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CHINA TOWN BUS STUDY

New York City Department of City Planning
Transportation Division

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2009



Chinatown Bus Study

Final Report

October 2009

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City of New York

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Executive Summary

The Chinatown private interstate bus industry began operating from Chinatown in 1997, primarily serving restaurant workers and other Chinese immigrants residing in New York City. The buses provide an alternative to air travel, which is costly and not always possible for those who do not have resident status. After September 11, 2001 airline travel became more time-consuming and cumbersome and bus travel became popular among students and bargain seekers outside the immigrant market. Another reason for the popularity of Chinatown buses is that they cost less than other long-standing commercial bus companies, such as Greyhound or Peter Pan. Chinatown buses are also more convenient for the target population since they operate from the Chinatown of the origin city to the Chinatown of the destination city, and eliminate unnecessary traveling.

The Chinatown Bus industry has grown exponentially since 1997, and the buses now travel to many states along the east coast such as Massachusetts, District of Columbia, Delaware, Maryland, Virginia, Pennsylvania and Georgia. Some bus companies travel further west to Ohio, Tennessee and Illinois. Many problems have arisen as a result of this expansion and competition. A significant strain has been placed on the surrounding community. Reported and observed problems include increased congestion, noise, pollution, litter and decreased safety and security for pedestrians, passengers and neighborhood residents.

This study documents the efforts of New York City to improve these conditions. Case studies and historical models are presented to demonstrate how other cities manage the Chinatown bus industry and how New York City has historically managed similar problems of severe congestion.

There are several studies underway in Chinatown that overlap the study area of this analysis. The *Canal Area Transportation Study (CATS)* is being conducted by the New York Metropolitan Transportation Council (NYMTC). Although *CATS* does not directly address the problems associated with interstate buses, the study does examine congestion issues in the Chinatown area. *Lower Manhattan Street Management* is a study being undertaken by the New York City Department of Transportation (NYCDOT) that examines placard parking, as well as bus and curbside management. NYCDOT is also working with Congresswoman Nydia Velazquez's office, the Chinese Consolidated Benevolent Association (CCBA) and the Asian American Federation of New York (AAFNY) to commence a parking and access study for Chinatown.

Following a detailed examination of the bus operations, this report recommends that the City institute a permitting process to require bus operators to pay for curbside use, just as commercial trucks are required to pay for parking. It is important to note however, that in New York State instituting a permitting system requires state legislation.

Instituting a permit process will control the growth of the industry and its associated impacts by assigning the space from which buses may operate, and specifying hours when they are permitted to operate. Additionally, a permit process would add a measure of safety to the industry by discouraging bus companies from changing their names to evade safety regulations. Lastly, congestion would be eased by assigning the curb space properly and eliminating the need to double park, and block New York City Transit bus stops and parking meters. Noise and pollution would be reduced by eliminating the need for buses to circle while looking for parking. These recommendations would benefit the Chinatown community in many ways. Until a lower Manhattan bus terminal can be built, a permitting system would provide order to the industry.

Introduction

The Chinatown Bus Study examines the operations of the private interstate bus companies that load and discharge passengers throughout Chinatown (for locations see Figure 1). Recommendations to improve those operations are offered, which may help alleviate the congestion these buses create, to improve traffic circulation in the area and help travelers find buses more easily. Figure 2 illustrates the study area in context of the borough, and demonstrates its proximity to the Port Authority Bus Terminal and the George Washington Bridge Bus Station.

Figure 1



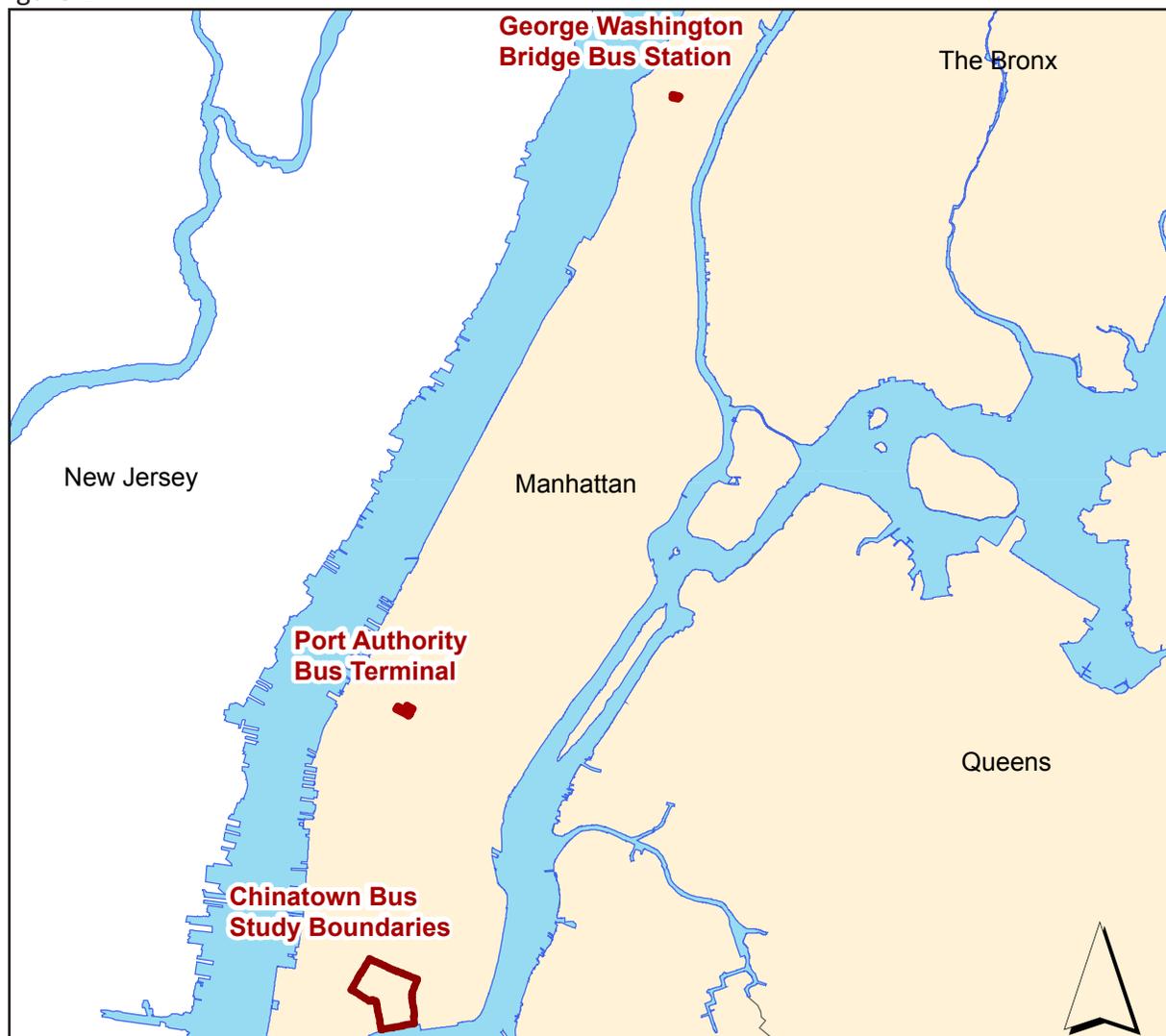
This study provides a comprehensive analysis of existing conditions, including information about the study area’s land use, zoning, demographics, street network, accidents and availability of public transportation. In addition, the operational characteristics of the companies conducting business from Chinatown have been documented, including their frequency, destinations and business model. Lastly, traffic circulation and congestion problems have been identified and recommendations have been developed to improve conditions.

History

The Chinatown Buses, also known as Dragon Buses in the Chinese community, began shuttling Chinese immigrants to the Chinatowns of other states in 1997. Many passengers were restaurant workers and/or NYC residents visiting family members. Prices were very low compared to the Greyhound or Peter Pan bus lines and soon word spread to students and other budget-conscious travelers that for a very low fare the Chinatown buses would take customers to Massachusetts, Virginia, Washington DC, or Pennsylvania.¹

Bus travel in general has increased a great deal since 1997. The growth of the Chinatown bus industry is primarily due to an increase in population of Chinatown communities in this country. In addition, immediately following the terrorist attacks of September 11, 2001, airlines tightened security thereby creating longer lines and delays for air travelers. In 2002 Chinatown Bus companies began to sell tickets online, which made it easier for travelers who do not belong to the Chinese community to purchase tickets. During this period of growth in the bus travel industry, several new bus companies began to provide service thereby cutting fares and creating fierce competition over passengers and curb space.

Figure 2

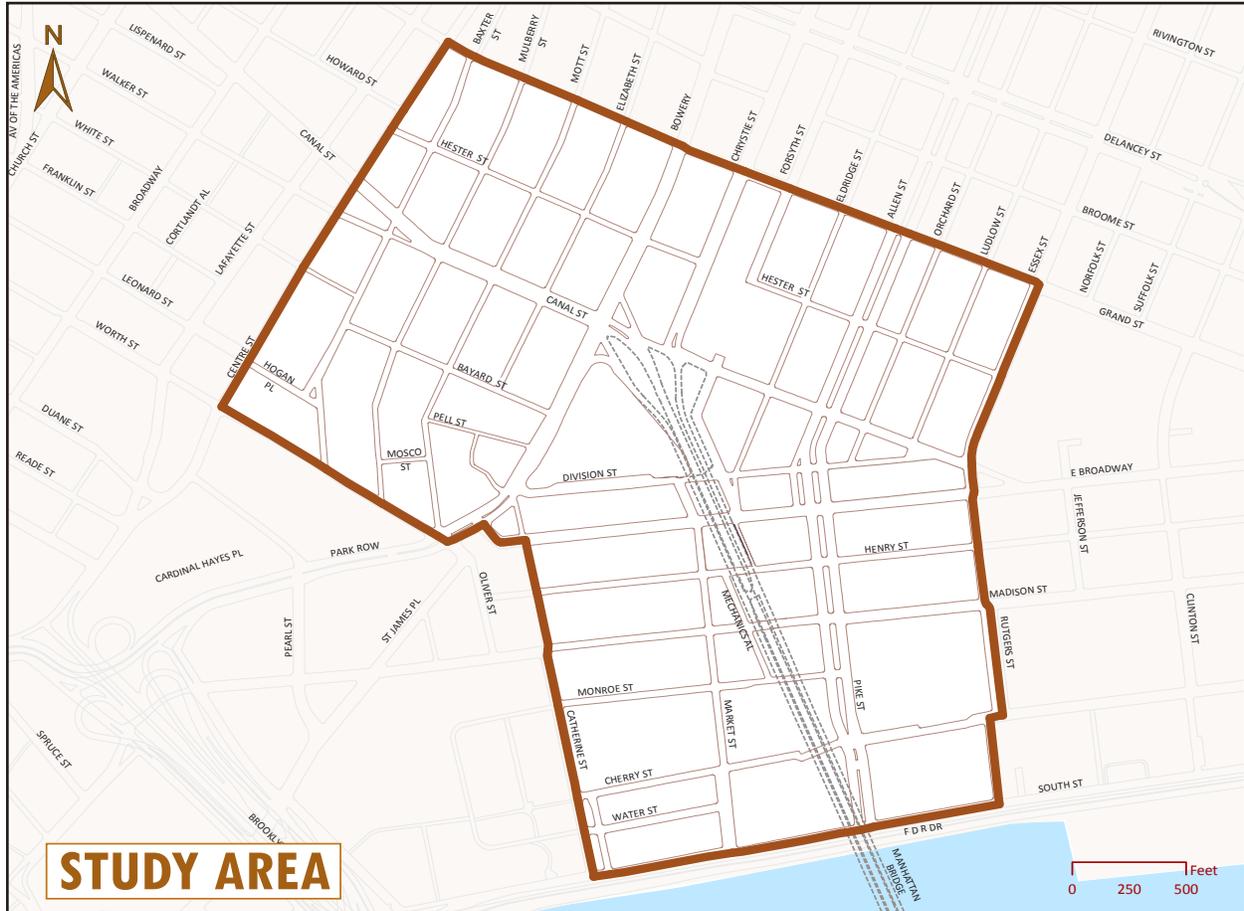


¹ GotoBus, "Brief History of Chinatown Bus." (2008) <http://www.gotobus.com/> (Accessed June 20, 2008).

Study Area

The study area boundaries are the FDR Drive to the south, Rutgers Street and Essex Street to the east, Grand Street to the north, Centre Street, Worth Street and Catherine Street to the west (see Figure 3). These boundaries include the core of the Chinatown community which surrounds the Manhattan Bridge entrance. Many of the interstate Chinatown buses load and unload passengers on the streets surrounding the Manhattan Bridge because the irregular street geometry in this area results in a considerable amount of excess roadbed.

Figure 3



Land Use

The study area encompasses a wide range of land uses including mixed residential buildings with ground-floor retail, low- to mid-rise commercial buildings, community facilities and open space. See Figure 4.

Figure 4



Residential Use

Residential use is generally apparent throughout the study area. While the prevailing building form is a low- to mid-rise, mixed-use building featuring commercial uses at the ground floor and residential space on the upper floors, the area reflects a range of building types, including lower-scale rowhouses, multi-family tenement buildings, mid-rise elevator apartment buildings and tower-in-the-park superblocks.

Commercial and Office Use

Commercial and office uses are generally concentrated along the Bowery and Canal Street. Throughout the study area there are buildings that offer first floor retail/commercial with residential space above.

Public Facilities and Institutions

Public facilities and institutions, including a number of government offices, are generally concentrated near Worth and Centre streets. Area schools include P.S. 1 Alfred E. Smith, Saint Joseph School, and P.S. 124 Yung Wing School. There are a number of churches and synagogues spread throughout the study area.

Parks and Open Space

Four parks/playgrounds are located within the study area and several others are located just outside of the study area. Most prominently, the 7.85-acre Sara D. Roosevelt Park overlaps a portion of the study area. This park extends to East Houston Street, beyond the study area's northern boundary. Columbus Park, at 3.14 acres, is bounded on the north by Bayard Street, on the south by Worth Street, on the east by Mulberry Street, and the west by Baxter Street. Coleman Square Playground, 2.61 acres, which provides baseball fields, basketball courts, and playgrounds, is located between Market and Pike streets. Tanahey Playground provides 1.25 acres of active play space between Cherry and Water streets.

Industrial Uses

There are a few lots in the study area zoned for manufacturing or industrial uses. The industrial areas are in the northwest corner and southern portions of the study area.

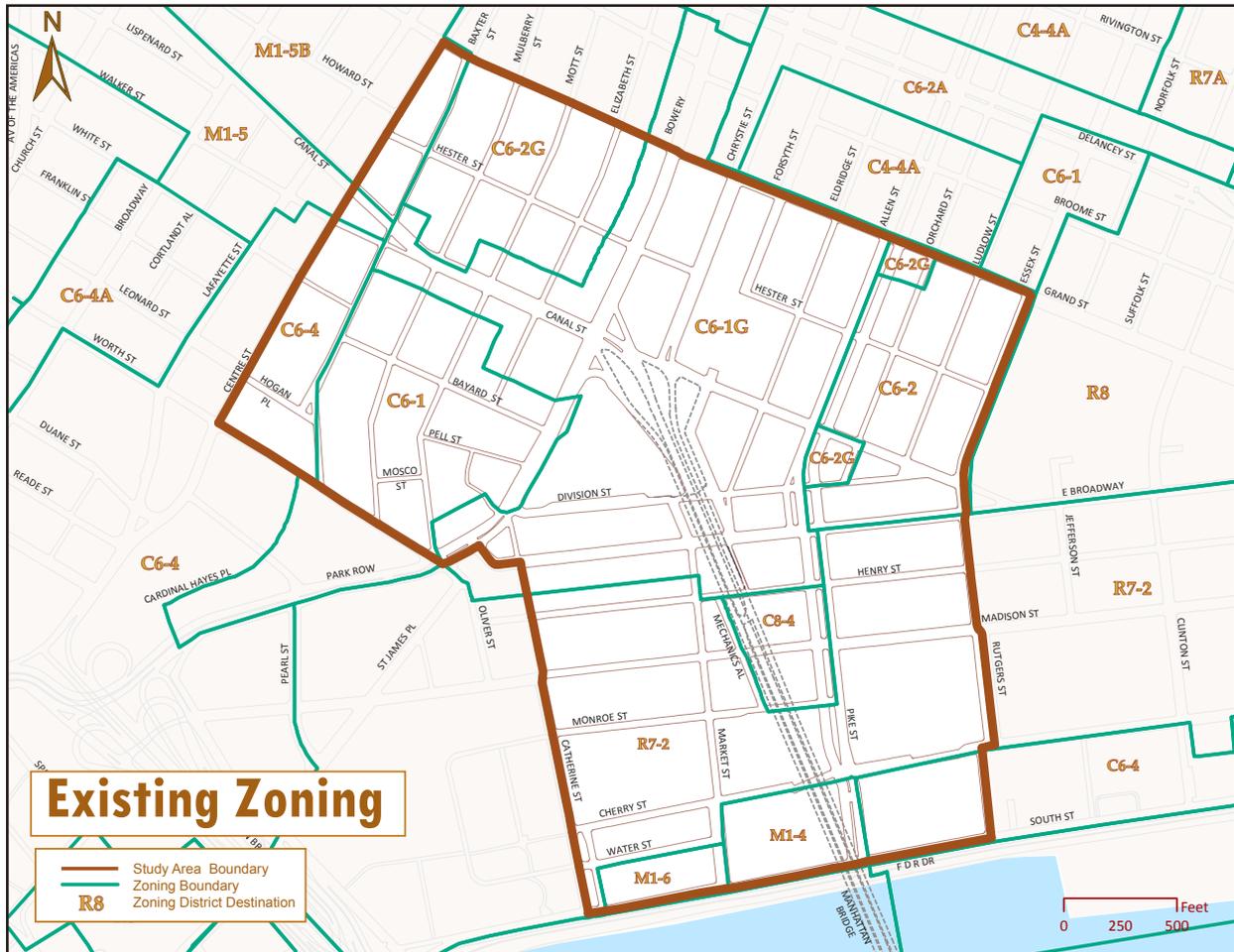
Vacant Lots

There is little vacant land within the study area. Undeveloped lots, including small sites located on Henry Street and Madison Street, east of Pike Street, are generally used for parking.

Zoning

The study area is widely mapped with commercial zoning districts, including high-density C6-1, C6-2, and C6-4 districts, which permit a diverse range of residential, community facility, retail and commercial Use Groups. These along with some semi-industrial uses, including automotive uses, are also permitted in the existing C8-4 zoning district mapped over two blocks between Pike Street and Mechanics Alley. C6-1G and C6-2G districts such as those mapped in other areas of Chinatown, Chelsea, and the Garment district are generally mapped in the northern half of the study area, above East Broadway.

Figure 5



The study area is also mapped with manufacturing districts, generally located in the northwestern portion of the area adjacent to Tribeca and on selected blocks along the waterfront south of the Brooklyn Bridge. These include M1-4, M1-5, M1-6 districts, as well as a small portion of an M1-5B district. This existing zoning permits Use Groups allowing certain retail, commercial, manufacturing (that can conform to high performance standards) and semi-industrial, including automotive uses. The M1-5B district is a special district that allows artists to occupy joint living-work quarters as an industrial use in a loft building.

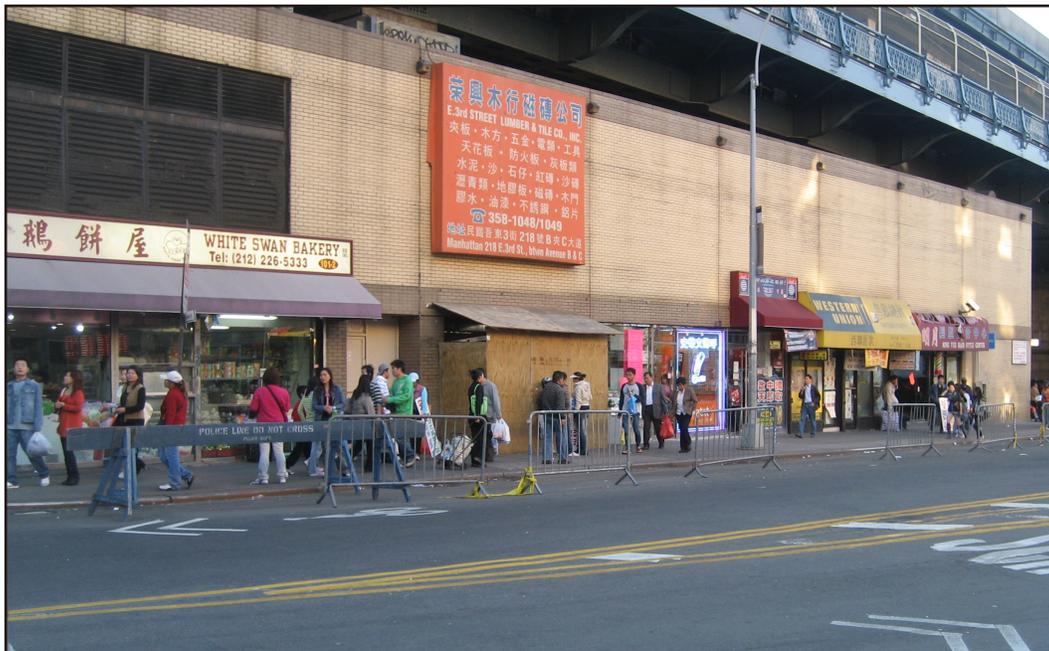
Use Group 16, which includes bus depots and certain other semi-industrial or automotive uses, is permitted as-of-right in the manufacturing districts and in the C8-4 district.

The study area is also mapped with a general residence R7-2 district, largely in the blocks between East Broadway and the FDR Drive. This district permits a wide range of housing types, community facilities and, in areas mapped with a commercial overlay district, certain local retail and service uses.

Bus Operations

The bus schedules for each company operating within the study area were obtained either online or by requesting a written schedule directly from the bus operators. In some cases both online and paper schedules were available and were cross referenced in order to provide as accurate a schedule as possible.

The bus schedules were verified on Friday September 19, Sunday September 21, and Monday September 22, 2008. To determine the accuracy of the bus schedules, counts were conducted by staff from 4:00 PM to 7:00 PM at four locations that had the highest number of arrivals and departures: 13 Allen Street, 139 Canal Street, 133 East Broadway, 88 East Broadway. When staff went into the field to conduct counts, the 88 East Broadway location, on Forsyth Street between East Broadway and Division Street, was cordoned off by police barricades. When asked about the blockade, police officers replied that this was a recent permanent change that had been ordered by the Police Department's (NYPD) 5th Precinct. The ticket sellers remained at this location selling bus tickets and directing passengers to nearby locations where interstate buses were loading and unloading.



Police barricades close 88 East Broadway to buses

As a result of the new NYPD policy of prohibiting buses to conduct curbside loading at 88 East Broadway, the buses were displaced and conducted their loading at various other locations throughout the study area. Staff members were told that buses were loading at Metropolitan Transportation Authority (MTA) bus stops on Henry Street and Allen Street. It was not possible to obtain accurate numbers since the buses were moved to many different locations, and some locations were undisclosed, to be revealed only if a ticket was purchased. Additionally, many of the buses were marked with different company names, making it difficult to determine which company was dispatching them. The only companies that accurately followed their advertised schedules were Fung Wah and Lucky Star. These companies are located north of Canal Street and were unaffected by the closure of the 88 East Broadway location.

The closure of the curb space adjacent to 88 East Broadway has created a new set of problems for nearby Allen Street, Henry Street and other locations along East Broadway. The interstate buses that once loaded and unloaded passengers at 88 East Broadway, have sought nearby MTA bus stops from which to operate. Interstate buses were observed to be obstructing MTA buses, forcing MTA buses to load passengers in the middle of the street. This practice further delays traffic and creates potentially dangerous conditions for MTA passengers. Additionally, passengers waiting for buses with luggage and packages on the sidewalks and in bus shelters results in severe sidewalk congestion. A survey conducted by AM NY News found that this was commonplace as well.²

While the bus companies post schedules online, these buses do not always depart or arrive according to schedule. Buses will often wait for additional passengers and depart when they are full.³ In addition, traffic and other routine traveling delays will cause buses to arrive later than their scheduled times. However, the following data taken from online bus schedules posted by www.chinatownbus.org, provides a fairly accurate representation of the number of interstate buses arriving to, and departing from, Chinatown daily. The numbers do not include intrastate buses traveling to other cities within New York State, such as Albany or Syracuse.

Table 1

Daily Estimated Arrivals and Departures

	Departures	Arrivals	Daily Total
Sunday	149	142	291
Monday	135	141	276
Tuesday	132	130	262
Wednesday	125	129	254
Thursday	127	126	253
Friday	141	138	279
Saturday	139	133	272

Table 1 indicates that the days with the highest number of daily total buses are weekends. Sunday has 291 daily total buses, the highest number of buses throughout the week. Friday has 279 daily total buses, the second highest number of buses throughout the week. The days with the lowest number of daily total buses are Wednesday (254) and Thursday (253).

The bus schedules indicate that these buses travel at all hours of the day and night. Buses depart for Philadelphia or Boston at 11:00 PM and arrive from Virginia at 1:00 AM. The bus activity is constant and around the clock.

The location with the highest number of arrivals and departures, at the time data were collected, was 88 East Broadway. The buses are now dispersed along Allen and Henry streets, however, the number of buses likely remain the same. Table 2 and Figure 6 below indicate all interstate bus locations and the number of arrivals and departures on Sunday.

² Marlene Naanes, "Cheap Buses Drive NY Crazy" AM New York, Pg. 3, October 27, 2008.

³ Chinatown Bus, "Chinatown Bus History." (2007) <http://www.chinatownbus.org/> (Accessed June 2, 2008).

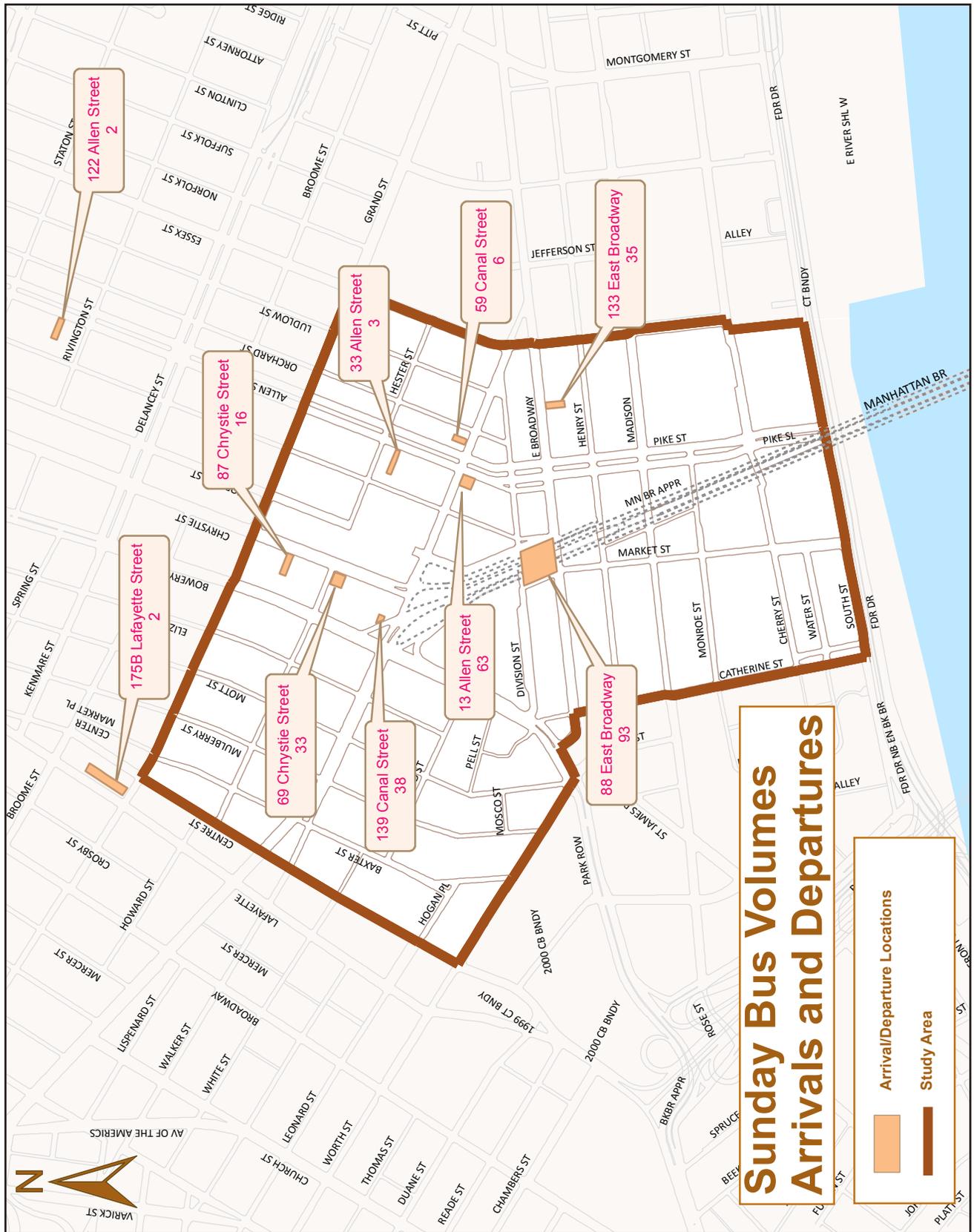
Table 2

Sunday Estimated Arrivals and Departures

Location	Number of Arrivals	Number of Departures
13 Allen Street	28	35
33 Allen Street	1	2
59 Canal Street	3	3
139 Canal Street	18	20
69 Chrystie Street	17	16
87 Chrystie Street	8	8
88 East Broadway	47	46
133 East Broadway	16	17
175B Lafayette St	1	1

The peak period for arrivals and departures is 4:00 PM to 7:00 PM.

Figure 6



Business Model

There are several reasons independent bus companies can offer lower fares than larger commercial bus carriers, which have been operating for decades. First, most Chinatown operators run small, streamlined operations and only offer basic service. Most of the bus companies do not have stations; instead they pickup and discharge passengers curbside. Second, they do not use traditional advertising methods; they rely on word of mouth and internet ticket sales. Third, many of the operators play a hands-on role in daily management of the company; some owners even drive buses when necessary.⁴ Finally, and perhaps the most important factor, operators make sure they fill their buses. It is for this reason that they only serve heavily trafficked routes and they will often wait until a bus is full before leaving, even if this means long delays for passengers.⁵

Previous Attempts to Improve Conditions

What began as a few daytime buses traveling to Boston has turned into a major industry that dispatches over 200 trips a day entering and exiting the city and providing service around the clock.

Concerns have been previously expressed by the community⁶ in the Community District Needs Statements, letters to CB3 from residents of Knickerbocker Village⁷ and from CB3 to the Lower Manhattan Development Corporation,⁸ as well as a CB3 Resolution⁹ that include pedestrian and vehicular congestion; pollution from fuel exhaust, noise and litter; blocking waterfront access; safety concerns with the conditions of the buses, qualifications of the drivers, and unloading hundreds of lost and confused visitors onto the streets without proper directions. The *Issues and Community Concerns* section of this report will expand on the problems created by curbside loading in the Chinatown community.

In 2007 the Mayor's Community Affairs Unit (CAU) spearheaded an effort to relocate some of these buses in response to community concerns. Some of the identified relocation sites were Forsyth Street, between Canal Street and Division Street; Pike Street, between Monroe Street and South Street; the Seward Park Urban Renewal Area bordered by Delancey Street, Broome Street, Essex Street and Clinton Street. (See Figure 7 for the locations listed above.)

Forsyth Street was eliminated from consideration since the Fire Department of New York (FDNY) requested that this street be kept clear in case of an emergency on the Manhattan Bridge. The Pike Street location was eliminated from consideration after concerns were raised over the exhaust entering nearby Coleman Park. Additional concerns were raised about passengers using the restroom facilities in the park. Lastly, the Seward Park Urban Renewal Area was eliminated from consideration because it is too far from the core of Chinatown, and the Lower East Side BID provides parking on these lots to neighborhood shoppers. Additionally, many community members support other uses for these lots,¹⁰ such as housing.¹¹

4 Saki Knafo, "Dreams and Desperation on Forsyth Street." *The New York Times*, Sunday, June 8, 2008.

5 Chinatown Bus, "Chinatown Bus History." (2007) <http://www.chinatownbus.org/> (Accessed June 2, 2008).

6 Sruthi Pinnamaneni, "Corralling Chinatown's Cowboy buses." *Downtown Express*, (August 3, 2007) http://www.downtownexpress.com/de_223/ (Accessed June 18, 2008).

7 Residents of Knickerbocker Village, Letter to David McWater, Chair of CB3, July 17, 2007.

8 David McWater and Richard Ropiak, Letter from CB3 Chair and Parks and Recreation Chair to Kevin Rampe, President of the Lower Manhattan Development Corporation, March 2, 2007.

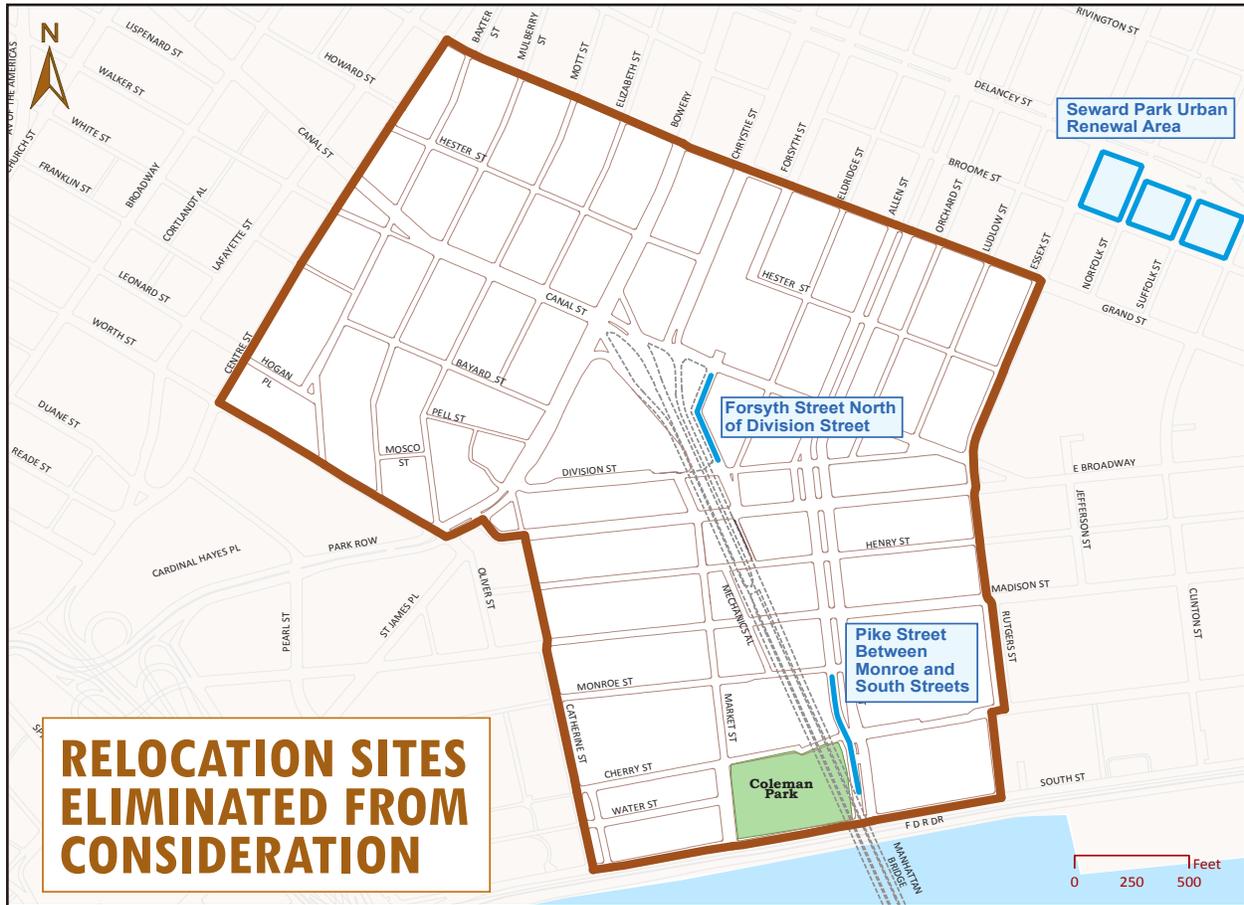
9 David McWater, CB3 Chair and David Crane, CB3 Transportation Chair, CB3 Resolution, July 31, 2007.

10 Meeting with Lolita Jackson, Manhattan Director, CAU, April 2008.

11 David Gonzalez, "Forty Years of Growth, Except Where It Was Expected." *New York Times*, August 27, 2007.

It is clear that a significant amount of resources have already been committed to finding a new location for the interstate buses. However, none of the recommended sites have proven to be feasible. As such, the buses continue to operate from their current locations and the CAU no longer plans to relocate the buses at this time. However, they have made a commitment to assist the Department of City Planning (DCP) in this study.

Figure 7



Industry Regulations

Currently, the United States Department of Transportation (USDOT) is responsible for regulating interstate buses. The Federal Motor Carrier Safety Administration (FMCSA) oversees driver qualifications, work schedules, and vehicle safety; and the Surface Transportation Board (STB) oversees intercity passenger bus company structure, finances, and operations.

The bus drivers and companies must comply with New York State regulations set by the Department of Motor Vehicles (DMV) for safety including bus guidelines, state stickers, weigh stations, number of violations, etc. NYCDOT does not inspect vehicles. Under USDOT regulations, any “for-hire” vehicles weighing over 10,000 pounds and transporting more than nine passengers, must obtain a USDOT number. An Operating Authority MC number is also required. The application processing fee for an MC number is \$300. The USDOT number and Operating Authority number can be used to check a company’s safety rating. Bus companies are permitted to change the name of their operation for a \$14 fee if there is no change in the ownership, management, or control of the company. The MC number remains the same if the company changes its name. USDOT numbers are not transferable.

There are some limitations to the City of New York’s authority when regulating the Chinatown buses, due to the fact that they are interstate carriers. If the operation of buses interferes with the flow of traffic,¹² some restrictions may be placed on bus operators. New York City may assign interstate buses specific bus stops or zones, but may not prohibit them from conducting interstate commerce. If there is space in a bus terminal, curbside buses could be required to operate from it.

Right now there is no available space in the Port Authority Bus Terminal at 42nd Street and there is no area in or near the Chinatown core that is optimal for curbside bus loading. There is currently a waiting list for bus companies that want to operate out of the Port Authority. In addition to the buses in Chinatown, there are other buses loading and unloading passengers on the curb in front of the Port Authority; many are discount companies offering low ticket prices.

The most effective tool the City has to regulate curbside bus operation is enforcement. Effective enforcement requires cooperation from all city agencies including NYPD, the Department of Environmental Protection (DEP), and the Department of Consumer Affairs (DCA). According to the Rules of the City of New York (RCNY), a bus may not park unless authorized by signs.¹³ Idling for longer than one and one-half minutes is also illegal. Idling laws are enforced by the DEP, who can issue a summons of up to \$2,000 for repeat offenses.

Many of the curbside buses in Chinatown, until recently, loaded and unloaded passengers at 88 East Broadway, where there is a bus layover sign. This location was designated as a bus loading area by the NYPD and DOT. In order to increase pedestrian safety and reduce traffic congestion, the NYPD has communicated with the bus drivers and operators and has negotiated with them about where they may or may not load passengers.¹⁴

Since curb space is limited, it is not possible to have signs for each type of bus on the curb. Section 383 of the NYC Vehicle and Traffic Laws (VTL) prohibits private use of a public right-of-way. A bus may use a stop dedicated for another bus (since it is a bus stop) to load and unload passengers

¹² *Rules of the City of New York, Title 34, Section 4-10.*

¹³ *Ibid.*

¹⁴ *Sgt. Frank Failla of the 5th Precinct, telephone interview, September 24, 2008.*

expeditiously. This is currently the practice among tour buses in the city. Tour buses, which are regulated by DCA, commonly use MTA bus stops. However, it is important to note that it is illegal to wait, layover, or park in a bus stop.

The sale of bus tickets on the sidewalk is another practice that the NYPD and DCA attempted to eliminate. According to Sgt. Frank Failla of the 5th Precinct, several years ago the DCA served the ticket sellers with summonses for illegal street vending. However, the summonses were dismissed in court on the grounds that the vendors were selling services, not goods, which is permitted on the sidewalks.¹⁵

¹⁵ *Ibid.*

Issues and Community Concerns

While the Chinatown buses provide an important service to the Chinatown community and to many travelers and tourists, they also create problems for the neighborhood including congestion, pollution, noise, safety and security.

Congestion

The congestion created by the Chinatown buses is both on-street and on the sidewalks. Buses regularly impede the flow of traffic by blocking travel lanes and bus stops. Additionally, buses occasionally park in metered parking spaces in order to avoid parking summonses. The buses will occupy up to three parking spaces and will not depart until a new bus arrives to occupy the same spaces.

While the buses do create a significant amount of congestion in the Chinatown area, it is important to note that this is not a new problem for the neighborhood. Canal Street carries a significant amount truck traffic since it is a through and local truck route and runs the entire width of Manhattan connecting the free Manhattan Bridge with the Holland Tunnel. Trucks (as well as many cars) try to avoid the one-way, Staten Island-bound toll on the Verrazano Bridge by using the Manhattan Bridge instead, thereby increasing traffic. One-way tolls were installed on the Verrazano Bridge in 1986, in response to community efforts to curb pollution from idling vehicles. According to a report from Congressman Anthony Weiner's Office, truck traffic has increased by almost 30% on City roads.¹⁶ In June of 2008 one woman was killed and several people were injured when a Fung Wah bus struck them, after a dump truck careened into the back of the bus.¹⁷

An additional problem created by the buses is that they attract large crowds of people. Each bus can accommodate 50 to 60 passengers and many of them wait on the sidewalk. As a result, the sidewalk congestion generated by the buses is significant. Passengers queue with luggage and other packages on sidewalks that are 15 feet-wide or narrower. They impede pedestrian traffic forcing many pedestrians to walk in the street as they circumvent the crowds.¹⁸



Buses occupy a significant amount of curbspace along East Broadway



Dump truck crashes into Fung Wah bus loading passengers on Canal Street. Filippo, www.flickr.com.

¹⁶ The Office of Congressman Anthony D. Weiner, "New York City Keeps Trucking— A Lot: A Study of Truck Traffic in NYC 1998 -2007." (January 12, 2007) http://www.house.gov/list/press/ny09_weiner/trucks_report.doc/ (Accessed August 5, 2008).

¹⁷ David Freedlander and Marlene Naanes, "Bus Crash Latest in String of Pedestrian Accidents." (June 24, 2008). AM New York Online, <http://www.amny.com/news/local/transportation/am-bus/> (Accessed September 4, 2008).

¹⁸ Graham T. Beck, "The Down Side of Low-Cost Buses." Gotham Gazette, (September 18, 2008) <http://www.gothamgazette.com/article/transportation/20080918/> (Accessed September 19, 2008).



Passengers wait on Allen Street for Apex bus



Passengers wait on Division Street for Great Wall bus

Pollution and Litter

Another concern associated with the Chinatown Bus industry is air and noise pollution, and litter. The buses arrive and depart at all hours of the day, on some days over 200 buses are dispatched, causing consistent pollution. At least one bus company reportedly operates old buses that may have failed inspections,¹⁹ and give off high emissions. Most of the buses observed while conducting field work appeared to be older models. Area residents are concerned about the effect of the bus emissions on air quality.²⁰ Noise pollution is also a concern since local residents hear the constant rumbling of bus engines on their streets.



Trash bags near Lucky Star bus stop

Litter is also a problem the buses create. Many of the smaller bus companies do not have waiting rooms so passengers are forced to wait on the sidewalk. As they wait, there is no proper place for trash disposal or available restrooms. Much of the waste generated by waiting passengers is thrown onto the sidewalks. It is important to note, however, that some bus companies do try to control the amount of litter on public property and provide restrooms for the passengers. Lucky Star ties trash bags to the gate of Sara D. Roosevelt Park. Both Apex Bus at 13 Allen Street, and Double Happiness Bus at 133 East Broadway provide waiting rooms.

¹⁹ Mac Daniel, "Fung Wah Bus Line Faces State, Federal Scrutiny." *The Boston Globe*, (September 7, 2006) <http://www.boston.com/news/local/articles/2006/09/07/> (Accessed March 18, 2008).

²⁰ Triada Stampas, "Idling Buses: Exhausting our Health." Prepared for The Council of the City of New York, The Committee on Oversight and Investigations, (October 2003) <http://www.nyc.gov/html/records/pdf/govpub/760busidling.pdf/> (Accessed July 25, 2008).

Safety

Bus operators will often put off repairs in order to save money in the near term.²¹ Additionally, there is no terminal in which the buses can be serviced.²² There have been reports of buses being seized for repair problems, buses catching fire²³ and turning over.²⁴ Drivers frequently fail to comply with speed limits, and operate buses that failed inspection.²⁵ Senator Schumer called for additional oversight and more inspections to be carried out by the Federal Motor Carriers Association.²⁶



Photo of cracked window on a Chinatown bus. Carrier not identified. The Viscious One, www.flickr.com.

There are also concerns with discharging scores of lost and confused visitors onto the city's streets without proper directions. When visitors enter the city through the Port Authority Bus Terminal there are signs directing travelers, and employees who can provide assistance. When passengers are left on the city's streets they can become targets for thieves and other criminals, however some companies such as Fung Wah and Lucky Star do have uniformed staff at the loading sites in order to provide assistance.



Fung Wah Staff in red uniform



Lucky Star staff in bright green uniform

21 Mac Daniel, "Wheel Scare Halts Fung Wah Bus Trip, Mishaps Continue for Bargain Carrier." *The Boston Globe*, (January 4, 2007) <http://www.boston.com/news/local/articles/2007/01/04/> (July 2, 2008).

22 I-Ching Ng, "Trouble on the Highway and Parked in Chinatown." *City Limits Weekly*, (June 11, 2007) <http://www.citylimits.org/content/articles/viewarticle.cfm/> (Accessed July, 2008).

23 Lisa Fleisher and Mac Daniel, "Passengers Say Bus Firm Unresponsive Fire, Delays Left Many in Difficulty." *The Boston Globe*, (August 18, 2005) <http://www.boston.com/news/local/massachusetts/articles/2005/08/18/> (Accessed June 5, 2008).

24 Robert D. McFadden, "Bus to Casinos Skid off Parkway; 2 Die and 28 are Injured." *The New York Times*, (February 8, 2003). <http://query.nytimes.com/gst/fullpage.html/> (Accessed August 5, 2008).

25 Mac Daniel, "Fung Wah Bus Line Faces State, Federal Scrutiny." *The Boston Globe*, (September 7, 2006) <http://www.boston.com/news/local/articles/2006/09/07/> (Accessed March 18, 2008).

26 Senator Charles Schumer, "Schumer Reveals Safety Gap on Inner-City Chinatown Buses; Rated Dangerously Low on Safety by Feds." (August 28, 2005) <http://schumer.senate.gov/ShumerWebsite/pressroom/press-release/> (Accessed July 8, 2008).

Community Concerns

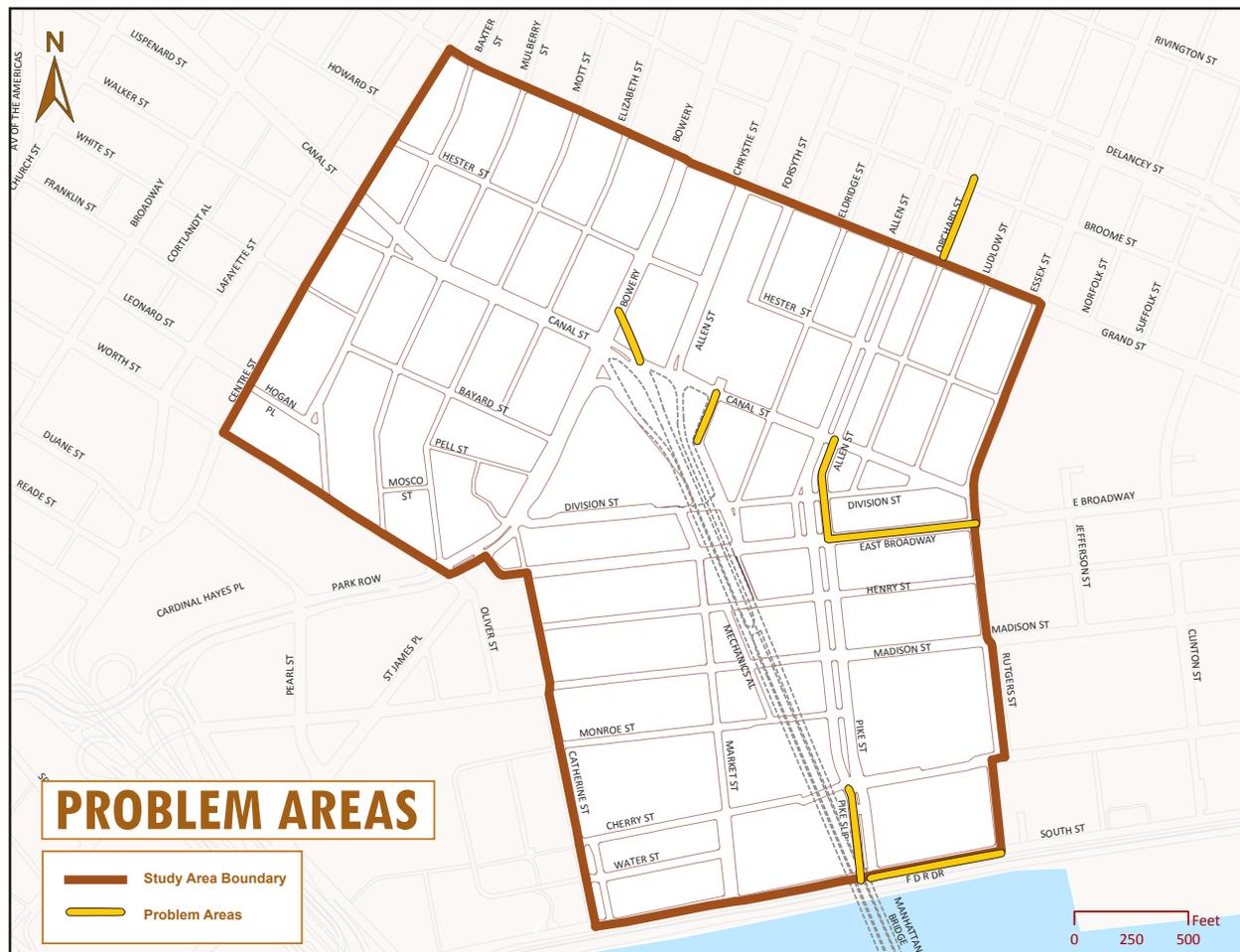
In their Community District (CD) Needs Statements, Community Boards 1, 2 and 3, which overlap the study area, have indicated the following problems that these buses cause:

The residents of CD 1 express the need for a bus storage facility because of the hundreds of commuter and tour buses that travel throughout Lower Manhattan each day. The people of this district are anticipating more buses once the World Trade Center site is rebuilt. The community is concerned with the pollution, noxious fumes, and congestion that are associated with the various interstate, tourist, and commuter buses that frequent the streets. They believe if there were a bus storage facility, then the buses would not be parked in front of their homes and workplaces.

The residents of CD 2 express concerns regarding the high levels of pedestrian traffic as well as the pollution emitted from semi-trucks and buses. They contend that many heavy vehicles will pass through this community district in order to use the toll-free Manhattan Bridge with access to the Holland Tunnel instead of the Verrazano Bridge which has a toll.

The residents of CD 3 are concerned with the traffic and parking congestion the numerous vans and low-cost bus companies are causing in Chinatown. They request that the NYPD and other enforcement agencies monitor and enforce curbside pick-up and drop-offs as well as proper layover practices. Figure 8 below illustrates the problem areas which generate most of the community's complaints.

Figure 8



Another concern the CD 3 residents have is the bus layover area on South Street. They indicate that the parked buses create a barrier between the residents and the water. They want the NYPD and DEP to strictly enforce the idling law.

The issue of Chinatown buses was discussed at Community Board 3's District Service Cabinet Meeting of April 2009. Members of the Board stated that complaints are received constantly. Particularly the residents of 1 and 3 Pike Street are having difficulties with passengers waiting for buses in their lobbies. The residents have petitioned NYCDOT to remove this bus stop in front of their buildings.²⁷ Some other problems include buses stuck on narrow side streets and buses and waiting passengers blocking entrances to small businesses.²⁸

The CAU reported to Community Board 3 that on Thursday, April 2, 2008, the 5th and 7th Precincts conducted a joint operation and issued 51 violations, including one moving violation and 28 parking summonses to bus operators. Additionally, a total of eight buses were towed because they did not pass safety inspections. These buses were not released to their respective owners until the safety issues were corrected. In a preceding operation the 5th Precinct towed 15 buses and issued 30 summonses.²⁹

Case Studies

Cities outside of New York have issues concerning the regulation of Chinatown buses as well. This study examines Boston, District of Columbia, and Philadelphia in order to provide an understanding of the distinct issues in each city. The issues resulting from Chinatown buses in these cities are not exactly parallel to those of New York City. However, the Case Studies do provide some information about what can be done to manage the industry and ensure safety and security to patrons, while also protecting the rights of the bus operators and preserving the low-cost fare business model.

Additionally, a discussion of the Port Authority Bus Terminal and George Washington Bridge Bus Station is provided. This discussion explains how historically, New York City has dealt with the growth of the bus industry and provides insight into what might be expected if the buses were moved to a centralized location such as a terminal.

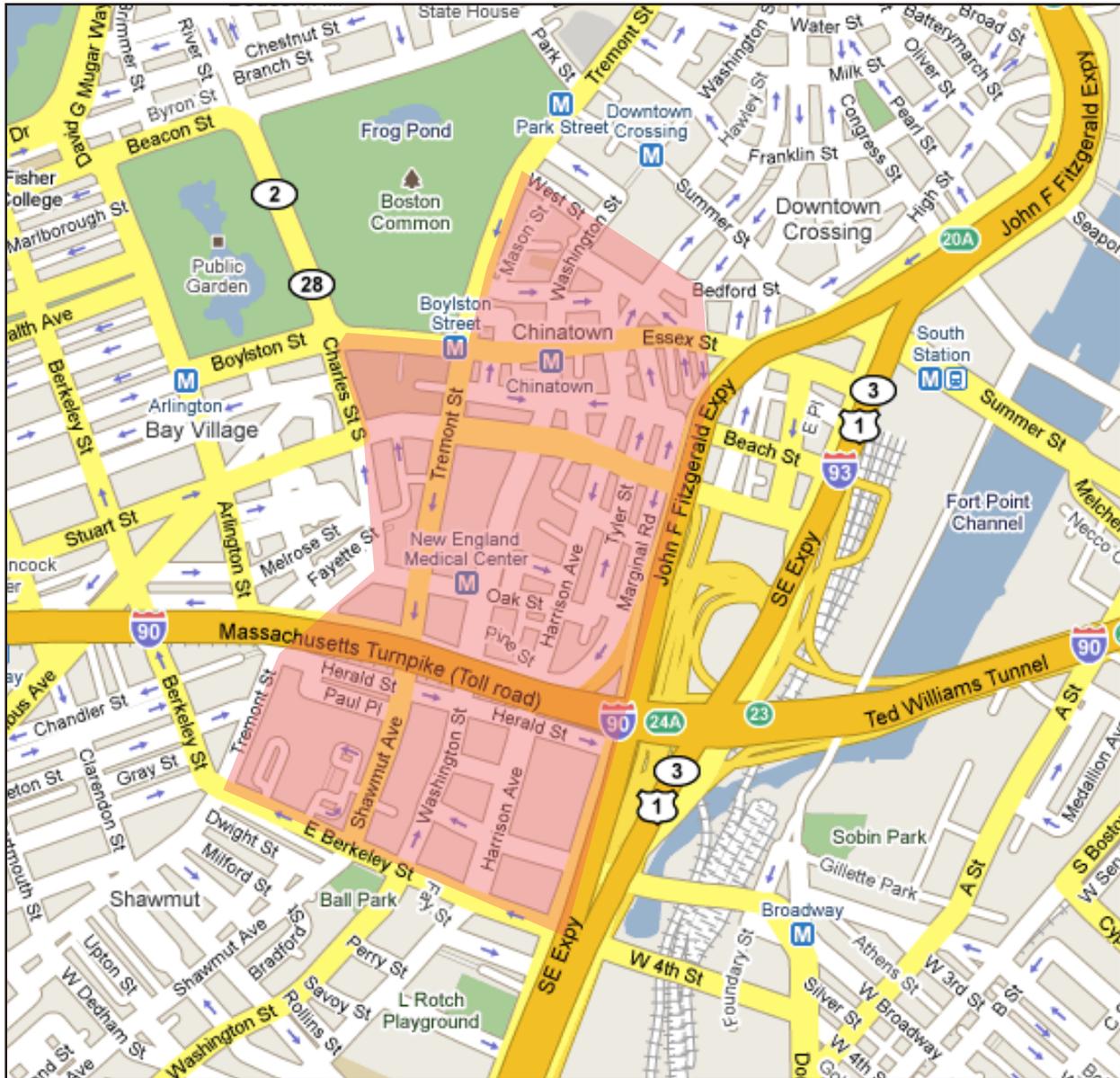
²⁷ Meeting Minutes, Community Board 3 District Service Cabinet Meeting, April 14, 2009.

²⁸ Susan Stetzer, DM CB3 and David Crane, CB3 Transportation Committee Chair, Telephone interviews, May 1, 2009.

²⁹ Meeting Minutes, Community Board 3 District Service Cabinet Meeting, April 14, 2009.

Boston, MA

Figure 9



Boston's Chinatown highlighted in red, Google maps

As the popularity of the curbside Chinatown buses escalated in Boston, so did the congestion problem on city streets. In 2004, all curbside buses operating out of Chinatown in Boston were ordered by the Massachusetts Bay Transportation Authority (MBTA) and the Massachusetts Highway Department to comply with a city ordinance prohibiting them from loading buses curbside and requiring them to operate out of South Station.³⁰ In 2004, Fung Wah requested that the Boston Department of Transportation (BDOT) place a bus loading sign on the street in Chinatown,

³⁰ Janna Starcic, "Surviving the Motorcoach Rate-Cutting War." *Metro Magazine*, (August 2005) <http://www.metro-magazine.com/Article/Story/2005/08/Surviving-the-Motorcoach-Rate-Cutting-War.aspx> (Accessed July 18, 2008).

designating the area, for Fung Wah buses only. The city rejected Fung Wah's request because as it would have given Fung Wah an unfair advantage. Additionally, the City of Boston would have lost revenue from terminal fees by allowing Fung Wah to operate on city streets, because there was ample room in the South Station Bus Depot for additional buses.³¹ In contrast, the Port Authority Bus Terminal in New York City is operating at capacity with a waiting list.

Through effective enforcement, and with the help of Chinatown residents and the Chinatown Civic Association, the City was able to end the curbside bus problem. Traffic enforcement officers, which operate under the City's Department of Transportation, ticket Fung Wah buses frequently for illegal parking. According to Bob Dimico of the BDOT, "it just was not worth their while anymore to operate on the street." From March through September of 2004, Fung Wah received \$11,000 in tickets from the City of Boston,³² which is far above the South Station terminal fees. Currently, there are only two Chinatown bus companies operating out of South Station, Fung Wah and Lucky Star. According to Bob Dimico, aside from commuter vans there have not been any reports or complaints of buses loading and unloading curbside in Chinatown.



Fung Wah ticket line in Boston's South Station

While there are many commuter vans (mainly that operate between Boston and New Hampshire) that load and unload passengers on the curb, they are not reported as a nuisance for the City. Commuter vans do not operate throughout the day. They typically arrive around 9:00 AM and depart around 5:00 PM and do not bring passengers with luggage, thereby limiting the load time. Additionally, an agreement was reached with the MBTA, which prohibits commuter vans from loading passengers in MBTA bus stops.³³

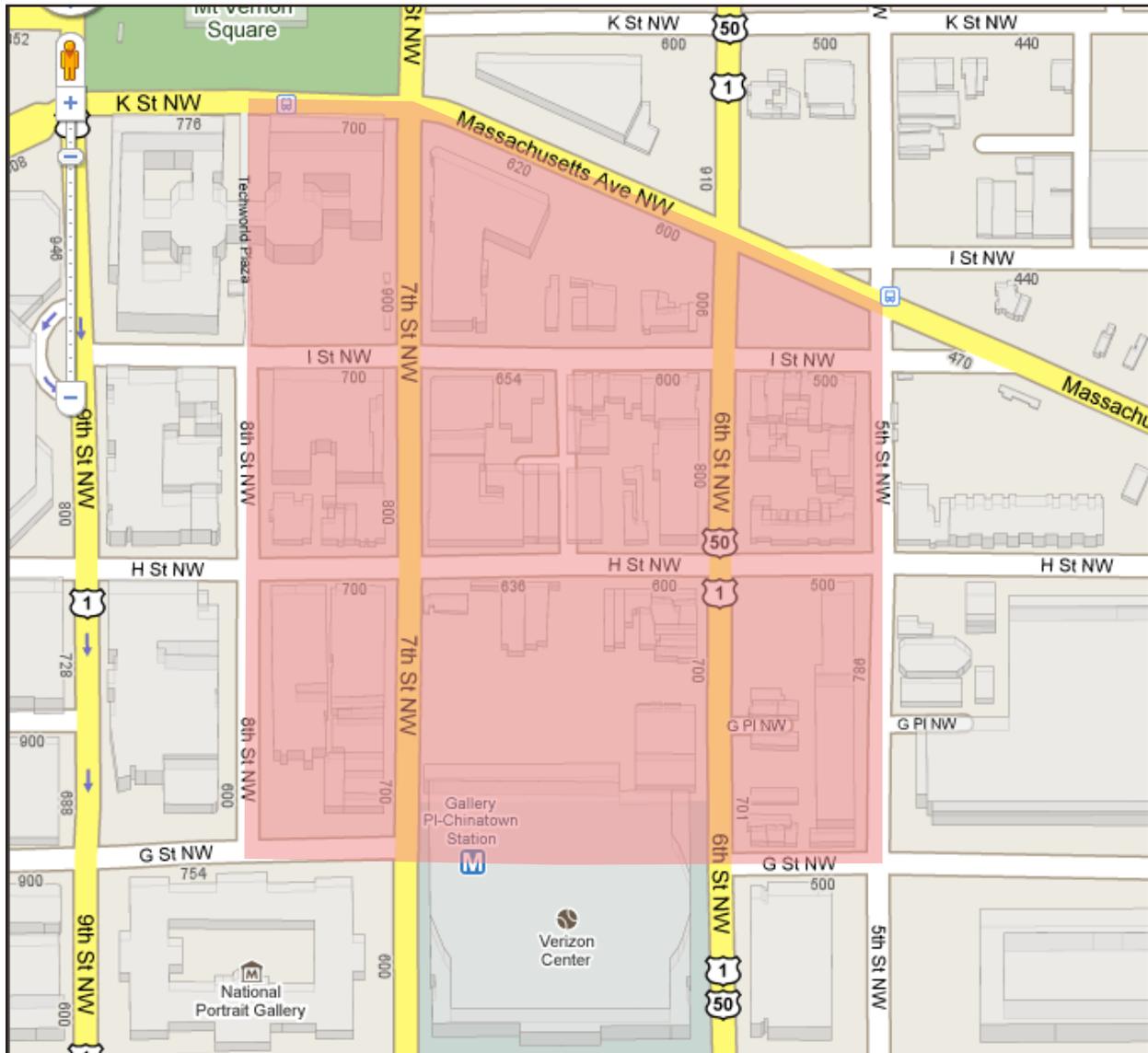
³¹ Bob Dimico of the Boston Department of Transportation (BDOT), telephone interview, June 24, 2008.

³² Steve Bailey, "Peter Pan is a Bully." *The Boston Globe*, (June 18, 2004) http://www.bostoncom/business/articles/2004/06/18/peter_pan_is_a_bully/ (Accessed July 29, 2008).

³³ Bob Dimico of the Boston Department of Transportation (BDOT), telephone interview, June 24, 2008.

Washington, DC

Figure 10



DC's Chinatown highlighted in red, Google maps

In 2007 DC's Downtown Neighborhood Association, a local civic association, expressed concern about curbside buses operating in D.C.'s Chinatown in a July 24, 2007 letter to Mayor Adrian Fenty:

Chinatown buses increase traffic congestion and interfere with law abiding businesses and park (or double-park) in front of residential buildings. The buses often block street traffic, sidewalks and/or alleys while loading and unloading. Double parking is common, as is the use of no-parking zones and loading zones. The companies seem to lack public space permits. Customer queuing frequently eliminates the pedestrian right of way, often forcing pedestrians into the street. These lines also obstruct the entrances of legitimate businesses. When parked, some buses habitually block storefronts (for example, the Eastern Travel stop at 715 H Street NW creates havoc for Matchbox Restaurant at 713 H Street). The buses idle far longer than the three minute maximum, which harms air quality and pollutes the air of nearby homes and businesses.

We understand that efforts have been made by MPD [Metropolitan Police Department] to enforce applicable ordinances, including those governing traffic, the environment, parking and public space. However, we have learned that this is difficult due to the avoidance strategies taken by these companies [which] routinely change ownership along their service chain so that a ticket to a company is hard to enforce since... the company ceases and another is created in its place. We need strategies to reconcile this effective avoidance behavior.

It is our understanding that buses that MPD finds with outstanding tickets or are unsafe cannot be towed because the towing resources and space to store these buses does not exist. So, they can issue thousands of dollars in tickets that are treated as a cost of doing business in DC or worse, ignored by routinely changing ownership structure. In short, efforts to enforce existing laws are not effective because we do not have the resources to seize and store the buses. We ask you to find the resources to enforce our laws and seize unsafe buses.³⁴

An emergency rule was adopted on May 29, 2008 by the District Department of Transportation (DDOT). Chapter 33, Title 24 of the *District of Columbia Municipal Regulations* (DCMR), entitled “Public Space and Safety,” was amended to establish curbside loading and unloading zones for intercity bus service. Intercity bus is defined by the DCMR as a vehicle-for-hire seating more than 12 people used for regularly scheduled, city to city transportation (Section 3399, Subsection 1).



Passengers wait for Chinatown Bus on sidewalk in D.C. Bus is double parked on H St NW between 8th St NW and 7th St NW.

A pilot program was proposed that would require all buses to have a Public-Right-of-Way permit and pay a rental fee to load and unload passengers in the designated “intercity bus zone.” Each permit would have a one year term. The rental fee would be \$1.18 for each 30-minute increment of public right-of-way used by the intercity bus operator for each arrival and departure in the intercity bus zone. The intercity bus zone is defined by the DCMR as a segment of a curb lane designated by signs prohibiting general purpose parking or standing to facilitate loading and unloading of intercity buses providing regularly scheduled intercity bus service. The intercity bus zone is at the curb lane of northbound 10th Street SW, south of D Street SW, beneath the L’Enfant Promenade, as designated by signs. This will be the bus zone until June 30, 2009 (Section 3399, Subsection 1).

Some highlights of the new intercity bus zone pilot program include:

- A \$100 permit application fee.
- All permit applications must include a proposed schedule, to be approved by the DDOT.
- A plan for orderly queuing of waiting passengers (so pedestrian movement along the sidewalk will not be obstructed or adjacent buildings will not be obstructed or impeded).
- All vehicles must have a copy of the arrival/departure schedule, stamped and signed by the DOT while occupying the loading/unloading zone.

³⁴ Miles E. Groves of the Downtown Neighborhood Association, Letter to Mayor Adrian M. Fenty, July 24, 2007.

- No occupancy of the loading/unloading zone prior to 30 minutes before scheduled departure as listed on the approved schedule, stamped and signed by DDOT.
- No vending of tickets in public space.

The DDOT has also proposed hefty fines for operators who fail to comply with the new rules governing curbside buses. The fine for failure to display a permit is between \$100 and \$300; depending on how many times the offense occurs. The fine for failure to obtain a permit for an intercity bus zone is between \$500 and \$1,500.

The pilot program was originally intended to begin in July of 2008, but DDOT suspended the intercity permit regulations to allow for additional evaluation and review of the program and policy. In response to public comments received, the Emergency Regulations were rescinded and the Proposed Rulemaking was revised to allow more than one location for loading and unloading of intercity buses, to clarify the application process and to modify the basis for computation of the public space rental fee. Currently there are no rules in effect regulating Chinatown buses.

In January 2009, DC again revised regulations for the intercity bus program. Like the original pilot program, the revised regulations require all intercity buses to have a Public-Right-of-Way permit. One of the major changes in the new amendments to the DCMR is “intercity bus” has been redefined as a for-hire vehicle with the seating capacity of more than 25 passengers used for regularly scheduled, interstate travel.

In addition to permit and application fees, there would be an annual public space rental fee for the use of the public right-of-way for intercity bus service. The fees would be determined by whether public curbside parking spaces are metered or non-metered, and how many days/hours the space would be occupied for operations.

Public-Right-of-Way permits would only be granted upon approval by a Public Space Committee, who has the right to deny a permit if it determines the applicant does not meet a set of conditions, including whether the intercity bus operations would have a direct impact on vehicular and pedestrian traffic, on nearby public transit systems, or any other effects on health and safety.

Additional highlights of the amended DCMR are:

- DDOT may designate shared intercity bus service passenger loading zones.
- DDOT will post signs indicating location and hours of operation for each approved intercity bus service passenger loading zone.
- Permit holders would be responsible for any direct costs and loss of revenue incurred by the Department in the creation of the intercity bus service passenger loading zones, including installation of signage marking the intercity bus loading/unloading zone, parking meter bagging.
- Intercity bus service operations can only be conducted within the authorized passenger loading zone designated by their specific permit.

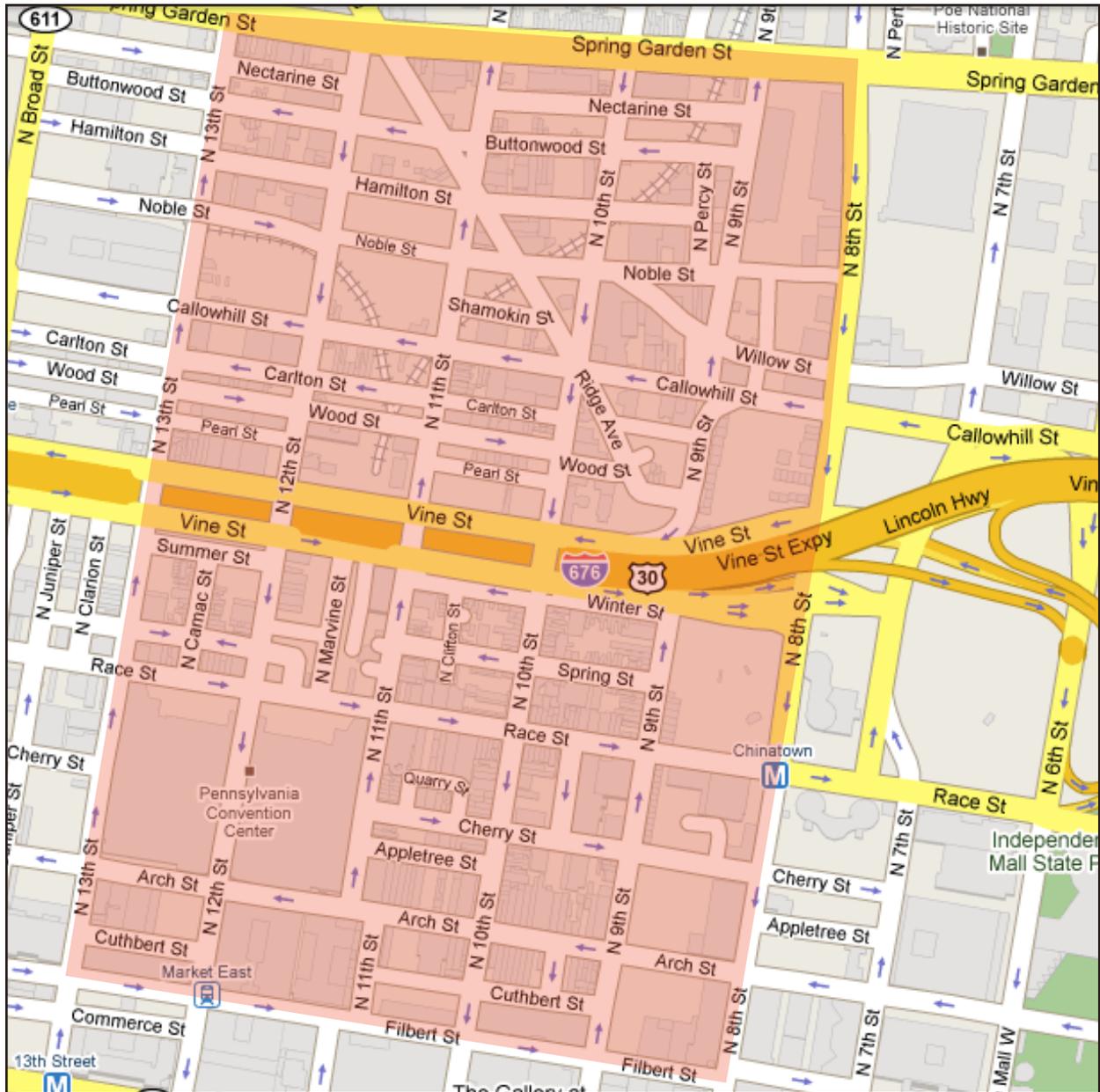
- The maximum layover/dwell time for intercity bus service passenger loading zones would be 15 minutes.
- Intercity bus service public space permit holders would need to inform the DDOT of any changes in route, ownership, and/or liability insurance.
- A new application for a public space permit would need to be submitted if there are any changes to operating hours, location, or schedule.
- DDOT may revoke an annual public space permit for failure to comply with the new rules.

The proposed regulations will be republished for comment prior to finalization.³⁵

³⁵ Alice Kelly, Program Manager, Public Space Policy Branch, Transportation Policy and Planning Administration, DDOT. Telephone interview, January 28, 2009.

Philadelphia

Figure 11



Philadelphia's Chinatown highlighted in red, Google maps

Philadelphia's Chinatown is located north of Center City and is bounded by 8th, 13th, Filbert and Spring Garden Streets.³⁶ Although Philadelphia's Chinatown is small compared to New York City's Manhattan Chinatown, it does occupy 20 square blocks.³⁷ Chinatown serves as a cultural cen-

36 Philadelphia Chinatown Development Corporation. "11th Street Commercial Corridor" (June 2007). www.chinatown-pcdc.org/images/11th%20St%20project/11th%20Street%20Report%20Introduction.pdf (Accessed March 30, 2009).

37 Ibid.

ter and a hub of services for Asians in the Delaware Valley. An estimated 75,000 people come through Chinatown every weekend.³⁸ Many visitors arrive to Philadelphia by bus.

In 2007, the Philadelphia Chinatown Development Corporation (PCDC), a neighborhood advocacy group, conducted a Neighborhood Resident Satisfaction Survey. Most of the respondents did not perceive the Chinatown buses as a problem. Yet, the closer the respondents lived to the buses, the more likely they were to have a problem with them.³⁹

Similar to the situation in NYC, the sidewalks are narrow and become filled with litter. Philadelphia's biggest challenge with regard to Chinatown buses is controlling litter resulting from passengers waiting outdoors during peak periods. Although the bus companies that operate in Philadelphia have storefronts with waiting rooms, when the weather is nice the passengers will wait outside. Therefore, in addition to generating litter, they also create a significant amount of pedestrian congestion on the sidewalks.

Although the overall opinion based on PCDC's surveys is that the Chinatown buses do not create problems, in a neighboring district of Philadelphia many problems were created by tour buses. The Independence National Historic Park draws in many visitors and school groups, and is the top visitor attraction in Philadelphia, Pennsylvania.⁴⁰ Because of the traffic issues created by the tour buses, the City of Philadelphia funded a study to examine the buses that routinely loaded and unloaded near Independence National Historic Park. The study concluded that 37 percent of the site's 1.8 million annual visitors arrived by bus.⁴¹ The study also found that spring weekdays are the peak time when school groups visit the site, at times generating 300 buses per day. Annually, the tourist attraction receives approximately 25,000 charter and tour buses.⁴²

As a result of the study's findings, the City of Philadelphia constructed the Independence Transportation Center (ITC) and required all tour buses to load and unload passengers in the new facility. New regulations went into effect in July 2004, which prohibited all buses, tour bus, and charter buses from parking on city streets.⁴³

ITC is specifically designated for motor coaches and charter buses to load and unload. The buses are able to park overnight in the newly constructed nearby Callowhill Bus Center (CBC), which provides many amenities for the motor coach drivers while they wait for their groups. In order for the motor coaches and tour buses to be able to use the ITC and CBC facilities, the group must pay a nominal fee and display the receipt in the windshield to indicate that they have paid.⁴⁴ In order to encourage tour and charter buses to follow the city's parking rules, parking and idling regulations are strictly enforced.

38 Christina Shat, "Health Needs Assessment: Executive Summary" http://www.chinatown-pcdc.org/community_health.htm. (Accessed March 30, 2009).

39 John Chin, Executive Director of the Philadelphia Chinatown Development Corporation. Telephone Interview, September 17, 2008.

40 Christopher Zearfoss and Adrienne Eiss. "Development of a Bus-Management System for Independence Mall." *Institute of Transportation Engineers. ITE Journal* (June 2002). http://findarticles.com/p/articles/mi_qa3734/is_200206/ai_n9134783 (Accessed March 30, 2009).

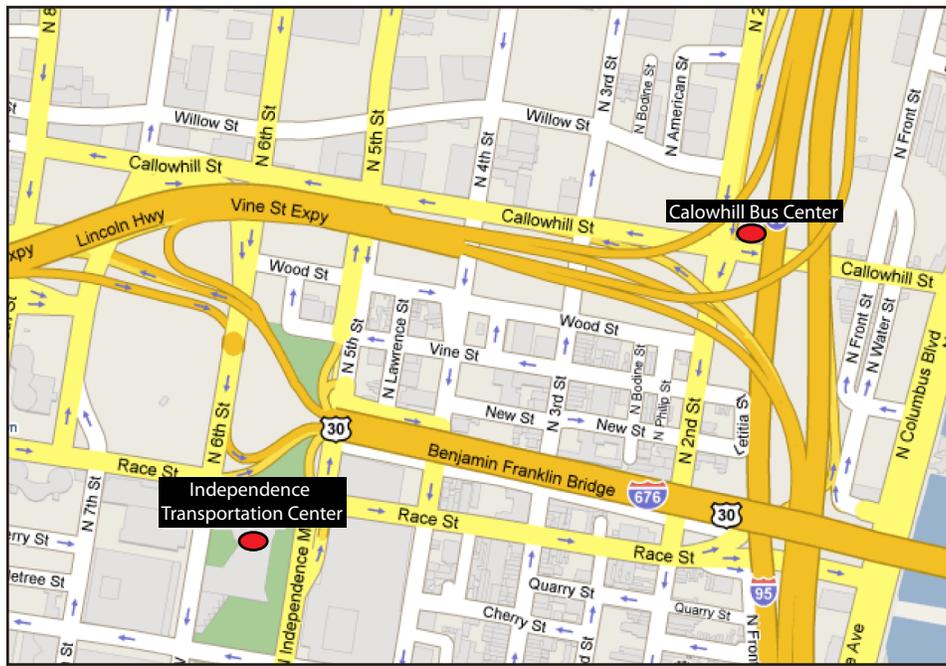
41 *Ibid.*

42 *Ibid.*

43 Independence Visitor Center, "Bus Parking." (2009) <http://www.independencevisitorcenter.com/motorcoach> (Accessed March 31, 2009).

44 National Constitution Center, "Group Information" (2009). http://constitution.org/ncc_visit_Group_Information.aspx (Accessed March 30, 2009).

Figure 12



Philadelphia's CBC and ITC, Google maps

Although at present it is not possible for NYC to construct new facilities similar to the ITC and CBC due to a lack of space and resources, it did appear to solve many of Philadelphia's problems related to tour buses.

Port Authority Bus Terminal and George Washington Bridge Bus Station

The following discussion of the Port Authority Terminal and George Washington Bridge Bus Station provides a historical model that is relevant today. The congestion issues that triggered the development of these projects reflect similar issues to those that are generated by the Chinatown bus industry. This model offers insight into the city's previous attempts to improve severe pedestrian and traffic congestion.

The George Washington Bridge Bus Station is located in Washington Heights between 178th and 179th streets. The Port Authority Bus Terminal is located one block west of Times Square, and is bounded by Eighth and Ninth avenues and 40th and 42nd streets.

The issue of interstate bus travel causing congestion is not a new one in New York City. Prior to the construction of the Port Authority Bus Terminal and George Washington Bridge Bus Station, buses would travel daily from New Jersey, bringing passengers over the George Washington Bridge and Holland Tunnel into midtown Manhattan.

In the 1930s after the completion of the George Washington Bridge and the Holland Tunnel, interstate buses began entering Manhattan from New Jersey. These buses would typically make their way from either the north or south entry point and proceed toward Midtown. The buses would travel many miles along crowded streets, stopping at various locations between 34th and 51st streets. Since this commute via bus took longer than alternative means of transportation, some opted to travel by railroad or car.

Prior to the Lincoln Tunnel's 1937 opening, the buses would enter mid-Manhattan via the George Washington Bridge, but by 1939 approximately 1,500 interstate buses were using the Lincoln Tunnel each day. The majority of buses were entering at 39th Street and Tenth Avenue, then would spread across the midtown area to eight separate bus stations, making stops along the way, blocking traffic and contributing to the general congestion in Midtown Manhattan. This chaotic situation demanded a solution:

Soon after the Lincoln Tunnel opened, traffic planners for the city and at the Port Authority began to realize that these problems could be dramatically eased if a single bus station were constructed near the Manhattan mouth of the Tunnel, and if all interstate bus companies terminated their trips at the unified station, abandoning their scattered bus terminals. Working initially with Mayor LaGuardia and Robert Moses, the Port Authority studied the idea of building and operating a unified bus terminal, agreed to build it, and then found itself embroiled in a series of battles over 5 years with those who opposed its efforts -- including Greyhound Bus Company, Robert Moses, key legislators in Albany, and New York's Governor Dewey.⁴⁵

In 1944, the Port Authority devised a plan for the new bus terminal that would consolidate all the current bus terminals located in Midtown Manhattan. The Port Authority proposed direct routes that would take most interstate buses straight from the Lincoln Tunnel into the bus terminal, which is how the Port Authority Bus Terminal operates today. Both the Port Authority and the City agreed that by requiring the buses to use the new terminal instead of loading and unloading along the street, traffic congestion would decrease.

To persuade all the bus companies to move from their separate stations into the new terminal, the city would have to agree that no bus terminals could be built or expanded in the midtown area. Without that prohibition, the Port agency argued, the interstate bus companies would be reluctant to sign contracts to use the Eighth Avenue terminal, since their competitors might later be able to build or enlarge terminals in more

⁴⁵ Jameson W. Doig, *Empire on the Hudson: Entrepreneurial Vision and Political Power at the Port of the New York Authority*. Pg 315-316, Columbia University Press, New York, 2001.

centrally located areas. Moreover, this restriction was essential to ensure that the Eighth Avenue terminal would have enough passengers to generate substantial rental and concession income...⁴⁶

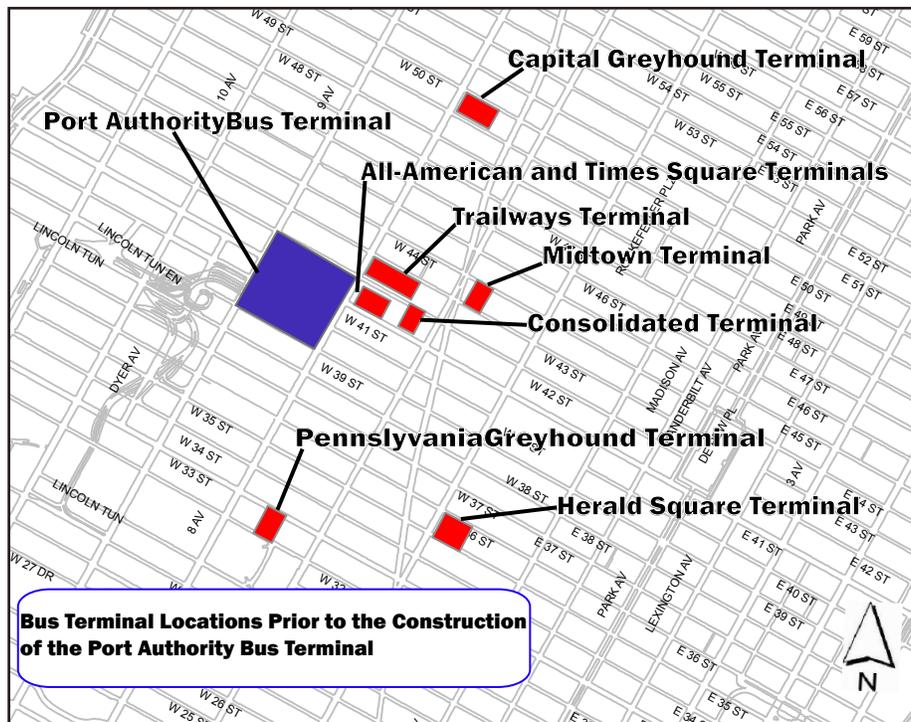
Construction of the Port Authority Bus Terminal was authorized in 1948, and it opened for business in December of 1950. The George Washington Bridge Bus Station was approved many years earlier in 1931 as part of the Bridge and Tunnel Unification Act, but did not open until 1963.

The George Washington Bridge Bus Station and the Port Authority Bus Terminal are examples of projects that needed bistate authorization to construct and that continue to be owned and operated by the Port Authority, a public corporation that works with municipal, county, state, and federal agencies. Since the Port Authority is responsible for large transportation projects in both New York and New Jersey, each new program or project must be approved by the entire Board and both states' governors. Depending on the scope of the project, local agencies also may need to approve the program.

The George Washington Bridge Bus Station replaced a number of sidewalk bus loading areas and a smaller depot that existed in the 166th and 167th street areas of Washington Heights.⁴⁷ By centralizing the buses, some traffic was lifted off the local streets. Additionally, passengers could more comfortably wait for their bus inside of the terminal, instead of standing on a street corner.

When the Port Authority Bus Terminal and the George Washington Bridge Bus Station were built, they initially alleviated some of the adjacent roadway traffic. However, the demand for space in the Port Authority Bus Terminal has grown and several interstate bus companies and charter buses must continue to use the street as a terminal.

Figure 13



46 Jameson W. Doig, *Empire on the Hudson: Entrepreneurial Vision and Political Power at the Port of the New York Authority*. Pg 317. Columbia University Press, New York, 2001.

47 The Port Authority of NY and NJ, "History of the Port Authority" (2006) <http://www.panynj.gov/> (Accessed August 10, 2008).

Recommendations and Next Steps

The recommendations of this study are intended to complement the many other studies being conducted in the Chinatown area that aim to manage the congestion and improve traffic conditions, such as: NYCDOT's *Chinatown Parking and Access Study*; NYCDOT's *Lower Manhattan Street Management*; and NYMTC's *Canal Area Transportation Study (CATS)*.

In preparation for this study DCP has consulted with the 5th Precinct, NYCDOT, NYMTC, and the Mayor's Community Affairs Unit (CAU). The following recommendations result from these meetings and a thorough analysis of the issues.

Long Term

A Chinatown bus terminal is essential for the economic growth of Chinatown and safety for patrons, pedestrians and residents. However there are no empty lots within the community's core. If the buses are moved too far from their current locations there is a risk that they will no longer be useful to the people who depend on them. Furthermore, moving the buses from their current locations could prove to be more problematic for the city. When NYPD closed the 88 East Broadway location, buses were displaced to nearby Allen Street, which has resulted in extreme congestion. Moving the buses will not necessarily improve conditions, it may simply move the problems from one location to the next.

Even if empty lots existed within the Chinatown core to build a bus terminal, a broader plan is necessary for how the terminal would be financed and built. Additionally, further study would be necessary to determine how the operations of the terminal would work with the surrounding traffic in Chinatown, and who would be responsible for management and maintenance.

While the current locations of the bus stops (including 88 East Broadway) are not optimal, they are centrally located in close proximity to the city's public transportation network. Additionally, the surrounding businesses benefit from them. Therefore, if the buses are moved they must remain in close proximity to where they currently operate from.

Near Term

Whether the buses will one day be moved to another location or not, it is advisable to charge bus companies for use of the curb space, much like the proposed DC program. The problems outlined in the Washington DC Case Study are similar to those experienced in New York City. The DDOT has found an innovative way of improving conditions without moving the buses into a terminal. While the City of Boston was successful in moving the buses into South Station, this is not an option for NYC because the Port Authority is operating over capacity, and it is geographically distant from Chinatown. Philadelphia's solution to build a new bus terminal is also not viable for New York City since the resources and space are not available at this time.

In Washington DC, bus companies must apply for a permit in order to load and unload passengers curbside. They are charged for both the permit application fee and a curb rental fee. The DC draft regulations give the DDOT a significant amount of control over the proliferation of intercity buses, their operations and schedules.

In New York City curb space is extremely limited and there are not enough spaces for each company to obtain a permit. However, it may be possible to issue permits for spaces by a competitive bidding process. It is important to note however, that issuing permits in New York State requires state legislation, which is not the case in Washington, DC.

The Permitting System

In order to obtain a permit for curbside loading in the District of Columbia, bus operators will soon be required to submit an application to the DDOT along with an administrative application review fee. The regulations will require each application to be accompanied by the following documentation:

- the corporate name of the intercity bus operator;
- a valid USDOT operating authority number;
- a copy of the operator's business license issued by the District Department of Consumer and Regulatory Affairs;
- a copy of the operator's liability insurance certificate;
- photographs of the proposed passenger loading zone;
- a proposal for orderly queuing of passengers on the sidewalk;
- a proposed traffic flow plan; and
- the proposed bus service schedule.

All applications will be reviewed by a Public Space Committee, who will consider the impact on vehicular and pedestrian flow, the anticipated traffic conditions during the peak hour, the size of the proposed loading zone, the number of passengers expected to board or disembark, the anticipated impact on nearby transit, and any other effects on public health and safety.

In New York City the permitting system could be administered by NYCDOT, who will determine the optimal location for each bus operator. In addition to determining the location from which buses may operate, NYCDOT could establish guidelines for their hours of operation, locations for ticket sales, wheelchair accessibility and safety standards.

Benefits of Permitting

While the DC program is complex and requires a significant amount of oversight and enforcement, it would benefit the Chinatown community in many ways. Congestion might be reduced and safety might be increased. This recommendation supports the PlaNYC goals of relieving congestion and reducing noise and air pollution. Additionally, the program would require Chinatown bus companies to compete with traditional commercial carriers and improve service to their customers.

Bus operations would become more efficient by issuing permits to bus operators. The City would determine appropriate locations for curbside loading, thereby eliminating confusion over the location of bus loading areas. This would expedite bus loading activities and improve and ease traffic congestion.

Permitting would also reduce noise and air pollution since the City could determine the appropriate number of permits to issue each year. Establishing a specific loading area for each bus operator would eliminate the need for buses to circle while looking for a place to park.

Requiring a permit to conduct curbside loading would support the NYPD in their efforts to enforce traffic and safety regulations. Bus operators will be less likely to evade enforcement officers if they have a legally obtained permit.

Additionally, a permit process would add a measure of safety to the industry. It is often difficult to track a bus company's safety record since they frequently operate under several names in order to evade safety regulations. Requiring bus companies to obtain a non-transferable city permit would encourage them to retain their names even when they receive fines and safety citations from the FMCA. The City could also require that bus companies adhere to specified safety standards and must comply with the Americans with Disabilities Act (ADA) in order to obtain a permit.

Next Steps

Instituting a program such as the one DDOT is establishing would firstly require new State Legislation. Once in place, permitting would require the cooperation of a number of different City agencies. A thorough inventory of spaces must be performed, which would be conducted by NYCDOT through the planned Chinatown Parking and Access Study. Once completed, NYCDOT could determine what space may be allocated to interstate buses and then institute a permitting process. However, in order to improve traffic flow and public safety, it is necessary for the City to take measures to improve curb management.

Proper enforcement by the NYPD is also essential to the success of such a program. The NYPD cannot negotiate individual agreements with bus operators. Decisions over proper locations for buses must be determined in advance collaboratively with the NYPD. NYCDOT is committed to working with NYCDOT and the NYPD in order to facilitate this process.

Conclusion

This report provides a comprehensive assessment of all the issues associated with Chinatown buses, as well as a review of the history of the industry and how the government has previously dealt with them. Additionally, the bus schedules have been collected and presented in a manner that gives an accurate, or close to accurate, representation of the magnitude of the industry. It was previously unknown how many buses were dispatched daily, to and from the Chinatown core. It is now clear that there are a minimum of 250 buses each day and the demand for such service is growing.

DCP's Transportation Division has met with the Mayor's CAU, NYCDOT, NYMTC and the 5th Precinct to collaborate on the best solution for managing the industry and its inevitable growth. Until a bus terminal can be built in lower Manhattan, it is necessary to allow curbside loading. Prohibiting this practice could be viewed as a violation of the Commerce Clause of the U.S. Constitution. However, in order to improve traffic flow and public safety, it is necessary for the city to take measures to manage this industry and it is recommended that the bus companies be required to pay for the use of curb space through a permitting system.

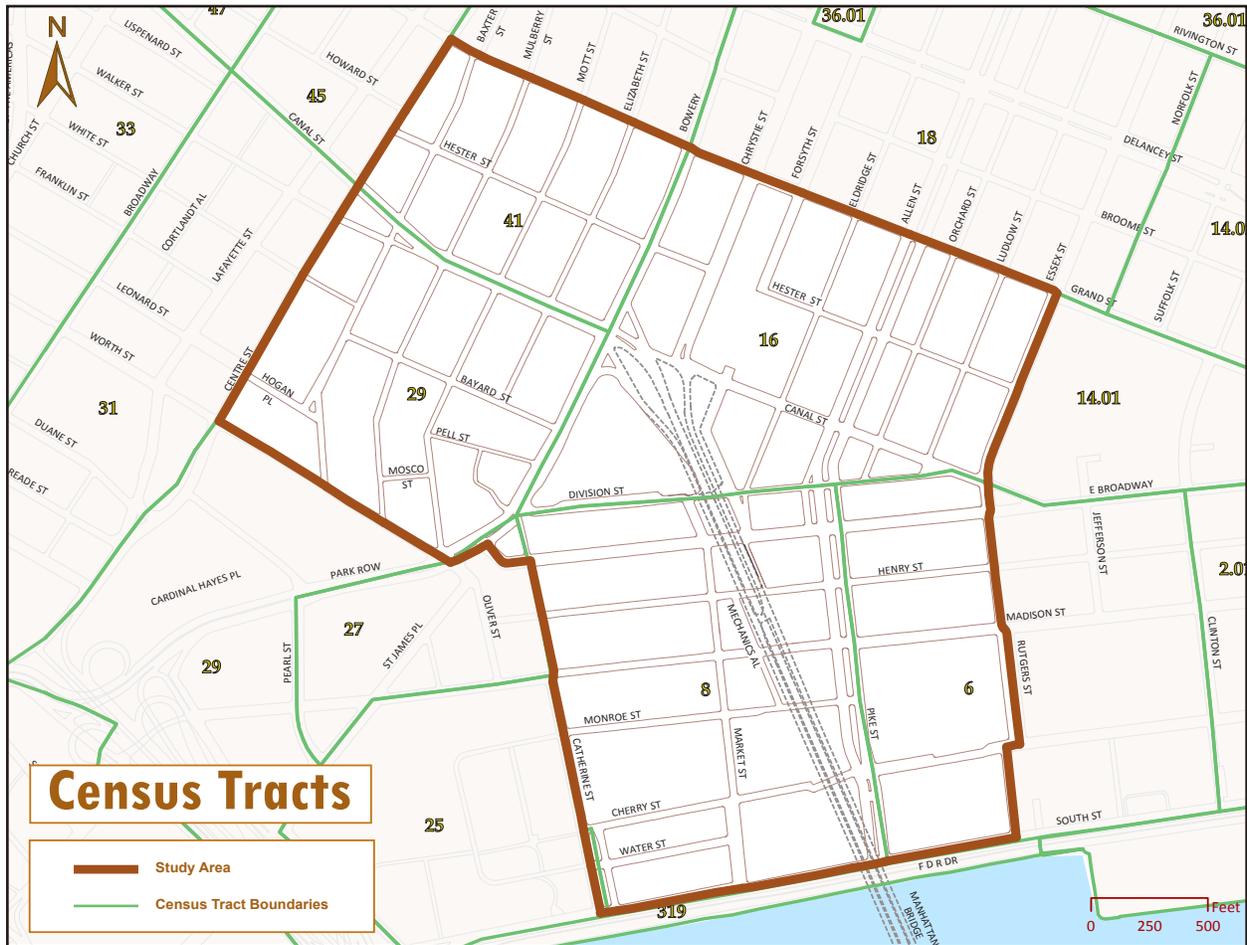
Appendix A Demographics

Demographics

Population

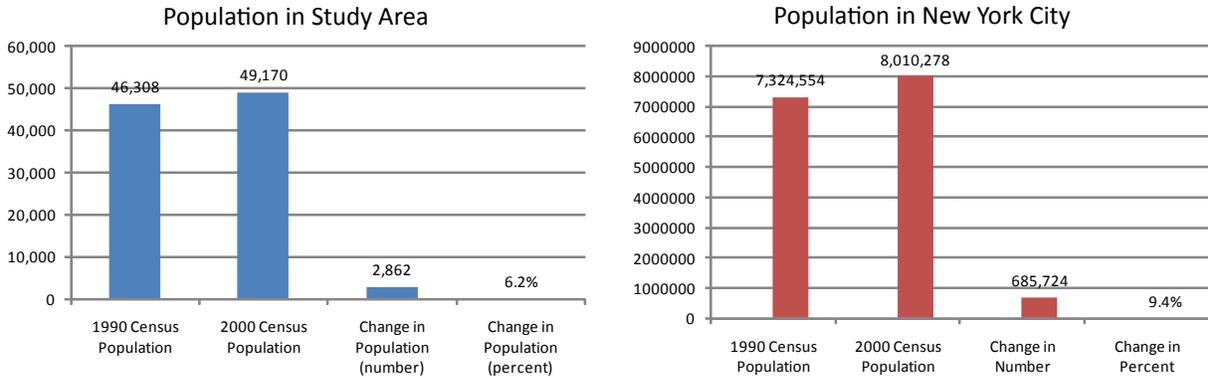
There are six census tracts (6, 8, 16, 27, 29, and 41) that fall within the study area (Figure 14). However, only a small portion of tract 27, consisting of a public plaza, falls within the study area. Since there are no residences on this public plaza the data from this census tract will not be analyzed for this study.

Figure 14



According to the 2000 decennial census, there were 16,410 households in and around the study area and 49,170 people lived in or surrounding the study area. There was a 6.2% increase in population from the 1990 census to the 2000 census (Figure 15). This increase is much smaller than the 9.4% increase in the rest of the city's population.

Figure 15: Population Change

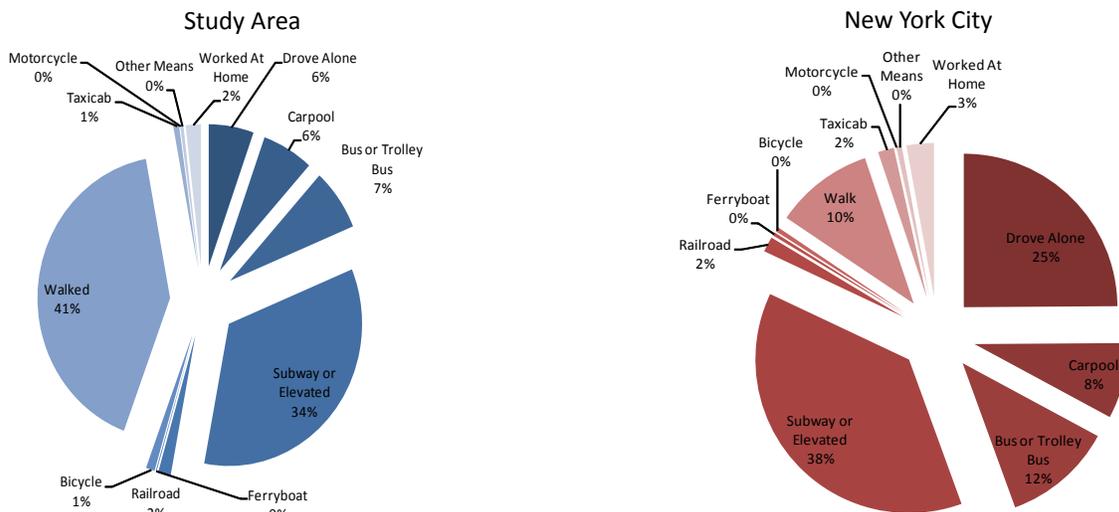


Journey to Work

The modal split analysis captures both the means of transportation to work for both the local resident labor force as well as for the people who travel into the study area to work. As part of the Census Bureau's disclosure avoidance process, the numbers are rounded in order to protect the privacy of participants. This process sometimes generates inconsistencies among the Journey to Work tables. However, the inconsistencies never exceed three percent.

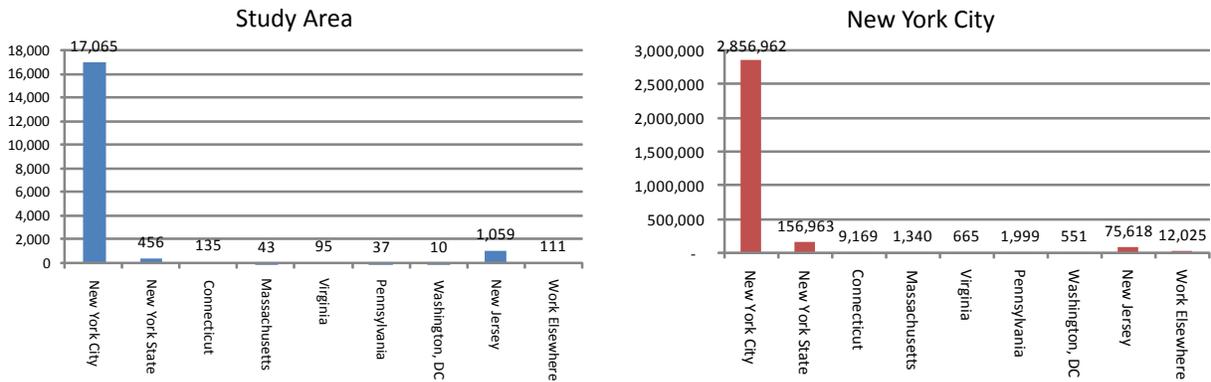
The 2000 Census shows that the local labor force consisted of 19,253 people over the age of 16. The data indicates that 7,970 (41%) people walked to work, making it the most common mode of transportation. Approximately 34% of the local workforce commuted to work by subway, the second most common mode of transportation. A relatively large portion of the Chinatown population walks to work in comparison to the rest of the City, where only 10% of the population walks to work. The most common mode of transportation to work for the rest of the City is subway (38%), followed by driving (25%). (See Figure 16).

Figure 16: Means of Transportation to Work for Local Labor Force Age 16 or Older



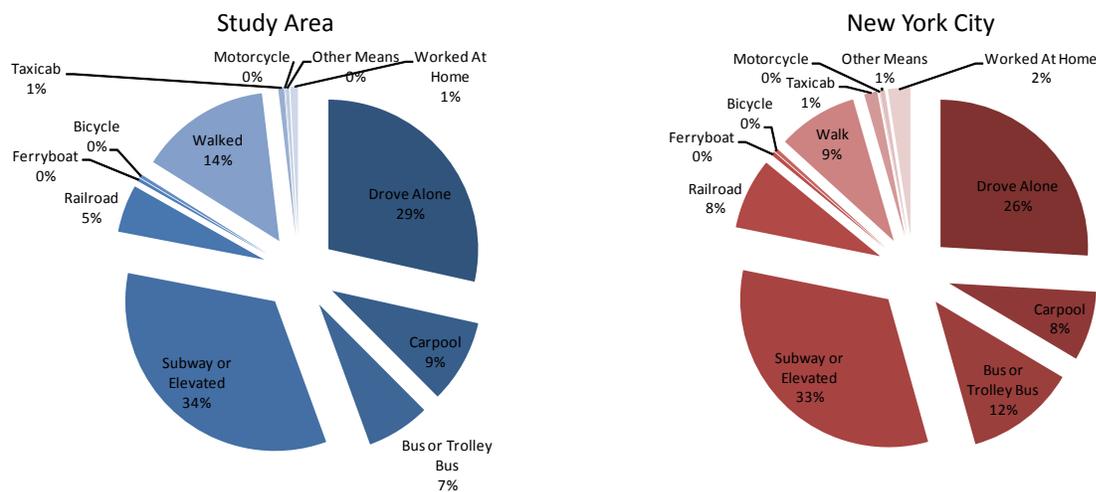
Out of the 19,253 people age 16 and older that constituted the local labor force in the study area, 17,065 people worked in New York City. The remaining labor force worked in other parts of New York State (excluding New York City), Connecticut (135), New Jersey (1,059), Massachusetts (43), Virginia (95), Pennsylvania (37), and elsewhere. This is consistent with the rest of the City, where most of the labor force works within New York City (Figure 17).

Figure 17: Place of Work for Local Labor Force Age 16 or Older



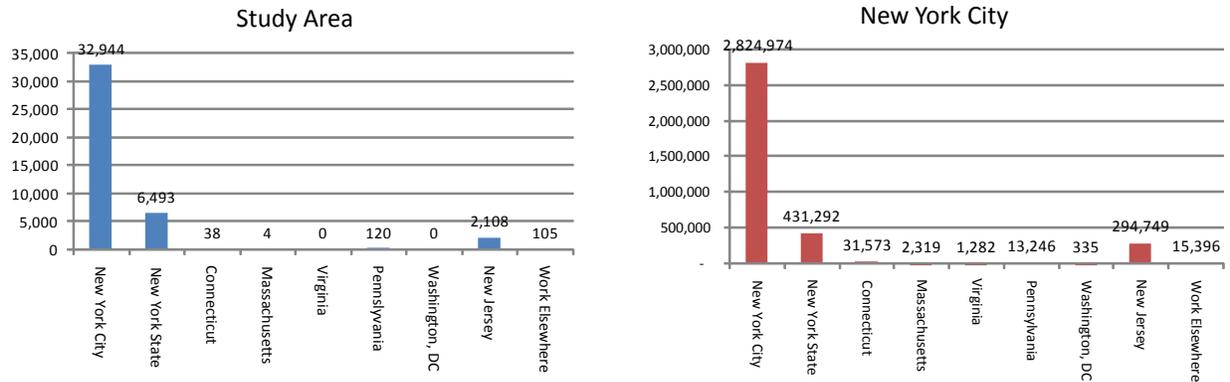
According to the 2000 U.S. Census data, 42,767 people worked in the study area. Approximately 34% of workers, 14,365, commuted to work by either the subway or elevated train. The next largest segment of workers, 29%, drove into the study area for work. There were 2,210 people who commuted to work by the railroad. There were 12,185 that drove into the study area alone and 3,869 people that carpoiled to work. A number of people, 6,080, walked to work in the study area. There were 149 people who traveled to work by ferry, 155 rode a bicycle to work, 265 traveled to work by taxi, 20 rode a motorcycle, 160 traveled to work by some other means, and 355 people worked at home. These figures are consistent with the rest of New York City (Figure 18).

Figure 18: Means of Transportation for Commuters



Out of the 41,812 people that commuted into the study area to work, 32,944 were from New York City. The remaining workers commuted from other parts of New York State (excluding New York City), Connecticut (38), New Jersey (2,108), Massachusetts (4), Pennsylvania (120), and elsewhere. These figures are consistent with the rest of New York City (Figure 19).

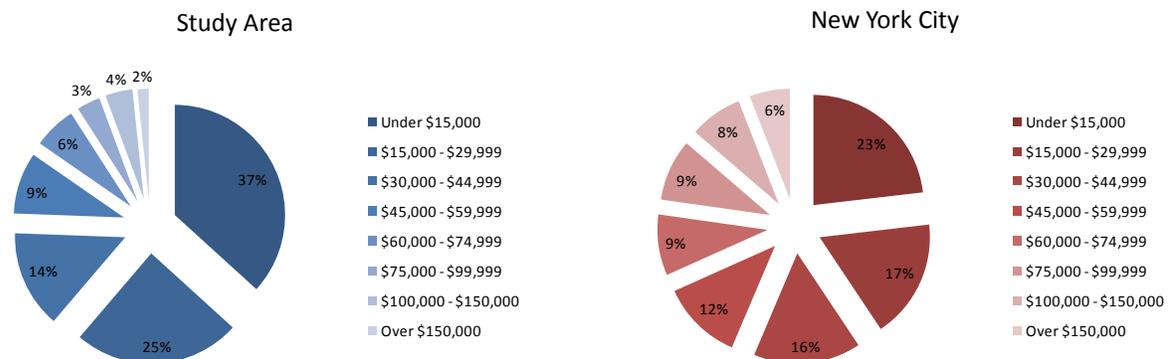
Figure 19: Place of Origin for Commuters



Households and Income

According to the 2000 Census data, there were 16,410 households in the study area. The study area was comprised of a variety of income ranges. The median salary for this study area was \$35,000 - \$37,499. Approximately 37% of the study area earns less than \$15,000 annually. This is a relatively large percentage in comparison to the rest of the City, where 23% of the population earns less than \$15,000 annually. Within the study area only two percent of residents earn more than \$150,000 annually, whereas in the rest of the City six percent of the population earns more than \$150,000 annually (Figure 20).

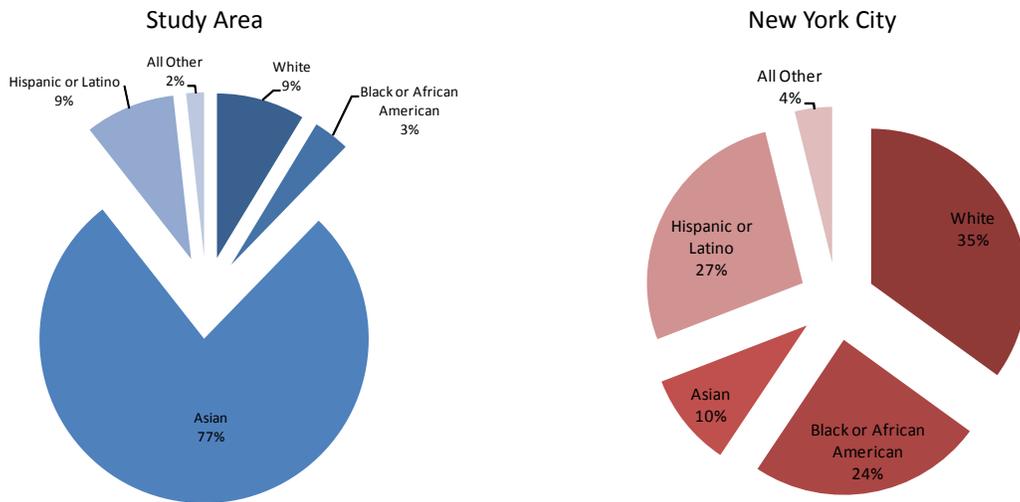
Figure 20: Income in 1999



Race/Ethnicity

The data the U.S. Census obtains is based on information people report about themselves. Based on the 2000 Census data, the study area was relatively homogeneous, with 77% of the population classifying themselves as Asian. In the rest of New York City ten percent of the population classify themselves as Asian. There were 4,325 people who identified themselves Hispanic or Latino of any race. There were 4,245 people who identified themselves as White and 1,750 that identified themselves as Black (Figure 21).

Figure 21: Racial and Ethnic Composition



Appendix B

Transportation Network

Public Transportation

Subway

The F train stops on East Broadway and Rutgers Street in the eastern section of the study area and the J, M, Z, 6, N, Q, R and W all stop at Canal and Centre streets in the western section of the study area. Entrances to this station are also located at Lafayette Street and Broadway. Just north of the study area the F, J, M, and Z trains stop at Essex and Delancey streets and the J, M, and Z trains stop at Delancey Street and the Bowery. (See Figure 22 on the following page).

Bus

Several New York City Transit (NYCT) bus lines travel through the study area. The M22 travels from Grand Street on the Lower East Side to Vesey Street in Tribeca making stops along Madison and Worth streets. The M15 travels from East Harlem to Whitehall Street by South Ferry making stops along Allen Street and Madison Street. The M15 also makes part-time stops along East Broadway and has a part-time terminal at City Hall. The M9 travels from Union Square to Battery Park City. The bus travels through the study area along East Broadway. The M1 travels from Battery Park to West 147th Street in Upper Manhattan along Centre Street at the western edge of the study area. The B51 travels from Brooklyn to City Hall part-time. The bus travels over the Manhattan Bridge across Canal Street, down Centre Street and terminates at City Hall. The M103 travels from East Harlem to City Hall making stops along the Bowery.

Figure 22



Truck Routes

Truck movements within New York City are currently governed by the traffic rules and regulations contained in the Rules of the City of New York, Volume II, Chapter 4-13. These regulations apply to vehicles which are designated for the transportation of property and have either of the following characteristics; two axles and six tires or three or more axles.

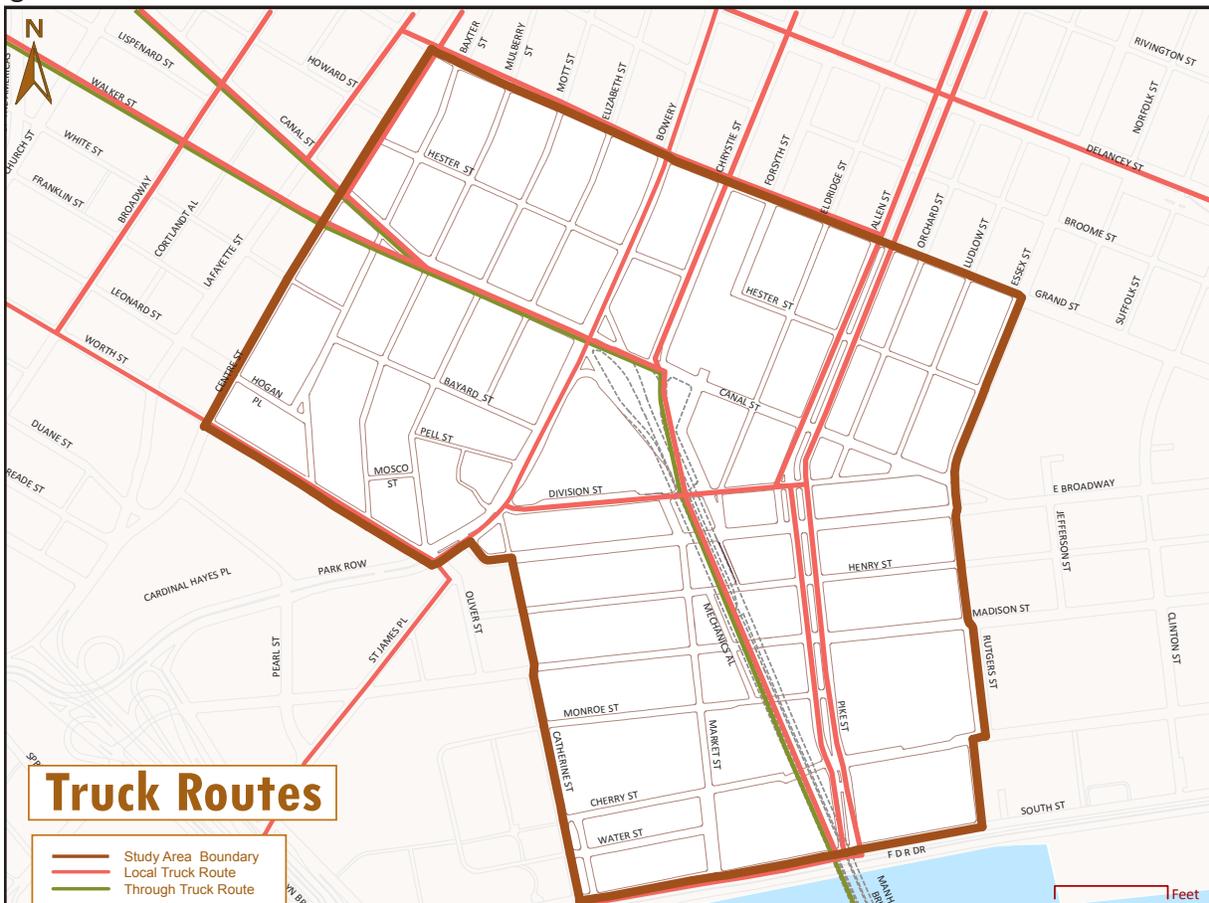
There are two Truck Route designations, Through and Local Truck Routes. Through Truck Routes are designated for trucks having neither an origin nor a destination within the local area. Local Truck Routes are designated for trucks with origins or destinations within an area for the purpose of delivery, loading, or providing services. See Figure 23 for the location of all study area Truck Routes.

The only Through Truck Route in the area is the Manhattan Bridge. There are several Local Truck Routes traversing the study area including Allen and Pike streets, Bowery, St. James Place, Division Street, Henry Street, Forsyth Street, Chrystie Street, Market Street, Worth Street, Canal Street, and Grand Street.

Limited Truck Zones

A Limited Truck Zone prohibits trucks from entering the designated boundaries except for the purpose of making a delivery and loading 24 hours per day, 7 days per week. Chinatown has been designated a Limited Truck Zone bounded by the northern property line of Worth Street, the eastern property line of Baxter Street, the southern property line of Canal Street, the western property line of the Bowery, and the western property line of Chatham Square.

Figure 23



Parking

The parking regulations for the Chinatown study area are grouped into nine different categories. The categories are as follows: no standing anytime; no parking anytime; no standing except authorized vehicles; truck loading/commercial parking; no standing during specified hours; no parking during specified hours; daytime alternate side parking regulations; nighttime alternate side parking regulations; and metered parking.

There are some noticeable correlations between parking regulations and land use patterns. The areas that have alternate side parking regulations are mostly residential, mixed-use residential and commercial, and open space. Commercial streets generally have parking regulations that allow commercial vehicles to use the curb space. The most common parking regulations are no parking and/or no standing during specified hours, truck loading/commercial parking, and no standing except authorized vehicles.

Near schools and other institutions the parking regulations are typically no standing at anytime and/or no standing except authorized vehicles. Parking meters are located throughout the study area, but they can be found most often near mixed-use commercial and residential buildings.

There are many places in the study area where the curb space is governed by multiple parking regulations. The parking regulations map (Figure 24) illustrates the current curb regulations. The curb regulations state the hours and types of vehicles restricted or permitted to park or stand at a specific location.

Figure 24



Street Network

The street network in New York City's Chinatown surrounds the Manhattan Bridge entrance. The bridge entrance is composed of several one-way on and off ramps which bring vehicles directly into the core of the study area. The entrance to the outbound Manhattan Bridge is from northbound Bowery and the exit from the inbound Manhattan Bridge is the intersection of Canal Street and Chrystie Street.

Through Streets

The **Bowery** is a major north-south thoroughfare within the study area. The street leads from Chatham Square in Chinatown to East 5th Street in the East Village, where it becomes Third Avenue. The street is approximately 79 feet wide and has three northbound travel lanes and three southbound travel lanes with a parking lane on both sides of the street. There is a four-foot wide median along the center of the street.

Allen Street is a north-south, two-way street that travels from East Houston Street to Canal Street where it becomes **Pike Street**, terminating at South Street. The street is approximately 112 feet wide with a 24-foot wide median. This median is referred to as the Allen Street Mall. Allen Street and Pike Street have three northbound travel lanes and three southbound travel lanes and a parking lane on each side of the street. A five-foot wide bicycle lane is striped along the entire length of Allen and Pike streets.

Centre Street is a one-way northbound street, approximately 40 feet wide, with two travel lanes and two parking lanes. The street travels from the Brooklyn Bridge to Spring Street, where it merges with Lafayette Street.

Canal Street is a major east-west thoroughfare that travels from Essex Street at the east to the Holland Tunnel at the west. The width of Canal Street varies along the length of the roadway. West of the Manhattan Bridge the street is approximately 70 feet wide and has two travel lanes and one parking lane in each direction, with a center median turning lane. West of Walker Street Canal Street narrows to 60 feet wide and has two travel lanes and one parking lane in each direction. East of the Manhattan Bridge the street is approximately 40 feet wide with one travel lane and one parking lane in each direction.

East Broadway is an east-west, two-way street that travels from Grand Street to Chatham Square. The street is approximately 50 feet from Chatham Square to Essex Street. The street narrows to approximately 45 feet east of Essex Street.

South Street runs below the FDR Drive from Wall Street to Montgomery Street. The Street varies in width from approximately 40 feet to approximately 60 feet.

Chrystie Street is a 35-foot wide northbound street which travels from the Manhattan Bridge to East Houston Street. The street has one 13-foot wide travel lane and two parking lanes on both sides of the street.

Minor Streets

Hester Street is a one-way street that travels from Centre Street to Essex Street and is bisected by Eleanor Roosevelt Park located between Forsyth and Chrystie streets. From Forsyth Street to Essex Street the street is approximately 25 feet wide and has one eastbound travel lane and one parking lane on each side of the street. From Chrystie Street to Centre Street the street is approximately 30 feet wide and has one westbound travel lane and one parking lane on each side of the street.

Division Street is a one-way westbound street that travels from Canal Street to Chatham Square. The street varies in width from approximately 25 feet at its narrowest point to approximately 55 feet at its widest point. The street has one travel lane from Canal Street to the Manhattan Bridge and two travel lanes west of the Bridge.

Henry Street is a two-way east-west street varying in width from approximately 30 to 45 feet wide. The street travels from Grand Street to Oliver Street and has one travel lane and one parking lane in each direction.

Madison Street is a two-way east-west street varying in width from approximately 30 to 45 feet wide. The street travels from Grand Street to the Brooklyn Bridge and has one travel lane and one parking lane in each direction. There is a five-foot bicycle lane striped along the street east of Pike Street. West of Pike Street the bicycle lane becomes shared.

Monroe Street is a one-way eastbound street which travels from Catherine Street to Pike Street. The street varies in width from approximately 25 feet to approximately 32 feet and has one travel lane.

Cherry Street is a one-way westbound street which varies in width from 35 feet to 50 feet. At its widest, the street can accommodate three travel lanes, however, no lanes are striped along the street and it carries observably light traffic. There is a parking lane on each side of the street.

Water Street is one block long within the study area, traveling from Catherine Street to Market Street. The street begins again just outside the study area traveling from Montgomery Street to Jackson Street. Within the study area the street is a one-way eastbound street approximately 35 feet wide.

Catherine Street is a one-way southbound street that varies in width from approximately 20 feet to approximately 50 feet. South of Cherry Street Catherine Street becomes two-way with an approximately 45-foot wide southbound roadbed and an approximately 30-foot wide northbound roadbed. The street also has an approximately 40-foot wide median between the northbound and southbound roads. Catherine Street travels from the Bowery to South Street.

Worth Street is an east-west street traveling from Chatham Square to Hudson Street. There is one travel lane in each direction.

Market Street is a one-way northbound street that travels from South Street to East Broadway. The street is approximately 30 feet wide with one travel lane and a parking lane on each side of the street.

Rutgers Street is a one-way northbound street that travels from South Street to Canal Street where it becomes Essex Street. Rutgers Street varies in width and becomes a two-way street from East Broadway to Canal Street, the intersection where it meets Essex Street.

Essex Street is approximately 54 feet wide and has two northbound travel lanes and two southbound travel lanes with a parking lane on each side of the street. The street travels from Canal Street to East Houston Street.

Ludlow Street is approximately 25 feet wide and has one southbound travel lane and parking lanes on both sides of the street. The street travels from East Houston Street to Division Street.

Orchard Street is approximately 25 feet wide and has one northbound travel lane and parking lanes on both sides of the street. The street travels from Division Street to East Houston Street.

Eldridge Street is approximately 25 feet wide and has one northbound travel lane and parking lanes on both sides of the street. The street travels from Division Street to East Houston Street.

Forsyth Street is a two-way street from East Houston Street to Hester Street and is approximately 45 feet wide. South of Canal Street Forsyth Street varies in width and becomes one-way southbound from Canal Street to Henry Street.

Elizabeth Street is a one-way northbound street that travels from Bayard Street to Bleecker Street. The street is approximately 25 feet wide and has one travel lane and one parking lane on each side of the street.

Mott Street is a one-way southbound street that travels from Bleecker Street to Chatham Square. The street is approximately 25 feet wide and has one travel lane and one parking lane on each side of the street.

Mulberry Street is a one-way northbound Street that travels from Worth Street to Bleecker Street. The street is approximately 25 feet wide and has one travel lane and one parking lane on each side of the street.

Bayard Street is a one-way eastbound street that travels from Baxter Street to the Bowery. The street is approximately 25 feet wide and has one travel lane and one parking lane on each side of the street.

Baxter Street is a one-way southbound street that travels from Grand Street to Hogan Place. The street is approximately 25 feet wide and has one travel lane and one parking lane on each side of the street.

Mosco Street is a one-way westbound street that travels from Mott Street to Mulberry Street. The street is approximately 15 feet wide and parking is not permitted. The only exception is when a funeral is in progress at a neighboring funeral home.

Pell Street is a one-way westbound street traveling from the Bowery to Mott Street. The street is approximately 15 feet wide and parking is not permitted.

Doyers Street is a one-way southbound street traveling from Pell Street to the Bowery. The street is approximately 15 feet wide and parking is not permitted.

Appendix C Accidents

Accidents

Data was compiled from the New York State Department of Transportation’s Local Accident Surveillance Project (LASP) for 2004 through 2006, the latest year for which data was available at the time of this analysis. The information gathered from LASP includes total accidents and pedestrian accidents.

Total Accidents are the number of accidents where a police report was taken at the scene of the accident. The site of the accident may either be at an intersection or at a mid-block location between two intersections. Pedestrian Accidents are accidents in which a pedestrian was involved.

There were 789 total accidents within the Chinatown study area during the period from 2004 through 2006, as indicated in Table 3. Data on the highest number of total recorded accidents over the three year period (2004-2006) revealed that one location, Bowery and Canal Street, 48 accidents occurred.

Table 3:

Intersections with the Highest Number of Total Recorded Accidents over a Three-Year Period

Intersection	2004-2006
Canal Street and Bowery	48
Grand Street and Allen Street	35
Canal Street and Centre Street	28
Canal Street and Elizabeth Street	22
Canal Street and Mott Street	18
East Broadway and Pike Street	18
Madison Street and Pike Street	18
Hester Street and Bowery	17
Grand Street and Bowery	15
Grand Street and Centre Street	14
East Broadway and Forsyth Street	14
Canal Street and Baxter Street	13
Walker Street and Center Street	12
Grand Street and Chrystie Street	12
Catherine Street and Henry Street	11
Division Street and Market Street	11
Canal Street and Mulberry Street	11
Elizabeth Street and Hester Street	10

Additionally, the intersections of Canal and Centre streets, Canal and Elizabeth streets, and Grand and Allen streets had 20 or more accidents during the same time period. Table 3 indicates the intersections within the study area that had ten or more accidents during the time period of 2004 through 2006, and Table 4 indicates mid-block locations within the study area where five or more accidents occurred during the same time period.

Table 4:

Mid-block Locations with the Highest Number of Total Accidents over a Three-Year Period

Location	2004-2006
Grand Street and Bowery/Hester Street	9
Canal Street and Bowery/ Ramp to Lower Level Manhattan Bridge	8
Grand Street and Chrystie Street/Hester Street	7
Hester Street and Allen Street/Canal Street	5
Canal Street and Bowery/Main Ramp to Manhat- tan Bridge	5
Catherine Street and Madison Street/Market	5
Canal Street and Elizabeth Street/ Bowery	5

The number of accidents that involved pedestrians and cyclists were significant during the 2004-2006 period (see Figures 26 and 27). There were 273 accidents that involved pedestrians and 51 accidents that involved cyclists over the three year period. Data on the highest number of total recorded accidents over the three-year period (2004-2006) revealed that at two intersections, Canal Street and Centre Street, and Grand Street and Allen Street, 11 accidents involving pedestrians occurred.

Table 5 shows intersections within the study area where five or more pedestrians were involved in accidents, and Table 13 shows intersections within the study area with the highest numbers of accidents involving cyclists.

Table 5:

Locations Where Vehicular Accidents Involved Pedestrians over a Three-Year Period

Intersection	2004-2006
Canal Street and Centre Street	11
Grand Street and Allen Street	11
Division Street and Market Street	10
Catherine Street and Henry Street	10
East Broadway and Forsyth Street	7
Forsyth Street and Division Street	6
Pike Street and East Broadway	6
Madison Street and Pike Street	6
Elizabeth Street and Hester Street	6
Canal Street and Elizabeth Street	5
Essex Street and Grand Street	5
Mott Street and Bayard Street	5

Table 6:

Intersections Where Vehicular Accidents Involved Bicyclists over a Three-Year Period

Intersection	2004-2006
Grand Street and Bowery	6
Madison Street and Pike Street	3
Forsyth Street and Canal Street	3

The intersection with the highest number of total accidents was Canal Street and Bowery (48). This intersection is the point of entry to the Manhattan Bridge and has observably high volumes. Fung Wah uses this location to load and unload passengers, which adds to the pedestrian traffic and general congestion of the intersection.

The intersections of Forsyth Street and East Broadway, and Forsyth Street and Division Street had seven and six pedestrian accidents from 2004 through 2006, respectively. These intersections, located near 88 East Broadway, have recently been closed off to Chinatown bus operations but until recently had the highest number of Chinatown bus arrivals and departures.

Once the buses were displaced from 88 East Broadway, many moved to nearby Allen Street between Grand and Henry streets. The intersection of Grand and Allen streets has the second highest number of total accidents (35) and the highest number of pedestrian accidents (11) in the study area.

Figure 25

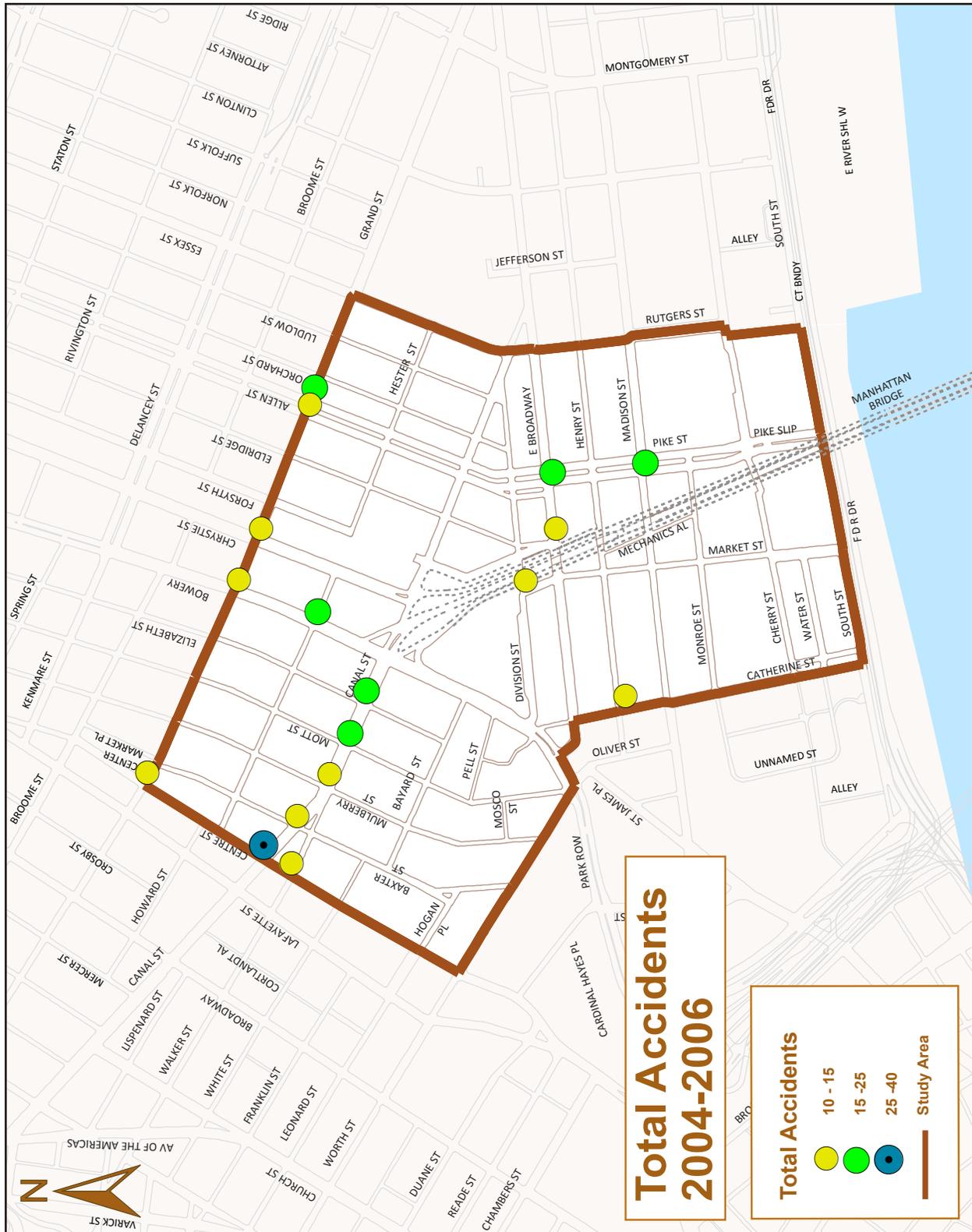
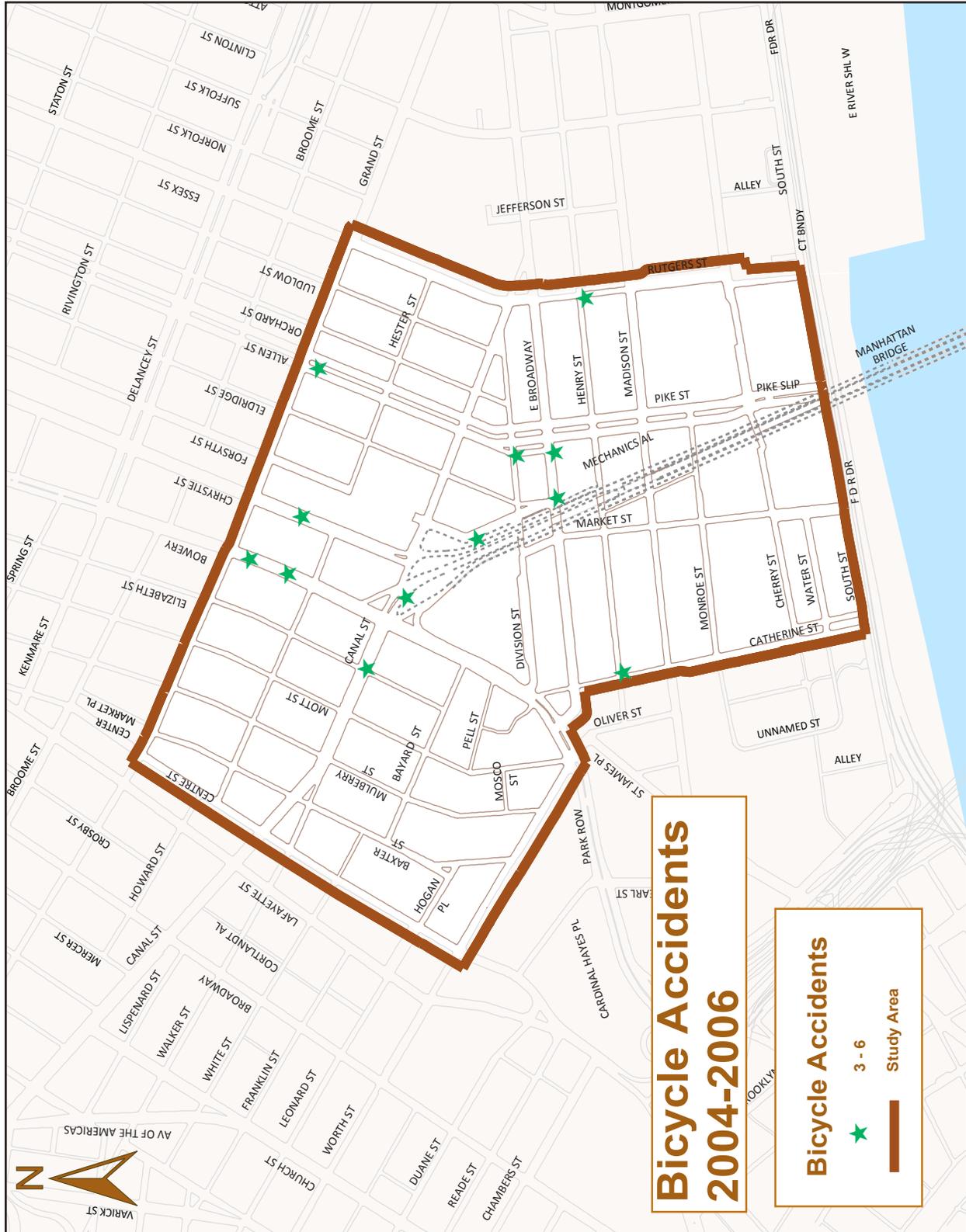


Figure 26



Figure 27



Bibliography

- Baily, Steve. "Peter Pan is a Bully." The Boston Globe, (June 18, 2004) http://www.boston.com/business/articles/2004/06/18/peter_pan_is_a_bully/ (Accessed July 29, 2008).
- Beck, Graham T. "The Down Side of Low-Cost Buses" Gotham Gazette, (September 18, 2008) <http://www.gothamgazette.com/article/transportation/20080918/> (Accessed September 19, 2008).
- Chinatown Bus. "Chinatown Bus History." (2007) <http://www.chinatownbus.org/> (Accessed June 2, 2008).
- Daniel, Mac. "Wheel Scare Halts Fung Wah Bus Trip, Mishaps Continue for Bargain Carrier." The Boston Globe, (January 4, 2007) <http://www.boston.com/news/local/articles/2007/01/04/> (July 2, 2008).
- Daniel, Mac. "Fung Wah Bus Line Faces State, Federal Scrutiny." The Boston Globe, (September 7, 2006) <http://www.boston.com/news/local/articles/2006/09/07/> (Accessed March 18, 2008).
- Doig, Jameson W. Empire on the Hudson: Entrepreneurial Vision and Political Power at the Port of New York Authority. New York: Columbia University Press, 2001.
- Fleisher, Lisa and Daniel, Mac. "Passengers Say Bus Firm Unresponsive Fire, Delays Left Many in Difficulty." The Boston Globe, (August 18, 2005) <http://www.boston.com/news/local/massachusetts/articles/2005/08/18/> (Accessed June 5, 2008).
- Freedlander, David and Marlene Naanes. "Bus Crash Latest in String of Pedestrian Accidents." (June 24, 2008) AM New York. <http://www.amny.com/news/local/transportation/ambus/> (Accessed September 4, 2008).
- Gonzalez, David. "Forty Years of Growth, Except Where It Was Expected." New York Times, August 27, 2007.
- Gotobus. "Brief History of Chinatown Bus" (2008) <http://www.gotobus.com/> (Accessed June 20, 2008).
- Independence Visitor Center. "Bus Parking." (2009) <http://www.independencevisitorcenter.com/motorcoach/> (Accessed March 31, 2009).
- Knafo, Saki. "Dreams and Desperation on Forsyth Street." The New York Times, Sunday, June 8, 2008.
- McFadden, Robert D. "Bus to Casinos Skid off Parkway; 2 Die and 28 are Injured." The New York Times, (February 8, 2003). <http://query.nytimes.com/gst/fullpage.html/> (Accessed August 5, 2008).
- Naanes, Marlene. "Cheap Buses Drive NY Crazy." AM New York, Pg. 3, October 27, 2008.
- National Constitution Center. "Group Information" (2009). http://constitution.org/ncc_visit_Group_Information.aspx (Accessed March 30, 2009).
- Ng, I-Ching. "Trouble on the Highway and Parked in Chinatown." City Limits Weekly, (June 11, 2007) <http://www.citylimits.org/content/articles/viewarticle.cfm/> (Accessed July, 2008).

- Philadelphia Chinatown Development Corporation. "11th Street Commercial Corridor." (June 2007) <http://www.chinatown-pcdc.org/images/11th/> (Accessed March 30, 2009).
- Pinnamaneni, Sruthi. "Corralling Chinatown's Cowboy buses." *Downtown Express*, (August 3, 2007) http://www.downtownexpress.com/de_223/ (Accessed June 18, 2008).
- Port Authority of NY and NJ. "History of the Port Authority." (2006) <http://www.panynj.gov/> (Accessed August 10, 2008).
- Rules of the City of New York, Title 34, Section 4-10.
- Schumer, Senator Charles "Schumer Reveals Safety Gap on Inner-City Chinatown Buses; Rated Dangerously Low on Safety by Feds." (August 28, 2005) <http://schumer.senate.gov/ShumerWebsite/pressroom/press-release/> (Accessed July 8, 2008).
- Shat, Christina. "Health Needs Assessment: Executive Summary." http://www.chinatown-pcdc.org/community_health.htm. (Accessed March 30, 2009).
- Stampas, Triada. "Idling Buses: Exhausting our Health." Prepared for The Council of the City of New York, The Committee on Oversight and Investigations, (October 2003) <http://www.nyc.gov/html/records/pdf/govpub/760busidling.pdf/> (Accessed July 25, 2008).
- Starcic, Janna, "Surviving the Motorcoach Rate-Cutting War." *Metro Magazine*, (August 2005) <http://www.metro-magazine.com/Article/Story/2005/08/Surviving-the-Motorcoach-Rate-Cutting-War.aspx> (Accessed July 18, 2008).
- United States Constitution, Commerce Clause, Article I, Section 8.
- Wabash, St. Louis, & Pacific Railway Co. v. Illinois, 118, U.S. 557 (1886).
- Weiner, Congressman Anthony D. "New York Keeps on Trucking- A lot: A Study of Truck Traffic in NYC 1998-2007." (January, 12 2007). www.house.gov/list/press/ny09_weiner/trucks_report.doc/ (Accessed August 5, 2008).
- Zearfoss, Christopher and Adrienne Eiss. "Development of a Bus-Management System for Independence Mall". Institute of Transportation Engineers. *ITE Journal* (June 2002). http://findarticles.com/p/articles/mi_qa3734/is_200206/ai_n9134783/ (Accessed March 30, 2009).

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