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.

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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
QUEENS
MANHATTAN
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