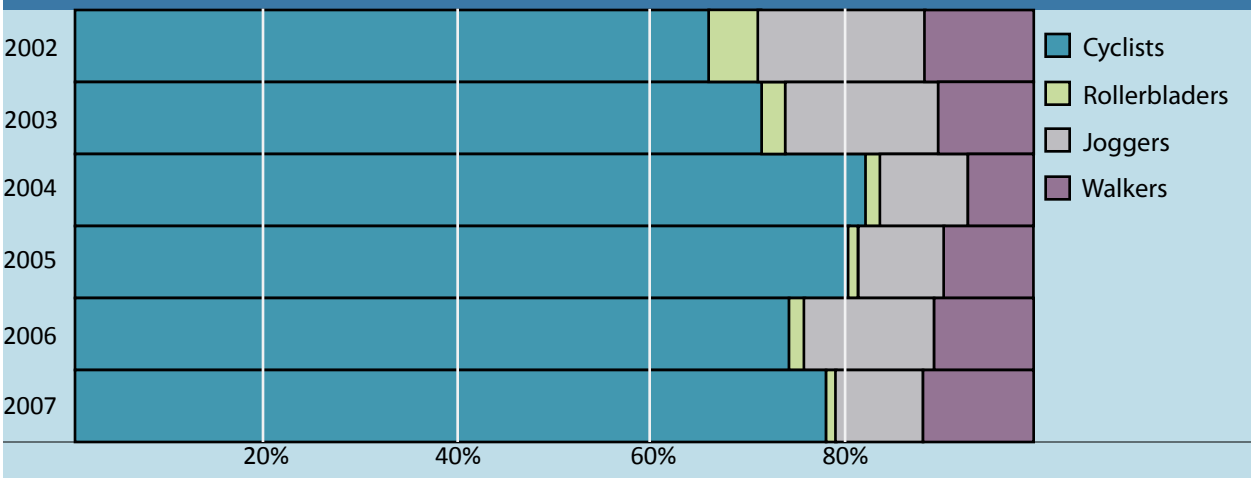


FIGURE 43: WEEKDAY GREENWAY USER MODAL SPLIT



Weekend Analysis

Weekend counts at this location will be compared for the years 2002 and 2006 due to the construction of the West Harlem waterfront area and of the greenway path at this location in 2008. Unlike other study-locations, which generally doubled in volume, there was just a modest 54 percent increase in users at this location between 2002 and 2006 (Figure 44). The volume of users on weekends is, on average, double the weekday volume, implying that this segment of the greenway is used mostly for recreational purpose.

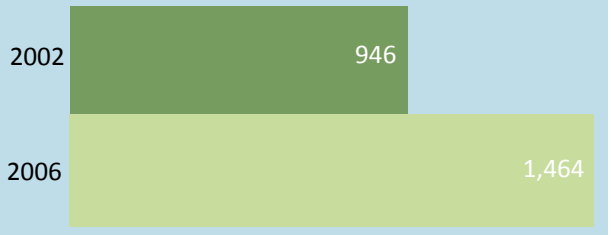
The percentage of users observed riding a bicycle is especially high at this location—an average of 75 percent of weekend users are cyclists. In general the percentage of users riding a bicycle did not change significantly from 2002 to 2006. The percentage of bicycle riders at this location is much higher than the study-wide average of 45 percent. Helmet usage rose about 20 percent between 2002 and 2006. It averaged 71 percent at this location, compared to the study-wide average of 53 percent.

The volume of users rollerblading remained steady between 2002 and 2006—with 35 and 36 rollerbladers, respectively—but the percentage of use that this number represents has decreased with the larger volume of total users. The percentage of users rollerblading averages lower than the study-wide average of four percent.

The percentage of users jogging at this location increased from 11 percent to 15 percent between 2002 and 2006. At 13 percent, this location averages the lowest percentage of joggers in the study. The average at this location is 14 percentage points below the study-wide average of 27 percent.

Like the study-wide trend, the percentage of users who walk has remained stable. However, the percentage of users who walk is less than half the study-wide average in both 2002 and 2006, at just nine and eight percent, respectively. For comparison, the study-wide average was 22 percent in 2002 and 25 percent in 2006.

FIGURE 44: WEEKEND USER VOLUME



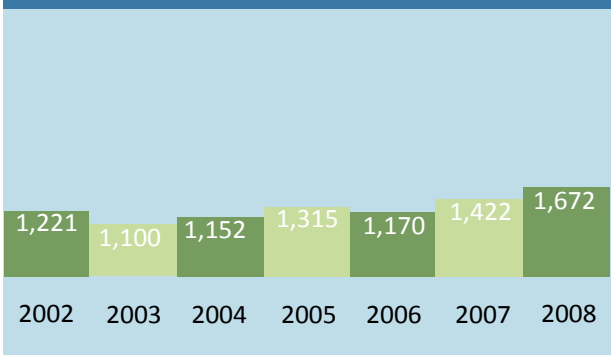
EAST RIVER AT HOUSTON STREET

The East River Greenway at Houston Street runs adjacent to East River Park, which features many recreational amenities such as baseball diamonds, tennis courts, an outdoor amphitheatre, and a soccer field.

Weekday Analysis

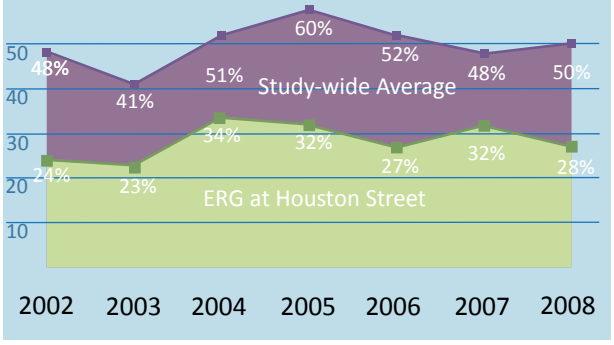
The volume of users was steady from 2002 to 2008, ranging from 1,100 to 1,672 (see Figure 45). An average of 29 percent of users were observed on bicycles during the week, compared to the study-wide average of 50 percent. The average percentage of users observed riding bicycles at this location is about half the study-wide average (see Figure 46). From 2002 to 2008, the percentage ranged from 23 to 34. This trend is prevalent at each location along the East River compared to the count locations along the Hudson River where more than 50 percent of the users on average are cyclists.

FIGURE 45: WEEKDAY USER VOLUME



The average percentage of cyclists observed using helmets at this location was just 37 percent—the second lowest average of the greenway weekday counts. The usage at this location averages 13 percentage points lower than the study-wide average. From 2002 to 2005, the percentage of cyclists using helmets was steady, fluctuating from 29 to 31 percent. Since 2006, the percentage has increased each year, from 37 percent in 2006 to 43 percent in 2007, and to 53 percent in 2008.

FIGURE 46: CYCLISTS AS A PERCENTAGE OF USERS



The percentage of users rollerblading at this location averages just one to two percent of total users each year. During the week, the volume of rollerbladers was steady from 2002 to 2004, ranging from 18 to 20. From 2006 to 2008, however, the volume of rollerbladers dropped to 10 - 12 users a day. In 2008, these 10 rollerbladers represented less than one percent of total users. Rollerblade use at this location averages a fourth of the study-wide average—one percent compared to four percent.

From 2002 to 2008, 38 to 48 percent of users jogged; The percentage of users jogging at this location has been consistently higher than the study-wide average of 23 percent.

From 2002 to 2008, the percentage of users walking during the week ranged from 23 to 32 percent. During the week, the percentage of users observed walking is close to the study-wide average of 24 percent.

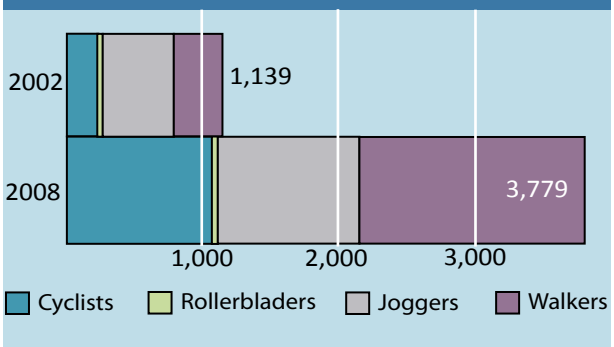

East River Greenway
At Houston Street

Weekend Analysis

Weekend volumes at this location more than tripled between 2002 and 2008 (Figure 47).

This location shows one of the lowest percentages of users cycling. An average of only 25 percent of weekend users were observed riding bicycles (see Figure 47), compared to the study-wide average of 45 percent. On average, just 42 percent of cyclists were observed using helmets. By contrast, 53 percent of weekend cyclists were observed using helmets study-wide.

FIGURE 47: WEEKEND USER VOLUME BY MODE



One percent of users rollerbladed at this location in both 2002 and 2008. Though this percentage is lower than the study-wide average of four percent, it breaks from the trend of decreasing rollerblade use.

The percentage of users jogging at this location mirrored the trend at nearly all locations, decreasing 15 percentage points from 47 percent in 2002 to 32 percent in 2008. Nevertheless, the percentage of users jogging is much higher at this location than at other study locations. It averaged 40 percent compared to the study-wide average of 27 percent.

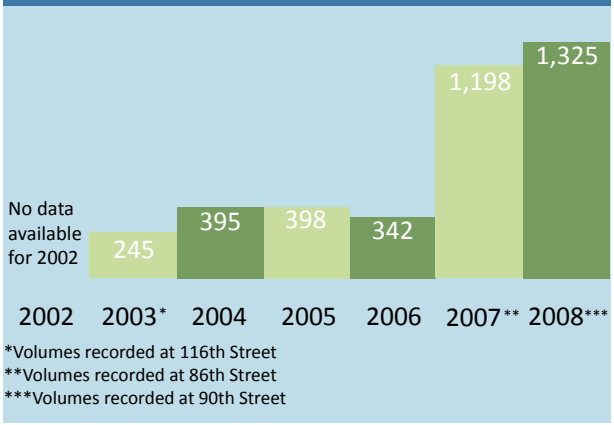
On weekends, the percentage of users walking increased from 31 percent to 38 percent along this stretch of the greenway (see Figure 47). This trend, along the East River at Houston Street is consistently higher than the study-wide averages of 22 percent in 2002 and 25 percent in 2008.

EAST RIVER NORTH OF 85TH STREET

The East River Greenway north of 85th Street is adjacent to numerous parks and playgrounds, including Thomas Jefferson Park and Carl Schurz Park. This stretch of the East River Greenway also connects to a pedestrian- and cyclist-only bridge to Randall's and Ward's Island. The bridge is open April through November and connects recreational greenway users to the amenities of Ward's Island Park, such as picnic tables and athletic fields.

Counts on the East River Greenway north of 85th Street were completed in four locations within a 20 block distance from 2003 to 2008: at 116th Street (2003), 106th Street (2004-2006), at 86th Street (2007) and at 90th Street (2008). The locations from 2003 to 2006 were situated close to the end of the segment of the East River Greenway across from Randall's Island. In 2007 and 2008, the count location was moved further south in order to collect data at the midpoint of this segment of the bicycle path, as it was done for the other count locations in Manhattan.

FIGURE 48: WEEKDAY USER VOLUME



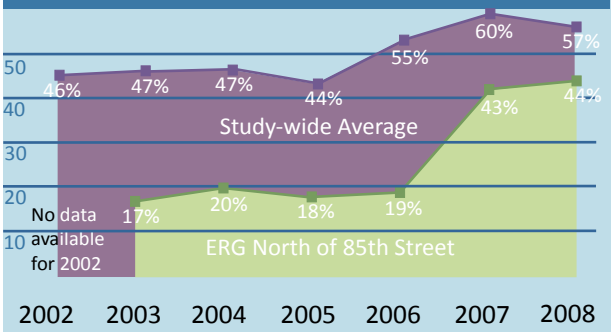
Weekday Analysis

The East River Greenway north of 85th Street boasts the largest increase in user volume from 2003 to 2008. No data was collected for the year 2002 during the weekday (Figure 48). The volume of users during the week remained fairly constant—starting at 245 in 2003, rising to about 400 from 2004 to 2006 (with an exception in 2006, when it dropped by 56 users)—before surging in 2007 and 2008 to more than triple its previous volumes. This is due mainly to the new count location which is at midpoint of the segment, near the East 90th Street Pier.

This location has the lowest percentage of users bicycling in the study (see Figure 50). It is generally less than half the study-wide average, with an average of 16 percent of users, compared to study-wide average of 50 percent. This trend is prevalent at each location along the East River compared to the count locations along the Hudson River where more than 50 percent of the users on average are cyclists.

Also the volume of cyclists did not increase as dramatically as it was observed from 2007 to 2008 for the user volume (Appendix A.II, pg 64). Though the volume of cyclists increased slightly each year, it was not proportionate to the spike in user volume of the last two years and remained generally between 75

FIGURE 49: WEEKDAY CYCLIST HELMET USE



and 125 in volume from 2003 to 2008.

The East River Greenway north of 85th Street also has the lowest percentages of helmet usage (Figure 49). Only 17 to 20 percent of weekday cyclists were observed using helmets from 2003 to 2006, though this percentage increased to 43 in 2007 and to 44 in 2008. Twenty-nine percent of cyclists were observed using helmets on average. Study-wide, this average is almost double, at 51 percent.

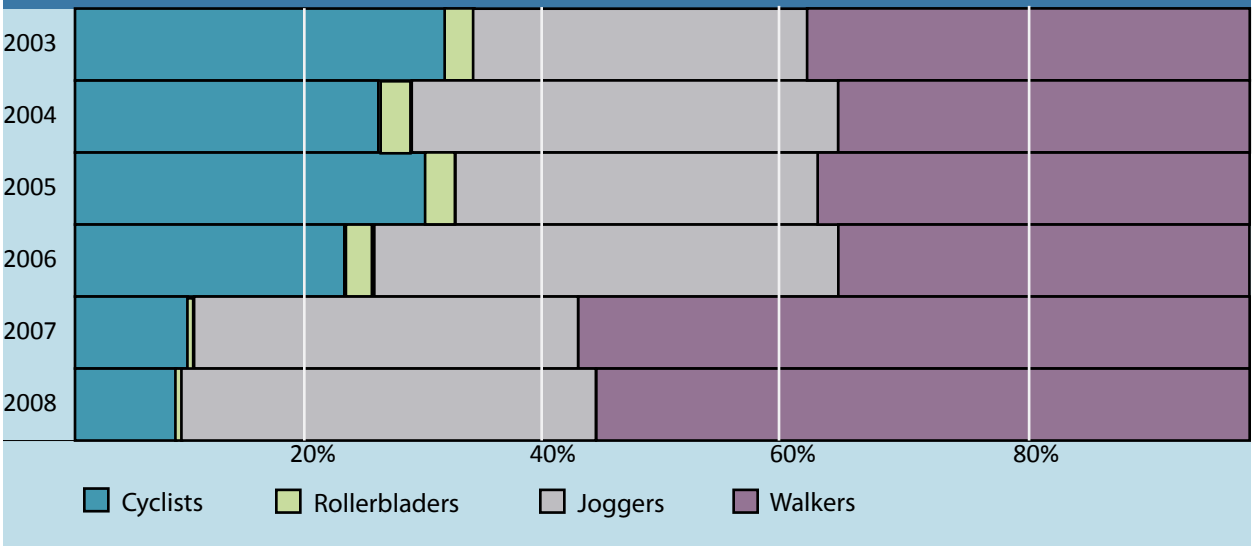
Rollerblader use is low at this location, averaging about one percent of use annually compared to the study-wide use of four percent. Less than 10 rollerbladers were counted in any given year. The 2008 counts marked just four rollerbladers—less than one percent of the users (see Figure 50).

Similar to the East River Greenway at Houston Street, this location has a higher than average percentage of users observed jogging: an average of 34 percent. The average at this location is 11 percentage points higher than the study-wide average of 23 percent.

This location features the highest percentage of users observed walking: 49 percent compared to study-wide average of 24 percent. In 2008, the percentage of walkers increased to 56—more than double the 2008 study-wide average of 26 percent. The bicycling and walking tables show opposite trends for the greenway path along the Hudson River compared to the one along the East River demonstrating their inverse relationship. (See Appendix A.II)

The highest percentage of female users and lowest percentage of male users were observed at this location. During the week, an average of 46 percent of users were female and an average of 54 percent were male. Study-wide, the average percentage of female users is 36 percent, while it is 64 percent for male users.

FIGURE 50: WEEKDAY GREENWAY USER MODAL SPLIT



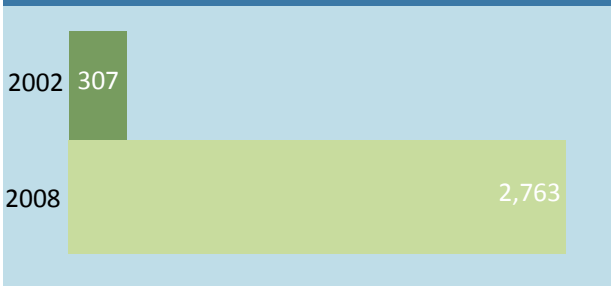
EAST RIVER NORTH OF 85TH STREET

Weekend Analysis

Weekend volumes have risen, from 307 in 2002 to 2,763 in 2008—a nine-fold increase in six years (Figure 51). However, this is mainly due to changing the count location from the northern end of the East River Greenway to the midpoint of this segment.

The percentage of users observed on bicycles averages just 18 percent, the lowest study-wide. By contrast, study-wide, cyclists average 45 percent of users. Moreover, it is one of only two locations where cyclists as a percentage of total users decreased between 2002 and 2008. The other location is on Route 9A at 125th Street. Weekend cyclists were more likely to be observed using helmets than weekday cyclists in 2002, mirroring the study-wide trend. In 2008, however, weekend cyclists were as likely observed to be wearing a helmet as their weekday counterparts (Appendix A.II).

FIGURE 51: WEEKEND USER VOLUME



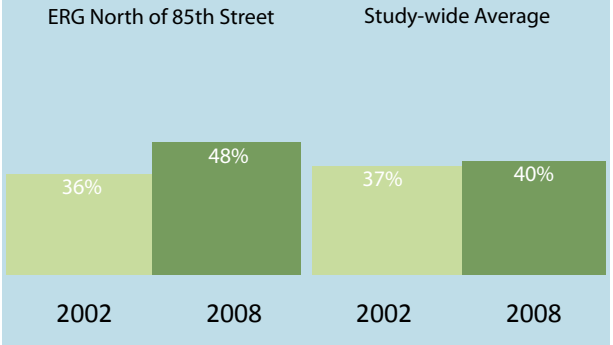
Rollerblade use was lowest at this location. In 2002, rollerbladers represented two percent of users, while in 2008, they represented less than a percent.

Joggers reached the highest average weekend users with 39 percent. This occurs even though the percentage of joggers decreased at this location from 43 percent in 2002 to 34 percent in 2008.

Walkers averaged 42 percent of weekend users, the highest in the study. While the percentage of walkers increased, the bicycling chart shows the opposite trend, demonstrating that the two share an inverse relationship.

Females represented 48 percent of weekend users in 2008, up from 36 percent in 2002. The increase at this location is especially significant when compared to the study-wide average growth rate of 3 percent, from an average of 37 percent in 2002 to an average of 40 percent in 2008 (Figure 52).

FIGURE 52: FEMALES AS A PERCENTAGE OF USERS



WEEKENDS

East River Greenway
At 116th Street

CONCLUSION

The bicycle ridership data that have been collected since 2001 indicate a great deal about bicycle riders and bicycle facilities in Manhattan. The number of on-street cyclists has increased 30 percent, while the number of off-street cyclists has increased by 22 percent since 2002. The exact reason for this increase in ridership is difficult to determine, however, one reason may be that since the year 2001 approximately 65* additional miles of on-street and off-street bicycle facilities have been built in Manhattan alone.

The data indicate that the number of riders in Manhattan is increasing in both genders. Furthermore, the ratio of male to female cyclists is becoming smaller for all bicycle facilities, suggesting that the number of female riders is increasing more than male riders. The ratio of male to female cyclists using on-street bicycle lanes decreased from 6.08:1 in 2001 to 4.92:1 in 2008. On the greenways during the week the ratio decreased from 1.92:1 in 2002 to 1.73:1 in 2008. During the weekends the ratio decreased from 1.71:1 in 2002 to 1.52:1 in 2008.

Helmet usage has also increased over the years. In 2001 the recorded percentage of on-street bicycle lane users wearing helmets was 22 percent, while in 2008 the recorded number of cyclists wearing helmets was 40 percent, an increase of 18 percentage points. The recorded percentage of greenway cyclists during the week wearing helmets increased from 46 percent in 2002 to 57 percent in 2008, also an increase of 11 percentage points. For the weekend counts, the percentage of cyclists on the greenway paths with a helmet went from 52% in 2002 to 58% in 2008, another increase in helmet usage.

Specific trends that the data indicate include increased ridership among both men and women, and increased helmet usage. The reasons for these positive trends could be an increase in the number of lanes striped and greenways built in order to improve the connectivity of the network. Other contributing factors could be increased education and awareness about biking in the City and improved dissemination of maps and information about the network. The Transportation Division of the New York City Department of City Planning will continue to collect bicycle user data annually and is committed to studying cycling trends in the City as new bicycle facilities are built and the dissemination of cycling information expands.

*According to the New York City Department of Transportation (NYCDOT) records the number of miles is much higher. On-street bicycle facilities with two lanes of bicycle traffic are measured once from start to end point by the NYC Department of City Planning while NYCDOT doubles the number of miles for streets with two-way bike traffic.

APPENDIX A: SUMMARY BY USER TYPE

CYCLIST VOLUMES: ON-STREET BICYCLE LANES

Cyclist Volume	2001	2002	2003	2004	2005	2006	2007	2008	Total	Average
Hudson Street	809	772	704	558	672	649	1204	1347	6716	840
Lafayette Street	1417	1379	1249	1327	1056	1076	1257	1436	10197	1275
Second Avenue	981	958	758	895	1027	1101	1109	1465	8294	1037
Broadway	796	831	677	812	808	774	623	713	6034	754
First Avenue	299	404	430	418	491	463	383	419	3307	413
Fifth Avenue	1031	982	928	1168	986	945	1018	854	7912	989
Sixth Avenue	1733	1766	1686	1913	1179	1286	1608	1447	12618	1577
Central Park West	N/A	501	407	471	764	678	692	793	4306	615
Fort Washington	N/A	418	400	388	548	358	413	510	3035	434
Adam Clayton	294	320	326	290	301	287	301	498	2617	327
STUDY-WIDE TOTAL	7360	8331	7565	8240	7832	7617	8609	9482	65036	8130

BIKE LANE USE: ON-STREET BICYCLE LANES

Bike Lane Totals	2001	2002	2003	2004	2005	2006	2007	2008	Total	Average
Hudson Street	416	402	366	294	372	321	555	726	3456	432
Lafayette Street	696	806	585	790	595	677	828	951	5928	741
Second Avenue	578	520	424	493	586	692	726	982	5001	625
Broadway	282	358	265	318	303	327	235	224	2312	289
First Avenue	77	195	233	261	322	224	189	245	1746	218
Fifth Avenue	430	479	348	452	466	480	0	499	3154	394
Sixth Avenue	1202	947	914	1060	728	656	976	857	7340	918
Central Park West	N/A	261	262	331	300	316	276	350	2096	299
Fort Washington	N/A	308	294	302	406	277	301	401	2289	327
Adam Clayton	178	210	0	229	200	220	206	393	1636	205
STUDY-WIDE TOTAL	3859	4486	3691	4530	4278	4190	4296	5628	34958	4370
Percentage of Total Users in the Bike Lane										
Hudson Street	51%	52%	52%	53%	55%	49%	46%	54%		52%
Lafayette Street	49%	58%	47%	60%	56%	63%	66%	66%		58%
Second Avenue	59%	54%	56%	55%	57%	63%	65%	67%		60%
Broadway	35%	43%	39%	39%	38%	42%	38%	31%		38%
First Avenue	26%	48%	54%	62%	66%	48%	49%	58%		52%
Fifth Avenue	42%	49%	38%	39%	47%	51%	0%	58%		40%
Sixth Avenue	69%	54%	54%	55%	62%	51%	61%	59%		58%
Central Park West	N/A	52%	64%	70%	39%	47%	40%	44%		51%
Fort Washington	N/A	74%	74%	78%	74%	77%	73%	79%		75%
Adam Clayton	61%	66%	0%	79%	66%	77%	68%	79%		62%
STUDY-WIDE TOTAL	52%	54%	49%	55%	55%	55%	50%	59%		54%

ADJACENT LANE USE: ON-STREET BICYCLE LANES

Adjacent Lane Totals	2001	2002	2003	2004	2005	2006	2007	2008	Total	Average
Hudson Street	35	7	36	13	20	23	165	129	428	54
Lafayette Street	252	73	220	91	138	49	23	113	959	120
Second Avenue	19	52	23	12	15	26	34	26	207	26
Broadway	166	137	122	134	132	130	105	137	1063	133
First Avenue	70	14	14	22	12	49	67	19	267	33
Fifth Avenue	113	80	78	142	73	86	0	63	635	79
Sixth Avenue	92	185	208	202	73	228	126	153	1267	158
Central Park West	N/A	23	19	22	19	10	43	24	160	23
Fort Washington	N/A	15	47	9	51	20	29	32	203	29
Adam Clayton	18	10	2	12	31	16	35	17	141	18
STUDY-WIDE TOTAL	765	596	769	659	564	637	627	713	5330	666
Percentage of Total Users in the Adjacent Lane										
Hudson Street	4%	1%	5%	2%	3%	4%	14%	10%		6%
Lafayette Street	18%	5%	18%	7%	13%	5%	2%	8%		9%
Second Avenue	2%	5%	3%	1%	1%	2%	3%	2%		2%
Broadway	21%	16%	18%	17%	16%	17%	17%	19%		18%
First Avenue	23%	3%	3%	5%	2%	11%	17%	5%		8%
Fifth Avenue	11%	8%	8%	12%	7%	9%	0%	7%		8%
Sixth Avenue	5%	10%	12%	11%	6%	18%	8%	11%		10%
Central Park West	N/A	5%	5%	5%	2%	1%	6%	3%		4%
Fort Washington	N/A	4%	12%	2%	9%	6%	7%	6%		7%
Adam Clayton	6%	3%	1%	4%	10%	6%	12%	3%		5%
STUDY-WIDE TOTAL	10%	7%	10%	8%	7%	8%	7%	8%		8%

OTHER LANE USE: ON-STREET BICYCLE LANES

Other Lane Totals	2001	2002	2003	2004	2005	2006	2007	2008	Total	Average
Hudson Street	142	186	164	117	135	112	320	310	1486	186
Lafayette Street	258	267	259	245	197	153	212	229	1820	228
Second Avenue	211	235	185	216	247	207	205	254	1760	220
Broadway	272	268	225	264	277	254	236	320	2116	265
First Avenue	96	138	127	102	97	135	99	107	901	113
Fifth Avenue	315	295	348	395	282	246	801	162	2844	356
Sixth Avenue	358	545	468	503	309	324	415	303	3225	403
Central Park West	N/A	50	8	18	16	17	48	49	206	29
Fort Washington	N/A	23	0	0	0	0	2	2	27	4
Adam Clayton	18	18	256	10	16	14	28	27	387	48
STUDY-WIDE TOTAL	1670	2025	2040	1870	1576	1462	2366	1763	14772	1847
Percentage of Total Users in Other Travel Lanes										
Hudson Street	18%	24%	23%	21%	20%	17%	27%	23%		22%
Lafayette Street	18%	19%	21%	18%	19%	14%	17%	16%		18%
Second Avenue	22%	25%	24%	24%	24%	19%	18%	17%		21%
Broadway	34%	32%	33%	33%	34%	33%	38%	45%		35%
First Avenue	32%	34%	30%	24%	20%	29%	26%	26%		27%
Fifth Avenue	31%	30%	38%	34%	29%	26%	79%	19%		29%
Sixth Avenue	21%	31%	28%	26%	26%	25%	26%	21%		26%
Central Park West	N/A	10%	2%	4%	2%	3%	7%	6%		5%
Fort Washington	N/A	6%	0%	0%	0%	0%	1%	1%		1%
Adam Clayton	6%	6%	79%	3%	5%	5%	9%	5%		6%
STUDY-WIDE TOTAL	23%	24%	27%	23%	20%	19%	27%	19%		23%

COUNTER-FLOW: ON-STREET BICYCLE LANES

Counter-flow, in the Bike Lane Totals	2001	2002	2003	2004	2005	2006	2007	2008	Total	Average
Hudson Street	130	105	74	82	92	120	69	82	751	94
Lafayette Street	129	129	83	137	86	119	118	95	896	112
Second Avenue	68	73	58	112	99	94	84	139	727	91
Broadway	33	27	27	39	37	25	13	8	209	26
First Avenue	25	19	22	12	12	25	12	22	149	19
Fifth Avenue	58	63	65	104	94	91	0	98	573	72
Sixth Avenue	53	40	56	92	44	34	62	80	461	58
Central Park West	N/A	42	36	47	76	51	48	85	385	55
Fort Washington	N/A	4	8	12	9	8	10	7	58	8
Adam Clayton	19	20	9	12	28	21	15	24	148	19
STUDY-WIDE TOTAL	515	522	438	649	577	588	428	640	4357	545
Percentage of Total Users Traveling Counter-flow, in the Bike Lane										
Hudson Street	16%	14%	11%	15%	14%	18%	6%	6%		11%
Lafayette Street	9%	9%	7%	10%	8%	11%	9%	7%		9%
Second Avenue	7%	8%	8%	13%	10%	9%	8%	9%		9%
Broadway	4%	3%	4%	5%	5%	3%	2%	1%		3%
First Avenue	8%	5%	5%	3%	2%	5%	3%	5%		5%
Fifth Avenue	6%	6%	7%	9%	10%	10%	0%	11%		7%
Sixth Avenue	3%	2%	3%	5%	4%	3%	4%	6%		4%
Central Park West	N/A	8%	9%	10%	10%	8%	7%	11%		9%
Fort Washington	N/A	1%	2%	3%	2%	2%	2%	1%		2%
Adam Clayton	6%	6%	3%	4%	9%	7%	5%	5%		6%
STUDY-WIDE TOTAL	7%	6%	6%	8%	7%	8%	5%	7%		7%

MALE HELMET USE: ON-STREET BICYCLE LANES

Total Male Cyclists	2001	2002	2003	2004	2005	2006	2007	2008	Total	Average
Hudson Street	670	646	583	496	577	550	1068	1169	5759	823
Lafayette Street	1142	1149	1043	1082	887	899	1038	1122	8362	1195
Second Avenue	790	748	603	711	834	868	844	1121	6519	815
Broadway	741	772	637	747	746	721	568	655	5587	698
First Avenue	282	385	410	389	472	441	358	387	3124	391
Fifth Avenue	874	828	785	985	819	803	847	677	6618	827
Sixth Avenue	1551	1595	1524	1707	1036	1160	1393	1237	11203	1400
Central Park West	N/A	391	324	385	625	527	541	653	3446	492
Fort Washington	N/A	397	360	355	496	296	381	447	2732	390
Adam Clayton	272	298	297	267	263	259	246	412	2314	289
STUDY-WIDE TOTAL	6322	7209	6566	7123.5	6755	6524	7284	7880	55664	6958
Number of Males Using Helmets										
Hudson Street	128	103	149	89	108	77	371	278	1303	163
Lafayette Street	238	197	202	186	172	197	335	347	1874	234
Second Avenue	107	106	76	133	154	207	263	286	1332	167
Broadway	129	124	97	114	125	130	209	168	1097	137
First Avenue	18	39	31	62	70	57	99	82	458	57
Fifth Avenue	139	141	109	181	149	162	283	175	1339	167
Sixth Avenue	268	289	209	320	192	231	473	371	2353	294
Central Park West	N/A	88	80	85	152	137	163	217	922	132
Fort Washington	N/A	139	155	164	247	168	207	222	1302	186
Adam Clayton	43	56	62	76	54	81	81	133	586	73
STUDY-WIDE TOTAL	1070	1282	1170	1411	1423	1447	2484	2279	12566	1571
Percentage of Males Using Helmets										
Hudson Street	19%	16%	26%	18%	19%	14%	35%	24%		23%
Lafayette Street	21%	17%	19%	17%	19%	22%	32%	31%		22%
Second Avenue	14%	14%	13%	19%	18%	24%	31%	26%		20%
Broadway	17%	16%	15%	15%	17%	18%	37%	26%		17%
First Avenue	6%	10%	8%	16%	15%	13%	28%	21%		14%
Fifth Avenue	16%	17%	14%	18%	18%	20%	33%	26%		20%
Sixth Avenue	17%	18%	14%	19%	19%	20%	34%	30%		21%
Central Park West	N/A	23%	25%	22%	24%	26%	30%	33%		27%
Fort Washington	N/A	35%	43%	46%	50%	57%	54%	50%		48%
Adam Clayton	16%	19%	21%	28%	21%	31%	33%	32%		25%
Total Male Cyclists	2001	2002	2003	2004	2005	2006	2007	2008	Total	Average
STUDY-WIDE TOTAL	14%	18%	18%	20%	21%	22%	34%	29%		22%

FEMALE HELMET USE: ON-STREET BICYCLE LANES

Total Female Cyclists	2001	2002	2003	2004	2005	2006	2007	2008	Total	Average
Hudson Street	140	126	121	62	95	99	136	178	957	120
Lafayette Street	275	230	206	245	169	177	219	314	1835	229
Second Avenue	191	210	155	184	193	233	265	344	1775	222
Broadway	55	59	40	65	62	52	55	58	446	56
First Avenue	17	19	20	29	19	22	25	32	183	23
Fifth Avenue	157	153	143	183	167	142	171	177	1293	162
Sixth Avenue	182	170	162	206	143	126	215	210	1414	177
Central Park West	N/A	110	83	86	139	151	151	140	860	123
Fort Washington	N/A	21	40	33	52	62	32	63	303	43
Adam Clayton	22	22	29	23	38	28	55	86	303	38
STUDY-WIDE TOTAL	1039	1120	999	1116	1077	1092	1324	1602	9369	1171
Number of Females Using Helmets										
Hudson Street	43	34	35	13	40	36	63	79	343	43
Lafayette Street	69	75	54	70	47	50	96	144	605	76
Second Avenue	48	51	48	43	42	94	102	143	571	71
Broadway	25	23	19	28	29	21	28	28	201	25
First Avenue	10	6	7	15	10	10	12	14	84	11
Fifth Avenue	49	59	45	61	55	41	69	75	454	57
Sixth Avenue	65	61	51	70	48	51	112	124	582	73
Central Park West	N/A	57	49	44	84	81	88	68	471	67
Fort Washington	N/A	13	28	12	44	55	28	42	222	32
Adam Clayton	10	11	16	10	18	13	30	73	181	23
STUDY-WIDE TOTAL	319	390	352	366	417	452	628	790	3714	464
Percentage of Females Using Helmets										
Hudson Street	31%	27%	29%	21%	42%	36%	46%	44%		36%
Lafayette Street	25%	33%	26%	29%	28%	28%	44%	46%		33%
Second Avenue	25%	24%	31%	23%	22%	40%	38%	42%		32%
Broadway	45%	39%	48%	43%	47%	40%	51%	48%		45%
First Avenue	59%	32%	35%	52%	53%	45%	48%	44%		46%
Fifth Avenue	31%	39%	31%	33%	33%	29%	40%	42%		35%
Sixth Avenue	36%	36%	31%	34%	34%	40%	52%	59%		41%
Central Park West	N/A	52%	59%	51%	60%	54%	58%	49%		55%
Fort Washington	N/A	62%	70%	36%	85%	89%	88%	67%		73%
Adam Clayton	45%	50%	55%	43%	47%	46%	55%	85%		60%
STUDY-WIDE TOTAL	31%	35%	35%	33%	39%	41%	47%	49%		40%

MALE TO FEMALE RATIO: ON-STREET BICYCLE LANES

Number of Males Per Female	2001	2002	2003	2004	2005	2006	2007	2008	Total	Average
Hudson Street	4.79	5.13	4.82	8.00	6.07	5.56	7.85	6.57		6.10
Lafayette Street	4.15	5.00	5.06	4.42	5.25	5.08	4.74	3.57		4.66
Second Avenue	4.14	3.56	3.89	3.86	4.32	3.73	3.18	3.26		3.74
Broadway	13.5	13.10	15.93	11.5	12.03	13.90	10.30	11.30		12.69
First Avenue	16.6	20.30	20.50	13.41	24.84	20	14.30	12.10		17.76
Fifth Avenue	5.57	5.41	5.49	5.38	4.90	5.65	4.95	3.82		5.15
Sixth Avenue	8.52	9.38	9.41	8.29	7.24	9.21	6.48	5.89		8.05
Central Park West	N/A	3.55	3.90	4.48	4.50	3.49	3.58	4.66		4.02
Fort Washington	N/A	18.9	9.00	10.8	9.54	4.77	11.9	7.10		10.28
Adam Clayton	12.4	13.55	10.24	11.61	6.92	9.25	4.47	4.79		9.15
STUDY-WIDE TOTAL	6.08	6.44	6.57	6.38	6.27	5.97	5.50	4.92		6.02

USER VOLUME: OFF-STREET BICYCLE PATHS ON WEEKDAYS

User Volume	2002	2003	2004	2005	2006	2007	2008	Total	Average
Route 9A at Chambers St	1875	3586	2847	2496	3286	N/A	N/A	14090	2818
Route 9A at 11th St	2630	2807	2134	1658	1764	3328	4291	18612	2659
Route 9A at 34th St	1825	1966	2095	1888	1790	2483	2617	14664	2095
Route 9A at 80th St	1638	1748	1719	2404	1525	2256	2337	13627	1947
Route 9A at 125th St	551	434	634	738	464	556	N/A	3377	563
East River Park at Houston St	1221	1100	1152	1315	1170	1422	1672	9052	1293
East River Park North of 85th St	N/A	245	395	398	342	1198	1325	3903	651
STUDY-WIDE TOTAL	9740	11886	10976	10897	10341	11243	12242	77325	1874

CYCLIST VOLUME: OFF-STREET BICYCLE PATHS ON WEEKDAYS

Total Cyclists	2002	2003	2004	2005	2006	2007	2008	Total	Average
Route 9A at Chambers St	682	960	790	1646	1190	N/A	N/A	5268	1054
Route 9A at 11th St	1,245	1237	1512	1239	1357	1,304	1,961	9855	1408
Route 9A at 34th St	1,267	1269	1378	1270	1269	1,897	1,890	10240	1463
Route 9A at 80th St	820	804	891	1244	863	1,222	1,247	7091	1013
Route 9A at 125th St	364	310	523	595	346	436	N/A	2574	368
East River Park at Houston St	295	250	395	426	315	451	460	2592	370
East River Park North of 85th St	N/A	77	100	120	79	125	120	621	104
STUDY-WIDE TOTAL	4673	4907	5589	6540	5419	5435	5678	38241	5463
Cyclists as a Percentage of Total Users									
Route 9A at Chambers St	36%	27%	28%	66%	36%	N/A	N/A		37%
Route 9A at 11th St	47%	44%	71%	75%	77%	39%	46%		53%
Route 9A at 34th St	69%	65%	66%	67%	71%	76%	72%		70%
Route 9A at 80th St	50%	46%	52%	52%	57%	54%	53%		52%
Route 9A at 125th St	66%	71%	82%	81%	75%	78%	N/A		76%
East River Park at Houston St	24%	23%	34%	32%	27%	32%	28%		29%
East River Park North of 85th St	N/A	31%	25%	30%	23%	10%	9%		16%
STUDY-WIDE TOTAL	48%	41%	51%	60%	52%	48%	46%		50%

CYCLIST HELMET USE: OFF-STREET BICYCLE PATHS ON WEEKDAYS

Total Cyclists	2002	2003	2004	2005	2006	2007	2008	Total	Average
Route 9A at Chambers St	682	960	790	1646	1190	N/A	N/A	5268	1054
Route 9A at 11th St	1,245	1237	1512	1239	1357	1,304	1,961	9855	1408
Route 9A at 34th St	1,267	1269	1378	1270	1269	1,897	1,890	10240	1463
Route 9A at 80th St	820	804	891	1244	863	1,222	1,247	7091	1013
Route 9A at 125th St	364	310	523	595	346	436	N/A	2574	368
East River Park at Houston St	295	250	395	426	315	451	460	2592	370
East River Park North of 85th St	N/A	77	100	120	79	125	120	621	104
STUDY-WIDE TOTAL	4673	4907	5589	6540	5419	5435	5678	38241	5463
Number of Cyclists Using Helmets									
Route 9A at Chambers St	262	437	345	441	599	N/A	N/A	2,084	417
Route 9A at 11th St	572	603	738	604	843	927	1052	5,339	763
Route 9A at 34th St	638	589	715	698	692	1060	1093	5,485	784
Route 9A at 80th St	427	421	500	684	518	741	779	4,070	581
Route 9A at 125th St	181	152	203	296	221	294	N/A	1,347	225
East River Park at Houston St	91	73	122	133	117	185	246	967	138
East River Park North of 85th St	N/A	13	20	22	15	54	53	177	30
STUDY-WIDE TOTAL	2,171	2,288	2,643	2,878	3,005	3,261	3,223	19,469	2,781
Percentage of Cyclists Using Helmets									
Route 9A at Chambers St	38%	46%	44%	27%	50%	N/A	N/A		40%
Route 9A at 11th St	46%	49%	49%	49%	62%	71%	54%		54%
Route 9A at 34th St	50%	46%	52%	55%	55%	56%	58%		54%
Route 9A at 80th St	52%	52%	56%	55%	60%	61%	62%		57%
Route 9A at 125th St	50%	49%	39%	50%	64%	67%	N/A		52%
East River Park at Houston St	31%	29%	31%	31%	37%	43%	53%		37%
East River Park North of 85th St	N/A	17%	20%	18%	19%	43%	44%		29%
STUDY-WIDE TOTAL	46%	47%	47%	44%	55%	60%	57%		51%

ROLLERBLADER VOLUME: OFF-STREET BICYCLE PATHS ON WEEKDAYS

Total Rollerbladers/Scooters	2002	2003	2004	2005	2006	2007	2008	Total	Average
Route 9A at Chambers St	151	178	99	102	125	N/A	N/A	655	131
Route 9A at 11th St	268	184	211	101	71	113	103	1051	150
Route 9A at 34th St	165	139	153	74	44	111	74	760	109
Route 9A at 80th St	96	60	42	67	17	36	28	346	49
Route 9A at 125th St	30	11	11	11	8	5	N/A	76	13
East River Park at Houston St	18	19	20	17	11	12	10	107	15
East River Park North of 85th St	N/A	6	6	9	6	3	4	34	6
STUDY-WIDE TOTAL	728	597	542	381	282	280	219	3029	433
Rollerbladers/Scooters as a Percentage of Total Users									
Route 9A at Chambers St	8%	5%	3%	4%	4%	N/A	N/A		5%
Route 9A at 11th St	10%	7%	10%	6%	4%	3%	2%		6%
Route 9A at 34th St	9%	7%	7%	4%	2%	4%	3%		5%
Route 9A at 80th St	6%	3%	2%	3%	1%	2%	1%		3%
Route 9A at 125th St	5%	3%	2%	1%	2%	1%	N/A		2%
East River Park at Houston St	1%	2%	2%	1%	1%	1%	1%		1%
East River Park North of 85th St	N/A	2%	2%	2%	2%	0%	0%		1%
STUDY-WIDE TOTAL	7%	5%	5%	3%	3%	2%	2%		4%

JOGGER VOLUME: OFF-STREET BICYCLE PATHS ON WEEKDAYS

Total Joggers	2002	2003	2004	2005	2006	2007	2008	Total	Average
Route 9A at Chambers St	373	982	739	199	951	N/A	N/A	3244	649
Route 9A at 11th St	723	698	326	262	243	1010	1,190	4452	636
Route 9A at 34th St	278	209	243	237	243	284	286	1780	254
Route 9A at 80th St	364	408	334	542	320	404	440	2812	402
Route 9A at 125th St	94	68	56	61	62	51	N/A	392	65
East River Park at Houston St	519	523	477	498	502	629	728	3876	554
East River Park North of 85th St	N/A	69	149	122	137	382	465	1324	189
STUDY-WIDE TOTAL	2351	2957	2324	1921	2458	2760	3109	17880	2554
Joggers as a Percentage of Total Users									
Route 9A at Chambers St	20%	27%	26%	8%	29%	N/A	N/A		23%
Route 9A at 11th St	27%	25%	15%	16%	14%	30%	28%		24%
Route 9A at 34th St	15%	11%	12%	13%	14%	11%	11%		12%
Route 9A at 80th St	22%	23%	19%	23%	21%	18%	19%		21%
Route 9A at 125th St	17%	16%	9%	8%	13%	9%	N/A		12%
East River Park at Houston St	43%	48%	41%	38%	43%	44%	44%		43%
East River Park North of 85th St	N/A	28%	38%	31%	40%	32%	35%		34%
STUDY-WIDE TOTAL	24%	25%	23%	19%	25%	24%	27%		23%

WALKER VOLUME: OFF-STREET BICYCLE PATHS ON WEEKDAYS

Total Walkers	2002	2003	2004	2005	2006	2007	2008	Total	Average
Route 9A at Chambers St	669	1466	1219	549	1020	N/A	N/A	4923	985
Route 9A at 11th St	394	688	85	56	92	901	1,037	3253	465
Route 9A at 34th St	115	349	321	307	234	191	367	1884	269
Route 9A at 80th St	358	476	452	551	325	594	622	3378	483
Route 9A at 125th St	63	45	44	71	48	64	N/A	335	56
East River Park at Houston St	389	308	260	374	342	334	474	2481	354
East River Park North of 85th St	N/A	93	140	127	120	688	736	1924	321
STUDY-WIDE TOTAL	1988	3425	2521	2055	2181	2772	3236	18178	2597
Walkers as a Percentage of Total Users									
Route 9A at Chambers St	36%	41%	43%	22%	31%	N/A	N/A		35%
Route 9A at 11th St	15%	25%	4%	3%	5%	27%	24%		17%
Route 9A at 34th St	6%	18%	15%	16%	13%	8%	14%		13%
Route 9A at 80th St	22%	27%	26%	23%	21%	26%	27%		25%
Route 9A at 125th St	11%	10%	7%	10%	10%	12%	N/A		10%
East River Park at Houston St	32%	28%	23%	28%	29%	23%	28%		27%
East River Park North of 85th St	N/A	38%	35%	32%	35%	57%	56%		42%
STUDY-WIDE TOTAL	20%	29%	23%	19%	21%	25%	26%		24%

MALE TO FEMALE RATIO: OFF-STREET BICYCLE PATHS ON WEEKDAYS

Total Males	2002	2003	2004	2005	2006	2007	2008	Total	Average
Route 9A at Chambers St	1253	2228	1725	1594	2079	N/A	N/A	8879	1776
Route 9A at 11th St	1713	1672	1514	1136	1228	2035	2825	12123	1732
Route 9A at 34th St	1249	1379	1433	1301	1212	1773	1786	10133	1448
Route 9A at 80th St	988	1062	1032	1480	944	1349	1458	8313	1188
Route 9A at 125th St	384	328	497	548	316	421	N/A	2494	416
East River Park at Houston St	815	615	760	849	790	883	1048	5760	823
East River Park North of 85th St	N/A	146	232	274	224	595	630	2101	350
STUDY-WIDE TOTAL	6402	7430	7193	7182	6793	7056	7747	49803	7115
Total Females									
Route 9A at Chambers St	622	1358	1122	902	1207	N/A	N/A	5211	1042
Route 9A at 11th St	917	1135	620	522	536	1293	1456	6479	926
Route 9A at 34th St	576	587	662	587	578	710	831	4531	647
Route 9A at 80th St	650	686	687	924	581	907	879	5314	759
Route 9A at 125th St	167	106	137	190	148	135	N/A	883	147
East River Park at Houston St	406	485	392	466	380	539	624	3292	470
East River Park North of 85th St	N/A	99	163	124	118	603	695	1802	257
STUDY-WIDE TOTAL	3338	4456	3783	3715	3548	4187	4485	27512	3930
Number of Males Per Female									
Route 9A at Chambers St	2.01	1.64	1.54	1.77	1.72	N/A	N/A		1.70
Route 9A at 11th St	1.87	1.47	2.44	2.18	2.29	1.57	1.94		1.87
Route 9A at 34th St	2.17	2.35	2.16	2.22	2.10	2.50	2.15		2.24
Route 9A at 80th St	1.52	1.55	1.50	1.60	1.62	1.49	1.66		1.56
Route 9A at 125th St	2.30	3.09	3.63	2.88	2.14	3.12	N/A		2.82
East River Park at Houston St	2.01	1.27	1.94	1.82	2.08	1.64	1.68		1.75
East River Park North of 85th St	N/A	1.47	1.42	2.21	1.90	0.99	0.91		1.17
STUDY-WIDE TOTAL	1.92	1.67	1.90	1.93	1.91	1.69	1.73		1.81

USER VOLUME: OFF-STREET BICYCLE PATHS ON WEEKENDS

User Volume	2002	2008	Average
Route 9A at Chambers St	990	2627*	1809
Route 9A at 11th St	2392	5761	4077
Route 9A at 34th St	1500	5830	3665
Route 9A at 80th St	1482	4833	3158
Route 9A at 125th St	946	1464*	1205
East River Park at Houston St	1139	3779	2459
East River Park North of 85th St	307	2763	1535
STUDY-WIDE TOTAL	8756	27058	17907
			*Volumes recorded in 2006

CYCLIST VOLUME: OFF-STREET BICYCLE PATHS ON WEEKENDS

Total Cyclists	2002	2008	Average
Route 9A at Chambers St	499	1529*	1014
Route 9A at 11th St	862	2982	1922
Route 9A at 34th St	650	3850	2250
Route 9A at 80th St	515	2588	1552
Route 9A at 125th St	721	1094*	908
East River Park at Houston St	228	1099	664
East River Park North of 85th St	62	474	268
STUDY-WIDE TOTAL	3537	13616	8576
Cyclists as a Percentage of Total Users			
Route 9A at Chambers St	50%	58%*	54%
Route 9A at 11th St	36%	52%	44%
Route 9A at 34th St	43%	66%	55%
Route 9A at 80th St	35%	54%	45%
Route 9A at 125th St	76%	75%*	75%
East River Park at Houston St	20%	29%	25%
East River Park North of 85th St	20%	17%	18%
STUDY-WIDE TOTAL	40%	50%	45%
			*Volumes recorded in 2006

CYCLIST HELMET USE: OFF-STREET BICYCLE PATHS ON WEEKENDS

Total Cyclists	2002	2008	Average
Route 9A at Chambers St	499	1529*	1014
Route 9A at 11th St	862	2982	1922
Route 9A at 34th St	650	3850	2250
Route 9A at 80th St	515	2588	1552
Route 9A at 125th St	721	1094*	908
East River Park at Houston St	228	1099	664
East River Park North of 85th St	62	474	268
STUDY-WIDE TOTAL	3537	13616	8576
Number of Cyclists Using Helmets			
Route 9A at Chambers St	248	844*	546
Route 9A at 11th St	404	1604	1004
Route 9A at 34th St	353	2233	1293
Route 9A at 80th St	298	1673	836
Route 9A at 125th St	439	876*	658
East River Park at Houston St	72	575	324
East River Park North of 85th St	23	190	107
STUDY-WIDE TOTAL	1837	7995	4916
Percentage of Cyclists Using Helmets			
Route 9A at Chambers St	50%	55%*	53%
Route 9A at 11th St	47%	54%	51%
Route 9A at 34th St	54%	58%	56%
Route 9A at 80th St	58%	65%	62%
Route 9A at 125th St	61%	80%*	71%
East River Park at Houston St	32%	52%	42%
East River Park North of 85th St	37%	40%	39%
STUDY-WIDE TOTAL	52%	58%	53%

*Volumes recorded in 2006

ROLLERBLADER VOLUME: OFF-STREET BICYCLE PATHS ON WEEKENDS

Total Rollerbladers/Scooters	2002	2008	Average
Route 9A at Chambers St	130	171*	151
Route 9A at 11th St	208	219	214
Route 9A at 34th St	132	205	169
Route 9A at 80th St	67	99	83
Route 9A at 125th St	35	36*	36
East River Park at Houston St	14	21	18
East River Park North of 85th St	7	6	7
NYC TOTAL	593	757	675
Rollerbladers/Scooters as a Percentage of Total Users			
Route 9A at Chambers St	13%	7%*	10%
Route 9A at 11th St	9%	4%	7%
Route 9A at 34th St	9%	4%	7%
Route 9A at 80th St	5%	2%	4%
Route 9A at 125th St	4%	2%*	3%
East River Park at Houston St	1%	1%	1%
East River Park North of 85th St	2%	0%	1%
STUDY-WIDE TOTAL	7%	3%	4%
			*Volumes recorded in 2006

JOGGER VOLUME: OFF-STREET BICYCLE PATHS ON WEEKENDS

Total Joggers	2002	2008	Average
Route 9A at Chambers St	241	334*	288
Route 9A at 11th St	852	1,415	1,134
Route 9A at 34th St	431	1,136	784
Route 9A at 80th St	397	1,014	706
Route 9A at 125th St	105	221*	163
East River Park at Houston St	539	1,205	872
East River Park North of 85th St	133	932	533
STUDY-WIDE TOTAL	2698	6,257	4478
Joggers as a Percentage of Total Users			
Route 9A at Chambers St	24%	13%*	19%
Route 9A at 11th St	36%	25%	31%
Route 9A at 34th St	29%	19%	24%
Route 9A at 80th St	27%	21%	24%
Route 9A at 125th St	11%	15%*	13%
East River Park at Houston St	47%	32%	40%
East River Park North of 85th St	43%	34%	39%
STUDY-WIDE TOTAL	31%	23%	27%
			*Volumes recorded in 2006

WALKER VOLUME: OFF-STREET BICYCLE PATHS ON WEEKENDS

Total Walkers	2002	2008	Average
Route 9A at Chambers St	120	593*	357
Route 9A at 11th St	470	1,145	808
Route 9A at 34th St	287	639	463
Route 9A at 80th St	503	1,132	818
Route 9A at 125th St	85	113*	101
East River Park at Houston St	358	1,454	906
East River Park North of 85th St	105	1351	728
STUDY-WIDE TOTAL	1,928	6,427	4,178
Walkers as a Percentage of Total Users			
Route 9A at Chambers St	12%	23%*	18%
Route 9A at 11th St	20%	20%	20%
Route 9A at 34th St	19%	11%	16%
Route 9A at 80th St	34%	23%	29%
Route 9A at 125th St	9%	8%*	9%
East River Park at Houston St	31%	38%	35%
East River Park North of 85th St	34%	49%	42%
STUDY-WIDE TOTAL	22%	25%	24%

*Volumes recorded in 2006

MALE TO FEMALE RATIO: OFF-STREET BICYCLE PATHS ON WEEKENDS

Total Males	2002	2008	Average
Route 9A at Chambers St	636	1,704*	1,170
Route 9A at 11th St	1,500	3,572	2,536
Route 9A at 34th St	956	3,634	2,295
Route 9A at 80th St	864	2,812	1,838
Route 9A at 125th St	599	899*	749
East River Park at Houston St	773	2,228	1,501
East River Park North of 85th St	197	1,427	812
STUDY-WIDE TOTAL	5,525	16,276	10,901
Total Females			
Route 9A at Chambers St	354	913 *	634
Route 9A at 11th St	892	2,189	1,541
Route 9A at 34th St	544	2,196	1370
Route 9A at 80th St	618	2,021	1,320
Route 9A at 125th St	347	565*	456
East River Park at Houston St	366	1,551	959
East River Park North of 85th St	110	1,336	723
STUDY-WIDE TOTAL	3231	10,771	7,001
Number of Males Per Female			
Route 9A at Chambers St	1.80	1.87	1.84
Route 9A at 11th St	1.68	1.63	1.66
Route 9A at 34th St	1.76	1.65	1.7
Route 9A at 80th St	1.40	1.39	1.39
Route 9A at 125th St	1.73	1.59	1.66
East River Park at Houston St	2.11	1.44	1.76
East River Park North of 85th St	1.79	1.07	1.43
STUDY-WIDE TOTAL	1.71	1.52	1.61
			*Volumes recorded in 2006

APPENDIX B: DATA SHEETS BY YEAR

2001 BICYCLE COUNT DATA: ON-STREET BICYCLE LANES

	Bicyclist							Male Cyclist			Female Cyclist			Rollerblader/Scooter					
	In bike lane	In adjacent Lane	Other travel lane	Counter-flow in lane	Counter-flow out of lane	Side-walk	**Total Cyclists**	with helmet	no helmet	total male	with helmet	no helmet	total female	in lane	out of lane	Counter-flow in lane	Total Bladers	Under age 16	**Total Users**
Hudson at Christopher St	416	35	142	130	58	28	**809**	128	542	670	43	98	141	49	19	22	90	10	**899**
Lafayette at Astor Place	696	252	258	129	45	37	**1,417**	238	904	1,142	69	207	276	25	11	8	44	3	**1,461**
Second Ave at Seventh St	578	19	211	68	30	75	**981**	107	683	790	48	143	191	31	10	8	49	9	**1,030**
Broadway at 28th St	295	163	257	51	45	9	**820**	121	641	762	23	35	58	13	13	4	30	1	**850**
Broadway at 48th St	268	168	287	14	33	2	**772**	138	583	721	18	33	51	25	24	2	51	0	**823**
First Ave at 91st St	77	70	96	25	16	15	**299**	18	264	282	10	7	17	3	1	1	5	5	**304**
Fifth Ave at 14th St	430	113	315	58	70	45	**1,031**	139	735	874	49	108	157	23	41	13	77	4	**1,108**
Sixth Ave at 23rd St	1,202	92	358	53	26	2	**1,733**	268	1,283	1,551	65	117	182	47	10	10	67	3	**1,800**
AC Powell Blvd at 113th St NB	84	16	16	13	4	24	**157**	32	110	142	8	7	15	1	2	0	3	3	**160**
AC Powell Blvd at 113th St SB	94	2	2	6	7	26	**137**	11	119	130	3	4	7	1	5	0	6	0	**143**

2002 BICYCLE COUNT DATA: ON-STREET BICYCLE LANES

	Bicyclist							Male Cyclist			Female Cyclist			Rollerblader/Scooter					
	In bike lane	In adjacent Lane	Other travel lane	Counter-flow in lane	Counter-flow out of lane	Side-walk	**Total Cyclists**	with helmet	no helmet	total male	with helmet	no helmet	total female	in lane	out of lane	Counter-flow in lane	Total Bladers	Under age 16	**Total Users**
Hudson at Christopher St	402	7	186	105	42	30	**772**	103	543	646	34	92	126	21	9	10	40	4	**812**
Lafayette at Astor Place	806	73	267	129	70	34	**1,379**	197	952	1,149	75	155	230	23	14	11	48	0	**1,427**
Second Ave at Seventh St	520	52	235	73	25	53	**958**	106	642	748	51	159	210	25	10	16	51	3	**1,009**
Broadway at 28th St	311	186	269	36	43	10	**855**	106	685	791	28	36	64	14	8	8	30	0	**885**
Broadway at 48th St	406	88	268	18	20	7	**807**	142	611	753	18	36	54	28	22	5	55	0	**862**
First Ave at 91st St	195	14	138	19	28	10	**404**	39	346	385	6	13	19	7	6	2	15	5	**419**
Fifth Ave at 14th St	479	80	295	63	32	33	**982**	141	687	828	59	94	153	25	23	13	61	6	**1,043**
Sixth Ave at 23rd St	947	185	545	40	35	13	**1,765**	289	1,306	1,595	61	109	170	34	60	6	100	2	**1,865**
CPW at 93rd St	261	23	50	42	43	82	**501**	88	303	391	57	53	110	11	14	7	32	17	**533**
Fort Washing-ton at 173rd St NB	190	14	23	3	1	40	**271**	106	153	259	9	3	12	0	6	1	7	6	**278**
Fort Washing-ton at 173rd St SB	118	1	0	1	2	25	**147**	33	105	138	4	5	9	0	6	5	11	0	**158**
AC Powell Blvd at 113th St NB	91	9	15	17	0	31	**163**	29	124	153	3	7	10	0	1	0	1	17	**164**
AC Powell Blvd at 113th St SB	119	1	3	3	0	31	**157**	27	118	145	8	4	12	10	3	0	13	19	**170**

2003 BICYCLE COUNT DATA: ON-STREET BICYCLE LANES

	Bicyclist							Male Cyclist			Female Cyclist			Rollerblader/Scooter					
	In bike lane	In adjacent Lane	Other travel lane	Counter-flow in lane	Counter-flow out of lane	Side-walk	**Total Cyclists**	with helmet	no helmet	total male	with helmet	no helmet	total female	in lane	out of lane	Counter-flow in lane	Total Bladers	Under age 16	**Total Users**
Hudson at Christopher St	366	36	164	74	32	32	**704**	149	434	583	35	86	121	33	23	12	68	4	**772**
Lafayette at Astor Place	585	220	259	83	53	49	**1,249**	202	841	1,043	54	152	206	13	17	19	49	5	**1,298**
Second Ave at Seventh St	424	23	185	58	27	41	**758**	76	527	603	48	107	155	18	10	4	32	3	**790**
Broadway at 28th St	220	166	200	35	29	15	**665**	75	544	619	19	27	46	19	13	6	38	0	**703**
Broadway at 48th St	310	78	251	19	21	11	**690**	119	536	655	20	15	35	12	12	1	25	0	**715**
First Ave at 91st St	233	14	127	22	20	14	**430**	31	379	410	7	13	20	2	6	2	10	8	**440**
Fifth Ave at 14th St	348	78	348	65	46	43	**928**	109	676	785	45	98	143	11	16	6	33	9	**961**
Sixth Ave at 23rd St	914	208	468	56	35	5	**1,686**	209	1,315	1,524	51	111	162	34	26	4	64	1	**1,750**
CPW at 93rd St	262	19	8	36	10	72	**407**	80	244	324	49	34	83	9	4	3	16	20	**423**
Fort Wash-ington Ave at 173rd St NB	140	28	0	6	0	29	**203**	76	107	183	14	6	20	1	4	0	5	11	**208**
Fort Wash-ington Ave at 173rd St SB	154	19	0	2	0	22	**197**	79	98	177	14	6	20	1	2	0	3	6	**200**
AC Powell Blvd at 113th St NB	0	0	127	6	5	19	**157**	41	102	143	6	8	14	0	0	1	1	13	**158**
AC Powell Blvd at 113th St SB	0	2	129	3	17	18	**169**	21	133	154	10	5	15	1	1	0	2	7	**171**

2004 BICYCLE COUNT DATA: ON-STREET BICYCLE LANES

	Bicyclist							Male Cyclist			Female Cyclist			Rollerblader/Scooter					
	In bike lane	In adjacent Lane	Other travel lane	Counter-flow in lane	Counter-flow out of lane	Side-walk	**Total Cyclists**	with helmet	no helmet	total male	with helmet	no helmet	total female	in lane	out of lane	Counter-flow in lane	Total Bladers	Under age 16	**Total Users**
Hudson at Christopher St	294	13	117	82	38	14	**558**	89	407	496	13	49	62	16	10	7	33	1	**591**
Lafayette at Astor Place	790	91	245	137	33	31	**1327**	186	896	1082	70	175	245	22	29	12	63	3	**1390**
Second Ave at Seventh St	493	12	216	112	24	38	**895**	133	578	711	43	141	184	15	3	9	27	2	**922**
Broadway at 28th St	272	187	207	50	44	12	**772**	103	602	705	28	39	67	14	9	3	26	0	**798**
Broadway at 48th St	364	81	321	29	40	17	**852**	126	662	788	28	36	64	12	9	5	26	1	**878**
First Ave at 91st St	261	22	102	12	11	10	**418**	62	327	389	15	14	29	0	2	0	2	0	**420**
Fifth Ave at 14th St	452	142	395	104	57	18	**1,168**	181	804	985	61	122	183	23	16	5	44	0	**1212**
Sixth Ave at 23rd St	1,060	202	503	92	42	14	**1,913**	320	1,387	1,707	70	136	206	34	34	7	75	0	**1988**
CPW at 93rd St	331	22	18	47	2	51	**471**	85	300	385	44	42	86	13	3	7	23	2	**494**
Fort Wash-ington Ave at 173rd St NB	198	3	0	2	0	32	**235**	110	102	212	16	7	23	1	0	0	1	11	**236**
Fort Wash-ington Ave at 173rd St SB	104	6	0	10	3	30	**153**	54	89	143	6	4	10	0	0	0	0	9	**153**
AC Powell Blvd at 113th St NB	117	8	7	5	6	9	**152**	44	98	142	4	6	10	0	1	4	5	2	**157**
AC Powell Blvd at 113th St SB	112	4	3	7	3	9	**138**	32	93	125	6	7	13	4	2	0	6	3	**144**

2005 BICYCLE COUNT DATA: ON-STREET BICYCLE LANES

	Bicyclist							Male Cyclist			Female Cyclist			Rollerblader/Scooter					
	In bike lane	In adjacent Lane	Other travel lane	Counter-flow in lane	Counter-flow out of lane	Side-walk	**Total Cyclists**	with helmet	no helmet	total male	with helmet	no helmet	total female	in lane	out of lane	Counter-flow in lane	Total Bladers	Under age 16	**Total Users**
Hudson at Christopher St	372	20	135	92	37	16	**1072**	108	469	577	40	55	95	10	23	4	37	1	**1109**
Lafayette at Astor Place	595	138	197	86	22	18	**1056**	172	715	887	47	122	169	18	8	6	32	1	**1088**
Second Ave at Seventh St	586	15	247	99	29	51	**1027**	154	680	834	42	151	193	17	10	9	36	7	**1063**
Broadway at 28th St	345	147	254	56	71	12	**885**	133	672	805	34	46	80	6	7	5	18	0	**903**
Broadway at 48th St	262	117	301	18	33	1	**732**	118	569	687	25	20	45	4	9	0	13	0	**745**
First Ave at 91st St	322	12	97	12	37	11	**491**	70	402	472	10	9	19	3	4	1	8	2	**499**
Fifth Ave at 14th St	466	73	282	94	57	14	**986**	149	670	819	55	112	167	10	12	2	24	0	**1010**
Sixth Ave at 23rd St	728	73	309	44	10	15	**1179**	192	844	1036	48	95	143	15	14	0	29	0	**1208**
CPW at 93rd St	300	19	16	76	277	76	**764**	152	473	625	64	75	139	17	6	13	38	13	**802**
Fort Wash-ington Ave at 173rd St NB	232	12	0	5	2	39	**290**	135	130	265	20	5	25	0	0	0	0	19	**290**
Fort Wash-ington Ave at 173rd St SB	174	39	0	4	2	39	**258**	112	119	231	24	3	27	1	0	0	1	22	**259**
AC Powell Blvd at 113th St NB	109	7	11	15	1	12	**155**	33	107	140	7	8	15	3	0	1	4	7	**159**
AC Powell Blvd at 113th St SB	91	24	5	13	2	11	**146**	21	102	123	11	12	23	2	1	0	3	5	**149**

2006 BICYCLE COUNT DATA: ON-STREET BICYCLE LANES

	Bicyclist							Male Cyclist			Female Cyclist			Rollerblader/Scooter					
	In bike lane	In adjacent Lane	Other travel lane	Counter-flow in lane	Counter-flow out of lane	Side-walk	**Total Cyclists**	with helmet	no helmet	total male	with helmet	no helmet	total female	in lane	out of lane	Counter-flow in lane	Total Bladers	Under age 16	**Total Users**
Hudson at Christopher St	321	23	112	120	49	24	**649**	77	473	550	36	63	99	12	14	4	30	1	**679**
Lafayette at Astor Place	677	49	153	119	34	44	**1076**	197	702	899	50	127	177	12	17	14	43	2	**1119**
Second Ave at Seventh St	692	26	207	94	37	45	**1101**	207	661	868	94	139	233	16	7	4	27	2	**1128**
Broadway at 28th St	367	83	174	37	41	6	**708**	122	534	656	20	32	52	12	3	2	17	0	**725**
Broadway at 48th St	287	178	335	14	18	8	**840**	139	648	787	23	30	53	7	12	4	23	0	**863**
First Ave at 91st St	224	49	135	25	12	18	**463**	57	384	441	10	12	22	2	9	0	11	6	**461**
Fifth Ave at 14th St	480	86	246	91	33	9	**945**	162	641	803	41	101	142	14	20	7	41	2	**986**
Sixth Ave at 23rd St	656	228	324	34	28	16	**1286**	231	929	1160	51	75	126	14	7	5	26	0	**1312**
CPW at 93rd St	316	10	17	51	226	58	**678**	137	390	527	81	70	151	10	6	5	521	13	**699**
Fort Wash-ington Ave at 173rd St NB	128	5	0	4	5	28	**170**	81	64	145	24	1	25	1	0	0	1	15	**171**
Fort Wash-ington Ave at 173rd St SB	149	15	0	4	1	19	**188**	87	64	151	31	6	37	2	0	1	3	7	**191**
AC Powell Blvd at 113th St NB	110	11	10	12	0	8	**151**	47	90	137	6	8	14	3	1	2	6	8	**157**
AC Powell Blvd at 113th St SB	110	5	4	9	0	8	**136**	34	88	122	7	7	14	0	1	0	1	1	**137**

2007 BICYCLE COUNT DATA: ON-STREET BICYCLE LANES

	Bicyclist							Male Cyclist			Female Cyclist			Rollerblader/Scooter					
	In bike lane	In adjacent Lane	Other travel lane	Counter-flow in lane	Counter-flow out of lane	Side-walk	**Total Cyclists**	with helmet	no helmet	total male	with helmet	no helmet	total female	in lane	out of lane	Counter-flow in lane	Total Bladers	Under age 16	**Total Users**
Eighth Ave at 26th St	555	165	320	69	59	36	**1204**	371	697	1068	63	73	136	23	24	7	7	0	**1258**
Lafayette at Astor Place	828	23	212	118	25	51	**1257**	335	703	1038	96	123	219	24	12	14	14	21	**1307**
Second Ave at Seventh St	726	34	205	84	23	37	**1109**	263	581	844	102	163	265	12	21	4	4	9	**1145**
Broadway at 48th St	235	105	236	13	28	6	**623**	209	359	568	28	27	55	10	15	1	1	1	**649**
First Ave at 91st St	189	67	99	12	5	11	**383**	99	259	358	12	13	25	13	12	2	2	5	**409**
Fifth Ave at 14th St	0	0	801	0	136	81	**1018**	283	564	847	69	102	171	0	27	9	9	8	**1054**
Sixth Ave at 23rd St	976	126	415	62	25	4	**1608**	473	920	1393	112	103	215	33	32	8	8	0	**1681**
CPW at 93rd St	276	43	48	48	216	61	**692**	163	378	541	88	63	151	14	16	11	11	10	**734**
Fort Wash-ington Ave at 173rd St NB	157	3	0	4	2	31	**197**	93	90	183	13	1	14	0	1	4	4	9	**193**
Fort Wash-ington Ave at 173rd St SB	144	26	2	6	8	30	**216**	114	84	198	15	3	18	7	5	0	0	9	**230**
AC Powell Blvd at 113th St NB	110	26	17	9	4	7	**173**	59	86	145	19	9	28	3	0	1	1	5	**177**
AC Powell Blvd at 113th St SB	96	9	11	6	2	4	**128**	22	79	101	11	16	27	3	0	0	0	5	**131**

2008 BICYCLE COUNT DATA: ON-STREET BICYCLE LANES

	Bicyclist							Male Cyclist			Female Cyclist			Rollerblader/Scooter					
	In bike lane	In adjacent Lane	Other travel lane	Counter-flow in lane	Counter-flow out of lane	Side-walk	**Total Cyclists**	with helmet	no helmet	total male	with helmet	no helmet	total female	in lane	out of lane	Counter-flow in lane	Total Bladers	Under age 16	**Total Users**
Eighth Ave at 26th St	726	129	310	82	84	16	**1,347**	278	891	1,169	79	99	178	26	15	18	59	0	**1,406**
Lafayette at Astor Place	951	113	229	95	21	27	**1,436**	347	775	1,122	144	170	314	33	19	22	74	1	**1,510**
Second Ave at Seventh St	982	26	254	139	30	34	**1,465**	286	835	1,121	143	201	344	17	6	20	43	8	**1,508**
Broadway at 48th St	224	137	320	8	17	7	**713**	168	487	655	28	30	58	8	6	2	16	0	**729**
First Ave at 91st St	245	19	107	22	23	3	**419**	82	305	387	14	18	32	0	0	1	1	1	**420**
Fifth Ave at 14th St	499	63	162	98	20	12	**854**	175	502	677	75	102	177	18	5	9	32	0	**886**
Sixth Ave at 23rd St	857	153	303	80	47	7	**1,447**	371	866	1,237	124	86	210	17	8	2	27	2	**1,474**
CPW at 93rd St	350	24	49	85	253	32	**793**	217	436	653	68	72	140	8	5	13	26	1	**819**
Fort Wash-ington Ave at 173rd St NB	268	18	2	6	0	30	**324**	154	126	280	32	12	44	0	1	0	1	14	**325**
Fort Wash-ington Ave at 173rd St SB	133	14	0	1	0	38	**186**	68	99	167	10	9	19	1	0	0	1	11	**187**
AC Powell Blvd at 113th St NB	215	7	21	12	3	12	**270**	73	148	221	45	4	49	1	9	3	13	2	**283**
AC Powell Blvd at 113th St SB	178	10	6	12	3	19	**228**	60	131	191	28	9	37	1	11	0	12	7	**240**

2002 BICYCLE COUNT DATA: OFF-STREET PATHS ON WEEKDAYS

	Direction	Bicyclists	Helmets	Bladers	Joggers	Walkers	**Total Users**	Male	Female
Route 9A at Chambers St									
7:30am-9:30am	NB+SB	219	112	16	16	94	**345**	224	121
12:00pm-2:00pm	NB+SB	89	33	10	21	77	**197**	147	50
4:30pm-6:30pm	NB+SB	339	117	112	322	440	**1213**	882	451
Total	NB+SB	682	262	151	373	669	**1875**	1253	622
Route 9A at 11th St									
7:30am-9:30am	NB+SB	435	234	62	306	105	**908**	541	367
12:00pm-2:00pm	NB+SB	186	89	65	159	121	**531**	364	167
4:30pm-6:30pm	NB+SB	624	249	141	258	168	**1191**	808	383
Total	NB+SB	1245	572	268	723	394	**2630**	1713	917
Route 9A at 34th St									
7:30am-9:30am	NB+SB	395	266	35	111	72	**613**	407	206
12:00pm-2:00pm	NB+SB	288	123	41	60	22	**411**	279	132
4:30pm-6:30pm	NB+SB	584	249	89	107	21	**801**	563	238
Total	NB+SB	1267	638	165	278	115	**1825**	1249	576
Route 9A at 80th St									
7:30am-9:30am	NB+SB	251	179	10	183	140	**584**	328	256
12:00pm-2:00pm	NB+SB	206	80	32	72	92	**402**	246	156
4:30pm-6:30pm	NB+SB	363	168	54	109	126	**652**	414	238
Total	NB+SB	820	427	96	364	358	**1638**	988	650
Route 9A at 125th St									
7:30am-9:30am	NB+SB	119	53	4	32	21	**176**	113	63
12:00pm-2:00pm	NB+SB	76	37	11	15	24	**126**	90	36
4:30pm-6:30pm	NB+SB	169	91	15	47	18	**249**	181	68
Total	NB+SB	364	181	30	94	63	**551**	384	167
East River Park at Houston St									
7:30am-9:30am	NB+SB	84	40	1	202	137	**424**	243	181
12:00pm-2:00pm	NB+SB	57	16	6	101	83	**247**	186	61
4:30pm-6:30pm	NB+SB	154	35	11	216	169	**550**	386	164
Total	NB+SB	295	91	18	519	389	**1221**	815	406
East River Park at 116th St									
7:30am-9:30am	NB+SB	13	2	0	45	42	**100**	42	58
12:00pm-2:00pm	NB+SB	35	7	2	8	19	**64**	44	20
4:30pm-6:30pm	NB+SB	29	4	4	16	32	**81**	60	21
Total	NB+SB	77	13	6	69	93	**245**	146	99

2003 BICYCLE COUNT DATA: OFF-STREET PATHS ON WEEKDAYS

	Direction	Bicyclists	Helmets	Bladers	Joggers	Walkers	**Total Users**	Male	Female
Route 9A at Chambers St									
7:30am-9:30am	NB+SB	277	141	40	419	451	**1187**	682	505
12:00pm-2:00pm	NB+SB	208	86	36	178	435	**857**	553	304
4:30pm-6:30pm	NB+SB	475	210	102	385	580	**1542**	993	549
Total	NB+SB	960	437	178	982	1466	**3586**	2228	1358
Route 9A at 11th St									
7:30am-9:30am	NB+SB	371	205	47	343	227	**988**	512	476
12:00pm-2:00pm	NB+SB	257	110	26	31	41	**355**	227	128
4:30pm-6:30pm	NB+SB	609	288	111	324	420	**1464**	933	531
Total	NB+SB	1237	603	184	698	688	**2807**	1672	1135
Route 9A at 34th St									
7:30am-9:30am	NB+SB	464	267	42	73	154	**733**	472	261
12:00pm-2:00pm	NB+SB	335	137	22	53	166	**576**	403	173
4:30pm-6:30pm	NB+SB	470	185	75	83	29	**657**	504	153
Total	NB+SB	1269	589	139	209	349	**1966**	1379	587
Route 9A at 80th St									
7:30am-9:30am	NB+SB	262	176	13	170	167	**612**	336	276
12:00pm-2:00pm	NB+SB	178	73	5	69	92	**344**	219	125
4:30pm-6:30pm	NB+SB	364	172	42	169	217	**792**	507	285
Total	NB+SB	804	421	60	408	476	**1748**	1062	686
Route 9A at 125th St									
7:30am-9:30am	NB+SB	91	54	4	11	15	**121**	95	26
12:00pm-2:00pm	NB+SB	83	35	2	23	11	**119**	88	31
4:30pm-6:30pm	NB+SB	136	63	5	34	19	**194**	145	49
Total	NB+SB	310	152	11	68	45	**434**	328	106
East River Park at Houston St									
7:30am-9:30am	NB+SB	76	39	0	169	87	**332**	190	142
12:00pm-2:00pm	NB+SB	58	12	0	56	42	**156**	122	34
4:30pm-6:30pm	NB+SB	116	22	19	298	179	**612**	303	309
Total	NB+SB	250	73	19	523	308	**1100**	615	485
East River Park at 116th St									
7:30am-9:30am	NB+SB	13	2	0	45	42	**100**	42	58
12:00pm-2:00pm	NB+SB	35	7	2	8	19	**64**	44	20
4:30pm-6:30pm	NB+SB	29	4	4	16	32	**81**	60	21
Total	NB+SB	77	13	6	69	93	**245**	146	99

2004 BICYCLE COUNT DATA: OFF-STREET PATHS ON WEEKDAYS

	Direction	Bicyclists	Helmets	Bladers	Joggers	Walkers	**Total Users**	Male	Female
Route 9A at Chambers St									
7:30am-9:30am	NB+SB	304	174	27	446	415	**1192**	656	536
12:00pm-2:00pm	NB+SB	253	66	45	228	524	**1050**	673	377
4:30pm-6:30pm	NB+SB	233	105	27	65	280	**605**	396	209
Total	NB+SB	790	345	99	739	1219	**2847**	1725	1122
Route 9A at 11th St									
7:30am-9:30am	NB+SB	444	268	29	133	23	**629**	416	213
12:00pm-2:00pm	NB+SB	250	92	35	53	24	**362**	265	97
4:30pm-6:30pm	NB+SB	818	378	147	140	38	**1143**	833	310
Total	NB+SB	1512	738	211	326	85	**2134**	1514	620
Route 9A at 34th St									
7:30am-9:30am	NB+SB	354	222	17	58	22	**451**	290	161
12:00pm-2:00pm	NB+SB	185	116	27	67	228	**507**	325	182
4:30pm-6:30pm	NB+SB	839	377	109	118	71	**1137**	818	319
Total	NB+SB	1378	715	153	243	321	**2095**	1433	662
Route 9A at 80th St									
7:30am-9:30am	NB+SB	339	240	7	200	168	**714**	400	314
12:00pm-2:00pm	NB+SB	255	132	9	65	174	**503**	294	209
4:30pm-6:30pm	NB+SB	297	128	26	69	110	**502**	338	164
Total	NB+SB	891	500	42	334	452	**1719**	1032	687
Route 9A at 125th St									
7:30am-9:30am	NB+SB	139	42	1	23	8	**171**	130	41
12:00pm-2:00pm	NB+SB	122	52	1	6	12	**141**	109	32
4:30pm-6:30pm	NB+SB	262	109	9	27	24	**322**	258	64
Total	NB+SB	523	203	11	56	44	**634**	497	137
East River Park at Houston St									
7:30am-9:30am	NB+SB	103	34	4	198	88	**393**	229	164
12:00pm-2:00pm	NB+SB	110	28	2	68	84	**264**	186	78
4:30pm-6:30pm	NB+SB	182	60	14	211	88	**495**	345	150
Total	NB+SB	395	122	20	477	260	**1152**	760	392
East River Park at 106th St									
7:30am-9:30am	NB+SB	10	3	0	83	64	**157**	46	111
12:00pm-2:00pm	NB+SB	41	5	5	14	35	**95**	84	11
4:30pm-6:30pm	NB+SB	49	12	1	52	41	**143**	102	41
Total	NB+SB	100	20	6	149	140	**395**	232	163

2005 BICYCLE COUNT DATA: OFF-STREET PATHS ON WEEKDAYS

	Direction	Bicyclists	Helmets	Bladers	Joggers	Walkers	**Total Users**	Male	Female
Route 9A at Chambers St									
7:30am-9:30am	NB+SB	576	171	30	92	168	**866**	505	361
12:00pm-2:00pm	NB+SB	523	59	17	49	305	**894**	561	333
4:30pm-6:30pm	NB+SB	547	211	55	58	76	**736**	528	208
Total	NB+SB	1646	441	102	199	549	**2496**	1594	902
Route 9A at 11th St									
7:30am-9:30am	NB+SB	486	257	26	74	13	**599**	380	219
12:00pm-2:00pm	NB+SB	223	89	27	43	17	**310**	215	95
4:30pm-6:30pm	NB+SB	530	258	48	145	26	**749**	541	208
Total	NB+SB	1239	604	101	262	56	**1658**	1136	522
Route 9A at 34th St									
7:30am-9:30am	NB+SB	484	300	20	98	72	**674**	423	251
12:00pm-2:00pm	NB+SB	250	124	15	43	125	**433**	305	128
4:30pm-6:30pm	NB+SB	536	274	39	96	110	**781**	573	208
Total	NB+SB	1270	698	74	237	307	**1888**	1301	587
Route 9A at 80th St									
7:30am-9:30am	NB+SB	389	250	20	289	153	**851**	436	415
12:00pm-2:00pm	NB+SB	262	113	22	60	174	**518**	333	185
4:30pm-6:30pm	NB+SB	593	321	25	193	224	**1035**	711	324
Total	NB+SB	1244	684	67	542	551	**2404**	1480	924
Route 9A at 125th St									
7:30am-9:30am	NB+SB	186	94	1	30	17	**234**	159	75
12:00pm-2:00pm	NB+SB	100	46	2	7	15	**124**	96	28
4:30pm-6:30pm	NB+SB	309	156	8	24	39	**380**	293	87
Total	NB+SB	595	296	11	61	71	**738**	548	190
East River Park at Houston St									
7:30am-9:30am	NB+SB	142	51	7	237	97	**483**	241	242
12:00pm-2:00pm	NB+SB	86	12	2	85	74	**247**	176	71
4:30pm-6:30pm	NB+SB	198	70	8	176	203	**585**	432	153
Total	NB+SB	426	133	17	498	374	**1315**	849	466
East River Park North of 85th St									
7:30am-9:30am	NB+SB	17	6	0	51	54	**122**	77	45
12:00pm-2:00pm	NB+SB	32	2	1	19	24	**76**	58	18
4:30pm-6:30pm	NB+SB	71	14	8	52	49	**200**	139	61
Total	NB+SB	120	22	9	122	127	**398**	274	124

2006 BICYCLE COUNT DATA: OFF-STREET PATHS ON WEEKDAYS

	Direction	Bicyclists	Helmets	Bladers	Joggers	Walkers	**Total Users**	Male	Female
Route 9A at Chambers St									
7:30am-9:30am	NB+SB	466	285	50	508	431	**1455**	832	623
12:00pm-2:00pm	NB+SB	247	62	27	75	123	**472**	328	144
4:30pm-6:30pm	NB+SB	477	252	48	368	466	**1359**	919	440
Total	NB+SB	1190	599	125	951	1020	**3286**	2079	1207
Route 9A at 11th St									
7:30am-9:30am	NB+SB	542	362	15	69	17	**643**	441	202
12:00pm-2:00pm	NB+SB	273	199	17	64	50	**405**	272	133
4:30pm-6:30pm	NB+SB	542	282	39	110	25	**716**	515	201
Total	NB+SB	1357	843	71	243	92	**1764**	1228	536
Route 9A at 34th St									
7:30am-9:30am	NB+SB	479	301	17	90	58	**644**	425	219
12:00pm-2:00pm	NB+SB	300	127	13	76	157	**546**	350	196
4:30pm-6:30pm	NB+SB	490	264	14	77	19	**600**	437	163
Total	NB+SB	1269	692	44	243	234	**1790**	1212	578
Route 9A at 80th St									
7:30am-9:30am	NB+SB	298	234	6	144	92	**540**	301	239
12:00pm-2:00pm	NB+SB	195	80	2	50	110	**357**	215	142
4:30pm-6:30pm	NB+SB	370	204	9	126	123	**628**	428	200
Total	NB+SB	863	518	17	320	325	**1525**	944	581
Route 9A at 125th St									
7:30am-9:30am	NB+SB	116	86	0	28	10	**154**	96	58
12:00pm-2:00pm	NB+SB	80	46	3	12	20	**115**	77	38
4:30pm-6:30pm	NB+SB	150	89	5	22	18	**195**	143	52
Total	NB+SB	346	221	8	62	48	**464**	316	148
East River Park at Houston St									
7:30am-9:30am	NB+SB	96	46	2	177	85	**360**	228	132
12:00pm-2:00pm	NB+SB	67	21	1	78	76	**222**	154	68
4:30pm-6:30pm	NB+SB	152	50	8	247	181	**588**	408	180
Total	NB+SB	315	117	11	502	342	**1170**	790	380
East River Park North of 85th St									
7:30am-9:30am	NB+SB	22	6	1	64	49	**136**	80	56
12:00pm-2:00pm	NB+SB	30	3	2	26	33	**91**	69	22
4:30pm-6:30pm	NB+SB	27	6	3	47	38	**115**	75	40
Total	NB+SB	79	15	6	137	120	**342**	224	118

2007 BICYCLE COUNT DATA: OFF-STREET PATHS ON WEEKDAYS

	Direction	Bicyclists	Helmets	Bladers	Joggers	Walkers	**Total Users**	Male	Female
Route 9A at 11th St									
7:30am-9:30am	NB+SB	175	396	24	471	227	**897**	445	452
12:00pm-2:00pm	NB+SB	382	157	34	189	282	**887**	598	289
4:30pm-6:30pm	NB+SB	747	374	55	350	392	**1544**	992	552
Total	NB+SB	1304	927	113	1010	901	**3328**	2035	1293
Route 9A at 34th St									
7:30am-9:30am	NB+SB	614	415	28	110	113	**865**	570	295
12:00pm-2:00pm	NB+SB	398	172	18	53	27	**496**	351	145
4:30pm-6:30pm	NB+SB	885	473	65	121	51	**1122**	852	270
Total	NB+SB	1897	1060	111	284	191	**2483**	1773	710
Route 9A at 80th St									
7:30am-9:30am	NB+SB	394	295	6	185	206	**791**	429	362
12:00pm-2:00pm	NB+SB	290	149	3	55	150	**498**	292	206
4:30pm-6:30pm	NB+SB	538	297	27	164	238	**967**	628	339
Total	NB+SB	1222	741	36	404	594	**2256**	1349	907
Route 9A at 125th St									
7:30am-9:30am	NB+SB	169	130	0	21	12	**202**	149	53
12:00pm-2:00pm	NB+SB	107	60	4	9	21	**141**	107	34
4:30pm-6:30pm	NB+SB	160	104	1	21	31	**213**	165	48
Total	NB+SB	436	294	5	51	64	**556**	421	135
East River Park at Houston St									
7:30am-9:30am	NB+SB	137	66	3	265	108	**513**	273	240
12:00pm-2:00pm	NB+SB	101	31	5	112	90	**308**	207	101
4:30pm-6:30pm	NB+SB	213	88	4	248	136	**601**	403	198
Total	NB+SB	451	185	12	625	334	**1422**	883	539
East River Park North of 85th St									
7:30am-9:30am	NB+SB	26	14	0	170	185	**381**	182	199
12:00pm-2:00pm	NB+SB	37	14	0	63	206	**306**	154	152
4:30pm-6:30pm	NB+SB	62	26	3	149	297	**511**	259	252
Total	NB+SB	125	54	3	382	688	**1198**	595	603

2008 BICYCLE COUNT DATA: OFF-STREET PATHS ON WEEKDAYS

	Direction	Bicyclists	Helmets	Bladers	Joggers	Walkers	**Total Users**	Male	Female
Route 9A at 11th St									
7:30am-9:30am	NB+SB	670	454	19	123	17	**829**	545	284
12:00pm-2:00pm	NB+SB	406	194	9	62	17	**494**	349	145
4:30pm-6:30pm	NB+SB	871	404	47	147	33	**1098**	694	404
Total	NB+SB	1947	1052	75	332	67	**2421**	1588	833
Route 9A at 11th St Esplanade									
7:30am-9:30am	NB+SB	0	n/a	2	398	240	**640**	n/a	n/a
12:00pm-2:00pm	NB+SB	5	n/a	6	173	270	**454**	n/a	n/a
4:30pm-6:30pm	NB+SB	9	n/a	20	287	460	**776**	n/a	n/a
Total	NB+SB	14	n/a	28	858	970	**1870**	n/a	n/a
Route 9A at 34th St									
7:30am-9:30am	NB+SB	722	463	11	112	21	**866**	607	259
12:00pm-2:00pm	NB+SB	425	215	14	52	67	**558**	380	178
4:30pm-6:30pm	NB+SB	743	415	49	122	279	**1193**	799	394
Total	NB+SB	1890	1093	74	286	367	**2617**	1786	831
Route 9A at 80th St									
7:30am-9:30am	NB+SB	421	293	4	215	180	**820**	497	323
12:00pm-2:00pm	NB+SB	237	127	9	66	198	**510**	304	206
4:30pm-6:30pm	NB+SB	589	359	15	159	244	**1007**	657	350
Total	NB+SB	1247	779	28	440	622	**2337**	1458	879
East River Park at Houston St									
7:30am-9:30am	NB+SB	172	106	3	347	114	**636**	344	292
12:00pm-2:00pm	NB+SB	77	28	2	113	132	**324**	203	121
4:30pm-6:30pm	NB+SB	211	112	5	268	228	**712**	501	211
Total	NB+SB	460	246	10	728	474	**1672**	1048	624
East River Park North of 85th St									
7:30am-9:30am	NB+SB	40	13	0	185	220	**445**	188	257
12:00pm-2:00pm	NB+SB	18	9	1	64	210	**293**	167	126
4:30pm-6:30pm	NB+SB	62	31	3	216	306	**587**	275	312
Total	NB+SB	120	53	4	465	736	**1325**	630	695

2002 BICYCLE COUNT DATA: OFF-STREET PATHS ON WEEKENDS

	Direction	Bicyclists	Helmets	Bladers	Joggers	Walkers	**Total Users**	Male	Female
Route 9A @ Chambers Street									
	NB	242	111	63	85	77	**467**	309	158
	SB	257	137	67	156	43	**523**	327	196
	NB+SB	499	248	130	241	120	**990**	636	354
Route 9A @ 11th Street									
	NB	**424**	**192**	**91**	**418**	**222**	**1155**	**730**	**425**
	SB	438	212	117	434	248	**1237**	770	467
	NB+SB	862	404	208	852	470	**2392**	1500	892
Route 9A @ 34th Street									
	NB	313	162	61	218	133	**725**	460	265
	SB	**337**	**191**	**71**	**213**	**154**	**775**	**496**	**279**
	NB+SB	650	353	132	431	287	**1500**	956	544
Route 9A at 80th Street									
	NB	274	159	27	200	259	**760**	430	330
	SB	241	139	40	197	244	**722**	434	288
	NB+SB	**515**	**298**	**67**	**397**	**503**	**1482**	**864**	**618**
Route 9A @ 125th Street									
	NB	410	239	18	58	61	**547**	349	198
	SB	311	200	17	47	24	**399**	250	149
	NB+SB	721	439	35	105	85	**946**	599	347
East River Park @ Houston Street									
	NB	108	37	4	295	187	**594**	400	194
	SB	120	35	10	244	171	**545**	373	172
	NB+SB	228	72	14	539	358	**1139**	773	366
East River Park @ 116th Street									
	NB	**36**	**15**	**4**	**62**	**52**	**154**	**99**	**55**
	SB	26	8	3	71	53	**153**	98	55
	NB+SB	62	23	7	133	105	**307**	197	110

2008 BICYCLE COUNT DATA: OFF-STREET PATHS ON WEEKENDS

	Direction	Bicyclists	Helmets	Bladers	Joggers	Walkers	**Total Users**	Male	Female
Route 9A @ Chambers Street*									
	NB	709	397	74	155	282	**1,220**	776	434
	SB	820	447	97	179	311	**1,407**	928	479
	NB+SB	1,529	844	171	334	593	**2,627**	1,704	913
Route 9A @ 11th Street									
	NB	**1382**	**747**	**78**	**200**	**29**	**1689**	**1020**	**669**
	SB	1595	857	101	282	54	**2032**	1294	738
	NB+SB	2977	1604	179	482	83	**3721**	2314	1407
Route 9A @ 11th Street Esplanade									
	NB+SB	5	n/a	40	933	1062	**2040**	n/a	n/a
Route 9A @ 34th Street									
	NB	1806	1028	87	538	332	**2763**	1702	1061
	SB	**2044**	**1205**	**118**	**598**	**307**	**3067**	**1932**	**1135**
	NB+SB	3850	2233	205	1136	639	**5830**	3634	2196
Route 9A @ 80th Street									
	NB	1290	813	58	494	604	**2446**	1440	1006
	SB	1298	860	41	520	528	**2387**	1372	1015
	NB+SB	**2588**	**1673**	**99**	**1014**	**1132**	**4833**	**2812**	**2021**
Route 9A @ 125th Street*									
	NB	565	446	21	123	62	**771**	467	304
	SB	529	430	15	98	51	**693**	432	261
	NB+SB	1094	876	36	221	113	**1464**	899	565
East River Park @ Houston Street									
	NB	482	256	9	577	789	**1857**	1104	753
	SB	617	319	12	628	665	**1922**	1124	798
	NB+SB	1099	575	21	1205	1454	**3779**	2228	1551
East River Park @ North of 85th Street									
	NB	**250**	**106**	**2**	**480**	**682**	**1414**	**733**	**681**
	SB	224	84	4	452	669	**1349**	694	655
	NB+SB	474	190	6	932	1351	**2763**	1427	1336
*Volume recorded in 2006									

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The Transportation Division of the Department of City Planning is grateful to all staff who participated in the bicycle ridership counts over the years.