Community Accessibility Study for Seniors and People with Mobility Disabilities

Prepared for Manhattan Community Board 3

By FCNY fellow
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Introduction

The number of senior citizens in New York City will increase more rapidly than any other age group over the next three decades (NYC Department of City Planning, 2006) outnumbering the growth of younger adults and children (Maltz, et al., 2014). Changing demographics in the United States require that the accommodation of senior citizens in high-density and pedestrian- oriented developments be addressed. The goal is to have places where people of all ages and abilities can live as safely and as independently as possible, not only in residential spaces, but also the entire neighborhood (Maltz et al., 2014). People are "aging in place"[1] among neighborhoods that should become built environments that gives the opportunity to all ages and abilities to engage in daily life activities (Rosenberg et al., 2012).

Manhattan Community Board 3, which is includes The East Village, Lower East Side, and Chinatown, participates in the Community Planning Fellowship Program from The Fund for The City of New York. The Community Board assigned for the 2014 – 2015 fellow to work on a study on community accessibility for older adults and people with mobility disabilities. The community board prioritized accessibility to four categories: goods, services, the public right of way, and housing.

The following chapters depict the process through which this study was developed, from the initial stage of defining the scope of the study to the recommendations proposed to the Community Board in order to improve accessibility for seniors and people with mobility disabilities in the district.

1 People are aging in the place they have live for the past years becoming older adults residents.

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1. Study Description and Goals

The study conducted by the 2014-2015 community-planning fellow focused on "*community accessibility for older adults and the population with mobility disabilities*" in order to improve their quality of life and to address current and future accessibility issues. This study aimed to create a model that could be used in other areas of the community district to measure the accessibility of goods (e.g. fresh food access, grocery stores, pharmacies, etc.), services (e.g. recreation services, health assistance, friendly visiting, etc.), the public right of way (e.g., sidewalks and street crossings, etc.) and housing typologies (e.g. tenement houses, high rise buildings etc.)[1] in a selected geographic area of Community District 3 (CD3).

It was necessary to define a threshold age for older adults. Some sources try to define a certain age being 60 or 65 and over. For example, The World Economic Forum defined in 2012 an "older adult" as someone aged 60 or older. According to the World Health Organization (WHO), most developed countries have adopted the definition of "older adult" at the chronological age of 65 (www.who.int). The New York City Department for the Aging (DFTA) defined the elderly population as age 60 and over, based on a census analysis of the changes occurring in the city's elderly population from 2000 to 2010.

The term "older adult" includes not only the population aged 60 or 65, but also includes those who are older than that threshold. Therefore, as people keep living longer (i.e., life expectancy increases), this age group will keep expanding. Moreover, the "older adult" age group is very broad since it is composed of individuals who have large differences in age and who have very different needs. For this reason, Community Board 3 (CB 3) gave priority to the "older-old adult age group," those age 75 and older, during the first phase of the study. However, this study also addresses the needs and concerns of the "young-old adult age group," those 65 to 74 years old, and addresses the needs and concerns for those in the 55 to 64 years-old age group bracket, as they will be the future older adults who will be largely benefit from having an accessible community.

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1 New construction does not require "elevator in facilities that are less than 3 stories or have less than 3,000 square feet per story (the typical NYC lot has an average of 2,500 sq. ft.) unless the building is a shopping center, a shopping mall, or the professional office of a health care provider." (Americans for Disabilities Act).
The Fair Housing Act also requires landlords to allow tenants with disabilities to make reasonable access-related modifications to new multifamily housing with four or more units which must be designed and built to allow access for persons with disabilities.

1.1 Key Concepts

This study first entailed defining the scope of the study developing the study objectives, and the approach. The following list describes some key words or concepts that helped to develop the scope:

- **Accessibility**: to ensure that goods, services, and the public right of way (sidewalks and street crossings) are adequate for the people with mobility disabilities and older adult populations. Since this study will look at the housing typologies where the older adult population lives, accessibility refers to space and availability limitations in semi-private and public spaces (CB 3, 2014)
- **Physically disabled:** a physical impairment that limits a person's ability to carry out major life activities (ADA, 2009). Thus, this term focuses on persons who use wheelchairs, walkers, and other mobility aids.
- **Older adults**: residents aged 65 and older (CB 3, 2014).
- **Young-old adult age group:** residents aged 65 to 74 (CB 3, 2014).
- **Older-old adult age group:** residents aged 75 and older (CB 3, 2014).
- **Resident:** a constituent living within Community District 3 or within the selected geography area of study (CB 3, 2014).
- **Healthy aging:** longevity, activity and freedom from disability and dependence (Moody, H.R.).
- **Pilot project:** a model of analysis that can be used in other parts of the district (CB 3, 2014).
- **Goods:** refers to essential items sold by retailers and businesses located in the area of study (CB 3, 2014).
- **Community services:** any type of service offered in the area (e.g. public facilities such as parks and public libraries, medical services, professional services, community associations, places of worship and others) (CB 3, 2014).
- **Public right of way:** sidewalks and street crossings (CB 3, 2014).
- **Housing typologies:** differentiates between mid-rise buildings or tenement houses and high-rise buildings or the typical tower-in-the-park building (CB 3, 2014).

2. Overview: Older Adults and the Population with Mobility Disabilities in CB 3

2.1 Targeted Population in Context:

Today, more than 13 percent of the population in United States is over 65 years old, and projections estimate that by the year 2030, this number will grow up to 20 percent (U.S. Census Bureau, 2012). According to the New York City Department of the Aging and the 2010 U.S. Census, there are 22,847 older adults in Manhattan Community District 3 (CD 3) which means that approximately 15 percent of CD3's total population is aged 65 and older. There are 12 community districts in Manhattan, and CD 3 ranks third in its percentage of the total population comprised of elderly residents. In first place is CD 8 (the Upper East Side) with 18 percent, followed by CD 7 (the Upper West Side) with 16 percent. A significant concern for Community Board 3 (CB 3) is that based on The NY Center for Economic Opportunity (CEO) and Federal Poverty Level Data, 13,281 older adults in CD 3 are below the poverty line[2] . This accounts for 60 percent of the older adult population in CD 3. In comparison, the Upper East and the Upper West Side have 15 and 27 percent, respectively, of their older adult population living below the poverty line (see figure 1) The New York Center for Economic Opportunity also reported that the poverty rate among those aged 65 and older is higher in NYC when compared to federal levels, primarily due to high costs of housing and extensive medical costs for New Yorkers (Corrado, 2014).

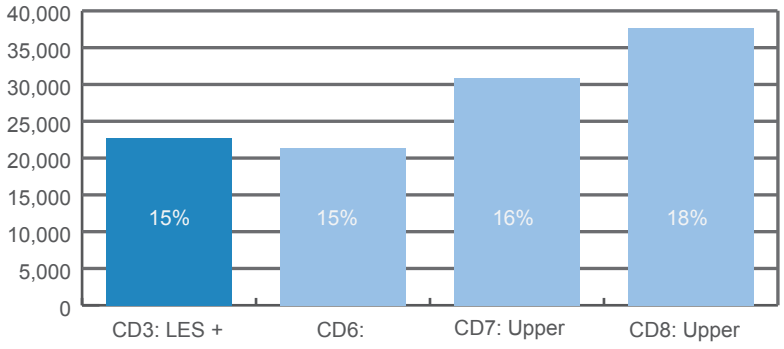


Figure 1: CD3 rank of elderly residents
Source: New York City Department of the Aging and the U.S. Census

Older adults in the United States have considerable late-life disability and care needs according to national data from the 2011 National Health and Aging Trends Study[3] (NHATS) (Freedman and Spillman, 2014). For this reason, the health and well being of the older adult population is another important factor to consider. In the United States, 19 percent (about 50 million people) reported having a type of disability (Center for Disease

2 According to the Federal Reserve System in 2015 a 1 person household is under the poverty line when receives an annual income of $11,770 and $15, 930 for a couple. Retrieved from http://familiesusa.org/sites/default/files/product_documents/FPL-federal-register.pdf

3 The successor to the 1982-2004 National Long Term Care Survey

Control and Prevention (CDC), 2006).

According to the 2008 – 2012 American Community Survey (ACS) estimates, 9 percent of the population in CD 3 lives with a mobility disability, wherein the highest concentrations are among senior residents where 33 percent of them reported having a mobility disability (see figure 2). People aging with a disability are more vulnerable to environmental constrains (Yen, Michael, & Perdue, 2009). Also, women outlive men by five to six years by age eighty-five, where there are roughly six women for every four men (Kirkwood, 2010). This may explain why women over 75 years old in CD 3 reported the highest rate of mobility disabilities with 49 percent of them having at least one.

CD3 Ambulatory Difficulties

	With	Without	% of Population with Difficulties
5 to 17	302	15,959	2%
18 to 34	483	56,615	1%
35 to 64	4,845	60,595	7%
65 to 74	2,793	9,977	22%
75 and over	5,518	6,623	45%
TOTAL	**13,941**	**149,769**	**9%**

Figure 2: Ambulatory Difficulties by Age in CD3
Source: U.S. Census Bureau, ACS 2008 - 2012

Two of the three neighborhoods that comprise CD3, Chinatown and The Lower East Side, have been historically known as immigrant neighborhoods. Today, 70 percent of their seniors are foreign born (the second highest ranking district in Manhattan). This means that there are language barriers in the older adult population. In fact, it has been reported that 59 percent of seniors in these neighborhoods speak English "less than very well." According to the 2010 – 2012 ACS, the two languages that elderly residents speak the most are Spanish (23 percent) and Chinese (43 percent).

Although CD 3 is the district with the highest number of senior centers in Manhattan, some senior centers accept members from the outer boroughs. The loss of private senior centers such as The Salvation Army Chinatown Corps has put additional pressure on public senior centers within the district, such as the Meltzer Senior Citizen Center and the Bowery Residents' Committee (BRC). These senior centers provide services to the diverse community of the district and are located close to seniors' homes.

Finally, of the 22, 847 senior residents in CD 3, 8,519 are living in a one-person household[4] according to the ACS. This makes up 37 percent of the older adult population aged 65 and older, and even higher rates are experienced by those in the 75 and

4 The U.S. Census Glossary household definition: a household includes all the people who occupy a housing unit as their usual place of residence

older age group. Both the older adults and people with mobility disabilities in CD 3 are vulnerable populations that share similar challenges and needs, which Community Board 3 hopes to address.

3. Selecting the Geographic Area of Study

On December 9th 2014, a presentation was given to CB3 Health, Seniors and Human Services Committee, where the study for the 2014 – 2015 community-planning fellow was introduced. One of the objectives of the first phase of this study and of this presentation was to define, with the input of the Committee, a geographic area of study. In order to achieve this objective, a demographic analysis of the elderly population was conducted, which prioritized two requests from the community board: 1) to focus primarily on the "older-old adult age group," those aged 75 and older, and 2) to include in the analysis the population with mobility disabilities.

3.1 Phase 1 Findings:

The first findings suggest that the percent share of older-old adults (75 +) is very similar community district, borough and citywide level. There is a 6 percent share of the total population in NYC and Manhattan, and an 8 percent share of the CD 3 population (see figure 3).

Older Adults (75 +) Population

	NYC	Manhattan	CD3
75+ Population	461,697	98,784	12,558
% Share of Total Population	6%	6%	8%

Figure 3: Older Adults 75+ Population in NYC, Manhattan and CD3
Source: U.S. Census Bureau, 2010

A similar situation applies to the total population (aged 75+) with mobility disabilities, where the percent share in New York City and Manhattan is 7 percent, and 9 percent in CD 3 (see figure 4).

While the percent share of the total population (aged 75+) with mobility disabilities across the three levels of governance is not relatively high, a comparison of the percentage share among the different older adult groups shows a significant variance and varies

Older Adults (75 +) With Ambulatory Difficulties

	NYC	Manhattan	CD3
75+ Population	515,279	95,786	13,941
% Share of Total Population	7%	7%	9%

Figure 4: Ambulatory Difficulties in 75+ in NYC, Manhattan and CD3
Source: U.S. Census Bureau, ACS 2008-2012

among gender, as you will see among women 75 and older in the following paragraph. Furthermore, people with disabilities have an increased risk of secondary conditions that prevent them from maintaining or improving their health situation (Seekins et al. 1994); this adverse impact on their health must therefore be managed to prevent future complications (Rimmer et al. 2011).

Once again the percent share in NYC and Manhattan are very similar, with 32 percent and 30 percent of older male adults (aged 75+) with mobility disabilities respectively, and in Community District 3 it is once again higher with a 39 percent share (see figures 5 to 7).

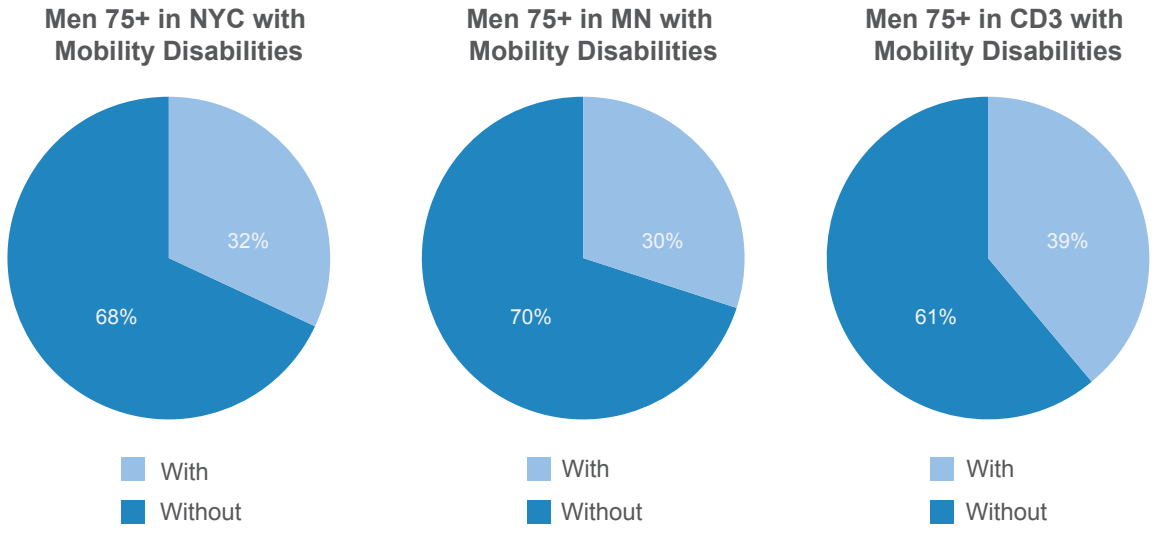


Figure 5 to 7: Men 75+ in NYC, Manhattan and CD 3 with Mobility Disabilities
Source: U.S. Census Bureau, ACS 2008 – 2012

Findings also suggest that the percent share of mobility disabilities is higher in women than in men, with 44% in NYC, 41% in Manhattan, and 49% in CD 3 (see figures

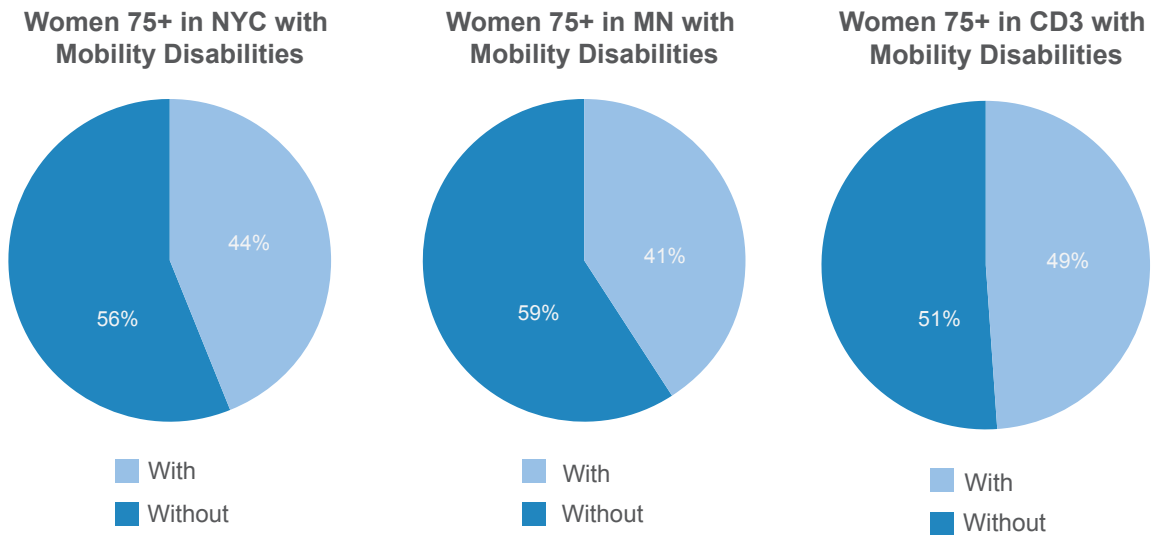


Figure 8 to 10: Men 75+ in NYC, Manhattan and CD 3 with Mobility Disabilities
Source: U.S. Census Bureau, ACS 2008-2012

8 to 10). To summarize, CD 3 has slightly higher concentrations of older adults in the "older-age group," those aged 75 and older, than New York City and Manhattan, and has relatively higher concentrations of the "older-old adult age group" with mobility disabilities, where women have the highest percentages of physical disability.

The concentration of populations with disabilities is higher amongst minorities and lower- income populations, and at the same time it is also correlated with educational attainment (Miller et al. 2014). As mentioned before, CD 3 has a very culturally and ethnically diverse elderly population, with a majority of 60 percent living under poverty levels. The challenge for health practitioners is to provide health information that is culturally customized (Lyons et al., 2013).

Census Tracts 8, 16, and 18 were the three geographic areas of study initially suggested to the Health, Senior and Human Services Committee (see figure 11). Using GIS software and data from the U.S. Census, the criteria for selection was based on:

- High concentrations of older adult population (aged 75+).
- High concentrations of older adults (aged 65+) with low median household income.
- High concentrations of population with mobility disabilities (aged 75+).
- Good mix of walk up buildings and buildings with elevator services.
- Complicated intersections, wide roadways and high concentration of collisions. See Appendix A for detailed maps.

Figure 11: Suggested Areas of Study
Source: NYC Department of City Planning, 2013

At the Committee presentation, some concerns arose about incorporating into the study the Smith Houses, a New York City Housing Authority (NYCHA) development located in Census Tract 25 and next to Tract 8. A comparison of the older adult population and those with mobility disabilities was conducted for both census tracts. Since Census Tract 25 primarily consists of Smith Houses, and NYCHA developments have singularly unique challenges regarding accessibility, Census Tract 8 was chosen for the pilot study, focusing on one track not two. See Appendix B for memo.

3.2 Further Analysis: the "Young-Old Adult Age Group"

Preventive measures that could help improve the quality of life are very important when planning for older adults and those with mobility difficulties. People with disabilities have an increased risk of secondary conditions that prevent them from maintaining or improving their health situation (Seekins et al. 1994) and the rate of comorbidities per older adult has increased by two or more (Fried, Bernstein, Bush, 2012). Therefore, preventing future complications that have adverse impacts on health is essential for both populations. For this reason, this study analyzes the "young-older adult age group," which are those aged 65 to 74 years old and the "pre-older adult age group" which are those aged 55 to 64 years old.

Even though concentrations vary among the district (see figure 12 and 13), it is important to note that the areas with the highest concentrations of both age groups (65 to 74 years old and 55 to 64 years old) are located among the same census tracts (16, 8, 6 and 2.02). This finding could suggest study areas for future analysis, even more so if these areas are proven to be areas with high concentrations of people with mobility disabilities.

In Census Tract 8, concentrations of older adults were also analyzed at the block level (see figure 14 and 15). Unfortunately, data at the block level is only available for age groups and not for mobility disabilities. Therefore, concentrations of people with physical disabilities at the block level are unknown. Similar to the findings at the district level, at the block level analysis concentrations of older adults (those aged 65 years and over) and of the "pre-older adult age group" (those aged 55 to 64 years old) are located among the same blocks in the study area and in the blocks adjacent to the study area boundaries. The blocks with the highest concentrations of older adults also have designated senior resident centers such as The Knickerbocker Village, The Smith Houses and LaGuardia Houses. However there is still a significant number of senior residents living in walk-up buildings who face challenges in the building's built environment where there are no elevators available and who face financial resources constraints for affording increasing

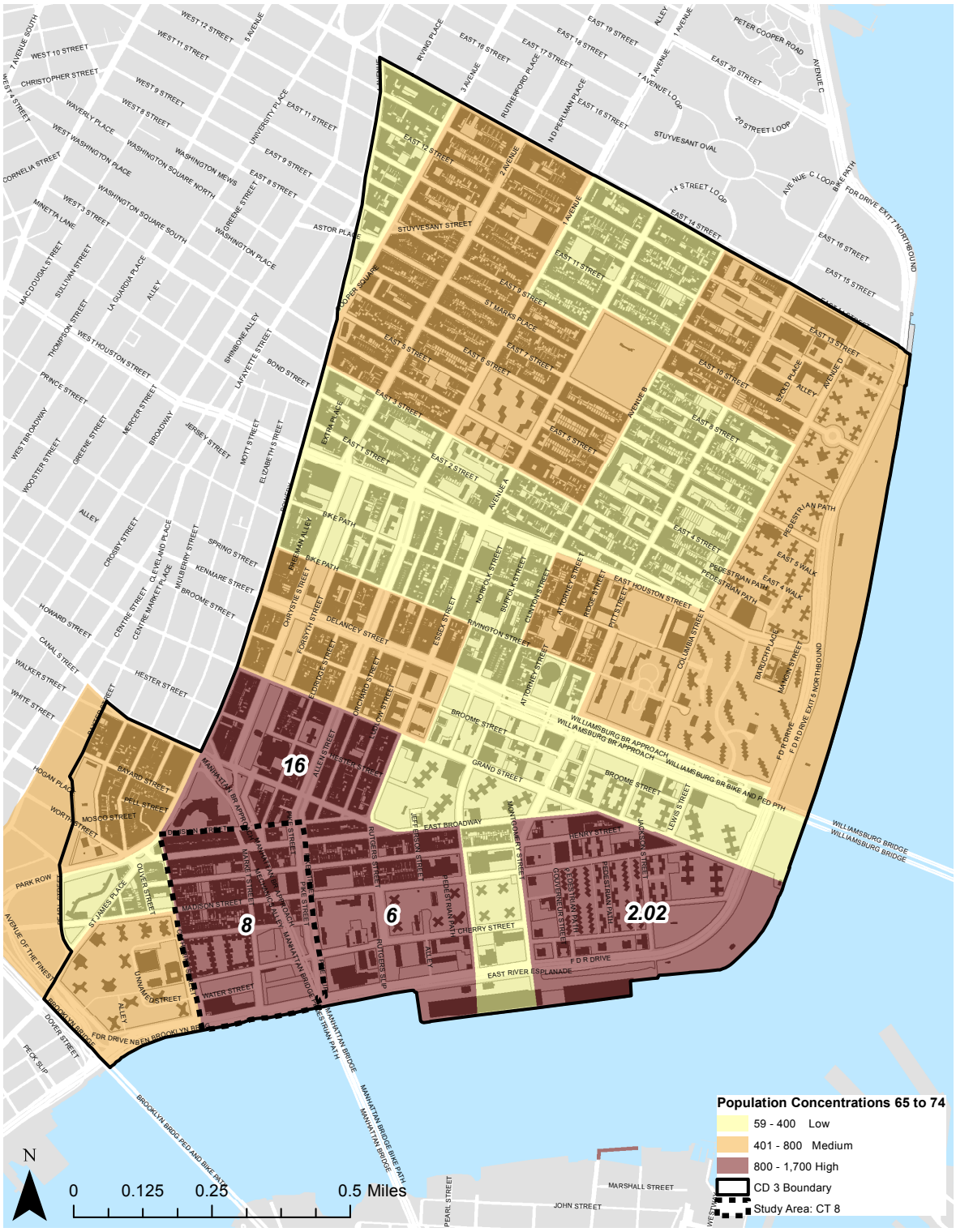


Figure 12: Concentrations of seniors 65 to 74
Source: U.S. Census Bureau, 2010

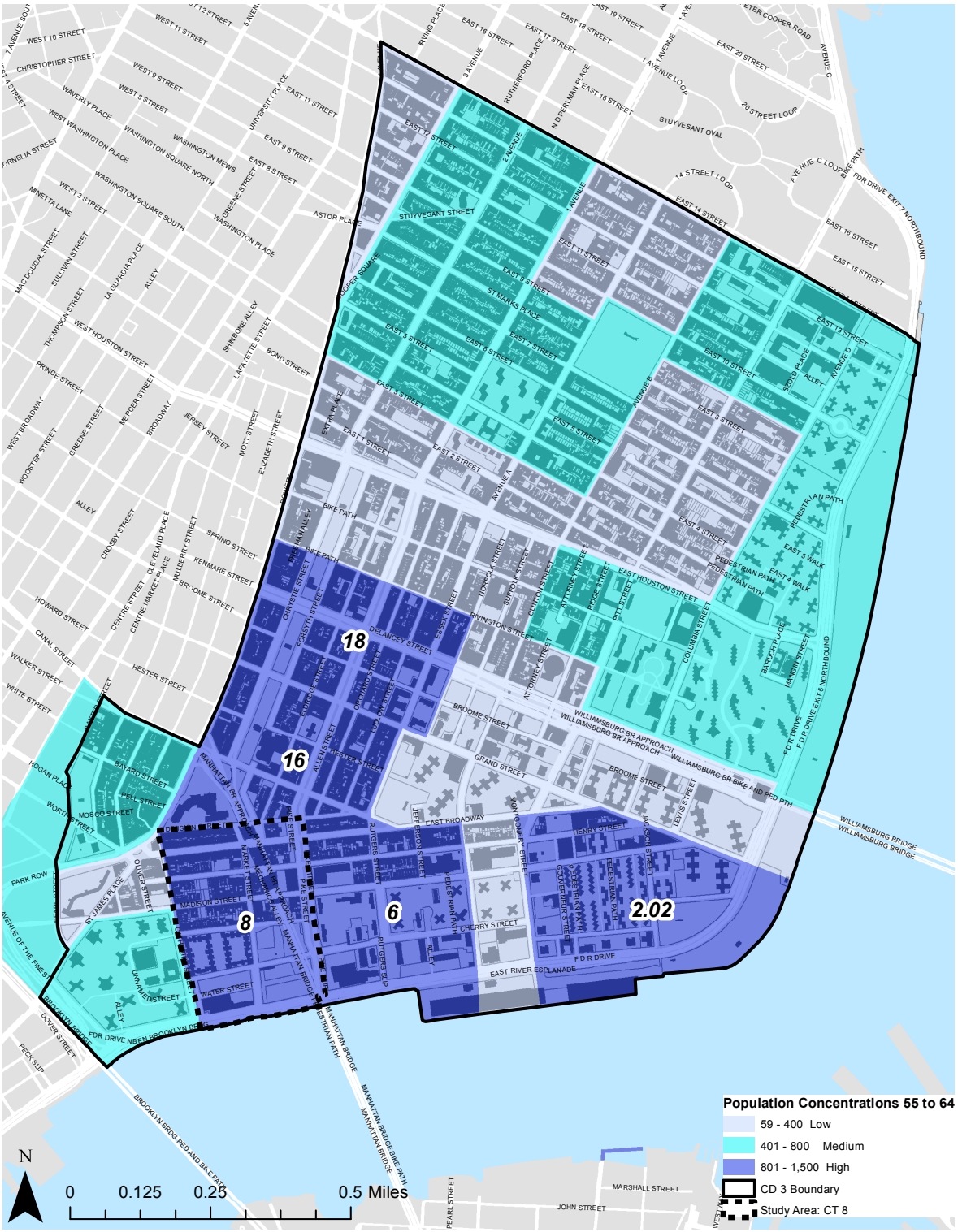


Figure 13: Concentrations of 55 to 64
Source: U.S. Census Bureau, 2010

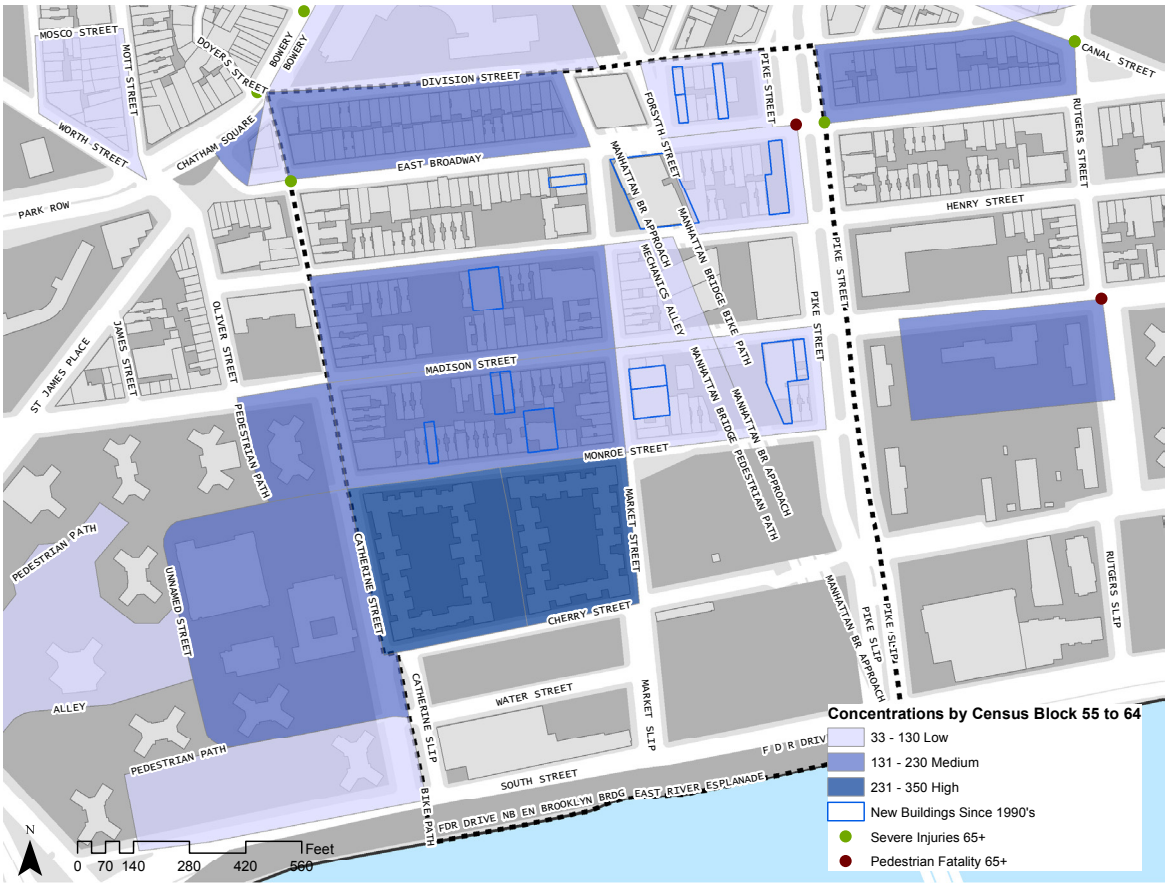


Figure 14: Concentrations by Census Block of 55 to 64
Source: U.S. Census Bureau, 2010

rent levels. In the following chapter, this study will analyze these issues in further detail.

4. Measuring Accessibility: Identifying accessibility gaps

An inventory of the four features (goods, services, the public-right-of-way, and housing typologies) was studied for both availability and physical accessibility in Census Tract 8. This section details the field survey findings and strategies. It also includes the focus groups findings for showing the perceptions of the participants who were elderly residents or residents with mobility disabilities, or staff members of organizations working with elderly and physically disabled residents within the study area boundaries. Each feature prioritized specific areas within Tract 8 (see below). Physical accessibility was ranked as follows:

- **1 (Good Accessibility)** = no step at the entrance, could have a ramp or not, there is some degree of obstruction.
- **2 (Fair Accessibility)** = having one or two steps at the entrance, there is some

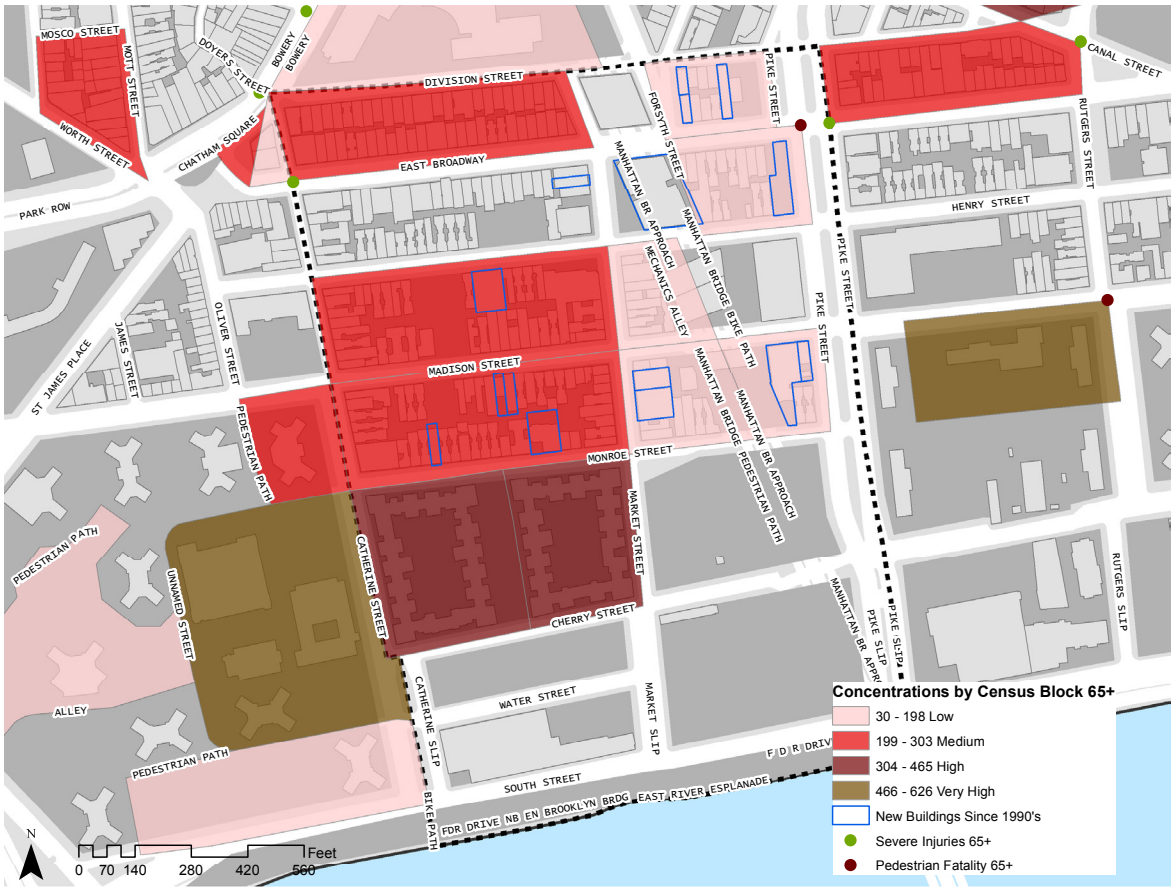


Figure 15: Concentrations by Census Block of 65 and over
Source: U.S. Census Bureau, 2010

degree of obstruction.

- **3 (Poor Accessibility)** = requires the use of stairs, usually second floor or underground stores.

4.1 Goods

This study analyzes the availability and accessibility to goods by analyzing the built environment of retailers and businesses in the area of study. For this feature, the priority areas in the field survey were commercial corridors like Division Street, East Broadway, and Market Street (See figure 16). Because of mixed residential-commercial uses and the overlap with the housing typology feature, the field survey of goods was also done on Henry Street, Madison Street, Monroe Street, and Catherine Street. This provided a better sense of the type and availability of businesses in the study area. This is not a retail market snapshot or an economic development study, but rather a study of retail focusing on the needs of the elderly and the population with mobility disabilities. Therefore, differences will be found (e.g., the criteria for determining the geographic trade area of

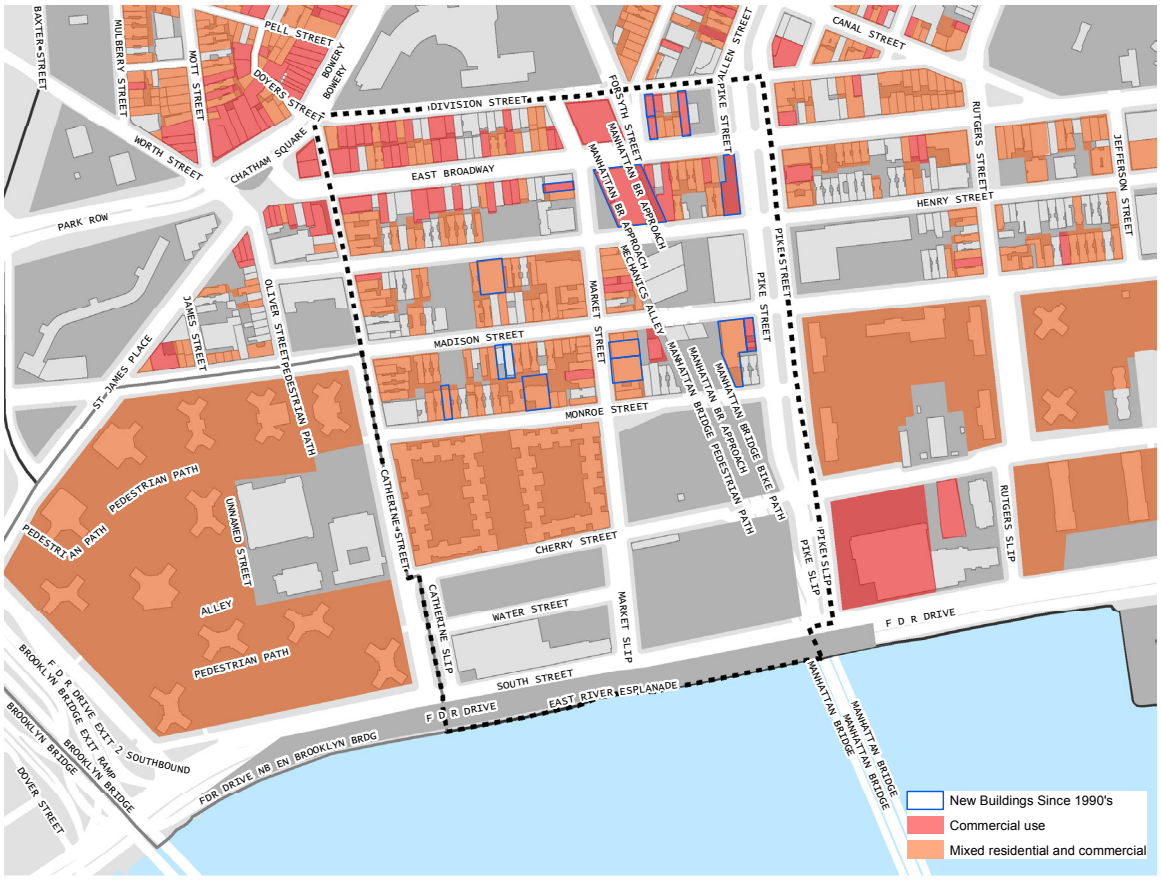


Figure 16: Commercial Uses in the Study Area
Source: NYC Department of City Planning, 2013

a commercial street for an economic development study is different from the one used in this accessibility study).

Findings:

In an area of 54 acres, 237 businesses were found where 57 percent of them qualified in the field survey as having good accessibility, most of them locally-owned businesses. Once the data was gathered on field and digitized, businesses were organized in four main groups according to the needs of the targeted population and degree of importance. Using NAICS code, the first group includes:

- Food Services & Drinking Places (e.g. restaurants, coffee shops, takeout food)
- Food and Beverage Stores (this group was categorized in four important subgroups: markets, convenience stores, grocery stores, and supermarkets)
- Health and Personal Care Stores (e.g. pharmacies, optical, cosmetics)

This group includes businesses that are more frequently visited by senior residents.

Forty seven percent of the stores in the study area fall into this group. Cultural heritage is a very important component to take into consideration, provided that the area counts with a variety of Asian food and drinking places, and food and beverage stores. There are two main supermarkets in the area that act as full-service grocery stores for the residents, the Chinatown Supermarket of Manhattan at 109 East Broadway (full of elderly customers during the day) and the New York Supermarket at 79 Henry Street. The rest of the food stores are Asian food markets, mid-sized grocery stores and convenience stores. The NYC Department of City Planning (DCP) has identified this area as a Food Retail Expansion to Support Health (FRESH) eligible area to promote grocery stores in underserved areas in NYC, giving financial incentives such as real estate tax reduction, sales tax exemption, and mortgage recording tax deferral (http://www.nyc.gov/html/misc/html/2009/fresh.shtml). Most of the existing food stores will not qualify with the FRESH program criteria as the program look for stores with a minimum of 6,000 square foot of retail. In fact, probably just two of the food stores in the study area qualify.

There are also 20 out of 53 food stores that receive food stamps; most of them are market and grocery stores including the Chinatown Supermarket of Manhattan (one of the two full-service grocery stores in the area) (see appendix C for field survey table). The area has six local pharmacies, most of them located at the commercial corridors of Division Street and East Broadway except for Medpharm located at the West Court of the Knickerbocker Villages. In the focus group senior residents expressed their desire to see more variety of stores in the area and especially more full-service grocery stores.

Sixty percent of the stores in this group were found to qualify as having "good accessibility" ("good accessibility" means no step at the entrance, there is a ramp or not, there is some degree of obstruction), while 40 percent qualified as having "fair or poor accessibility". The food stores that had some type of inaccessibility were because they usually showed some type of obstruction or a few steps at the entrance. However, it is important to notice that Chinatown Supermarket of Manhattan, one of the two main supermarkets, was found to be inaccessible as well as the pharmacy located in the Knickerbocker Villages (see figure 17).

The second group includes:

- Miscellaneous Retailers (kitchen supplies, florists, office supply, souvenir stores, used merchandise, pet supplies, art dealers, tobacco store, etc.)
- Multiple Store Entrances (commercial ground floor space subdivided into different small stores and accessible through a main track)
- Mall Entrance (normal mall entrance, e.g. East Broadway Mall Inc.)

- Clothing & Clothing Accessories Stores
- Electronics & Appliance Stores

The third group is comprised by:

- Stores for Rent
- Closed Stores or
- Vacant Retail Spaces

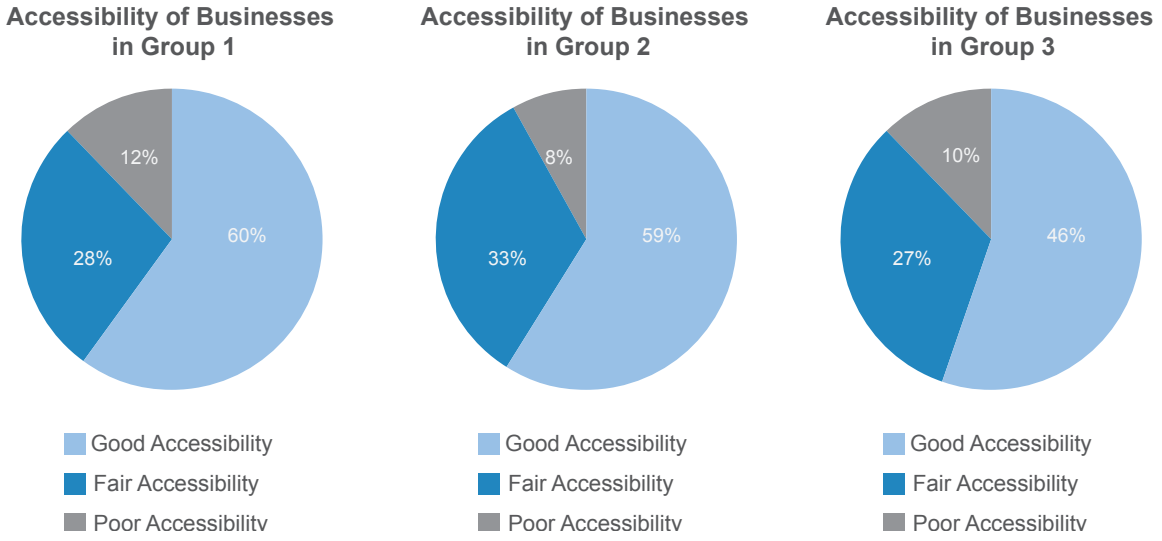


Figure 17 to 19: Accessibility of Businesses in Groups 1, 2 & 3
Source: U.S. Census Bureau, ACS 2008 – 2012

Seventeen percent of the retail space was found as being unused and is categorized in this third group, as it is located among blocks with high concentrations of senior residents. This means that there is opportunity for new stores to be opened near high concentrations of senior residents, which could be turned into positive use for the senior resident population (see figure 19).

Similar to the stores in the previous groups, the majority has good accessibility while the rest (37 percent) have fair or poor accessibility. The rest (17 percent) is unknown given that metal curtains make it difficult to evaluate their accessibility.

The fourth and last group is made-up of:

- Building Materials, Garden Equipment & Supply Stores
- Manufacturing (Food processing, and printing stores)
- Wholesale Trade (Merchant wholesalers, motor vehicle vendors, furniture whole-

salers, construction materials)
- Transportation & Warehousing
- Accommodation (hotels)

Even though it is probable that the targeted population makes little or no use at all of the stores in this group, it is important to note that 60 percent of them qualify as having good accessibility and 40 percent have fair accessibility while none have poor accessibility. It could be that the nature of these businesses requires them to have clear entrances and ramps (see figure 20).

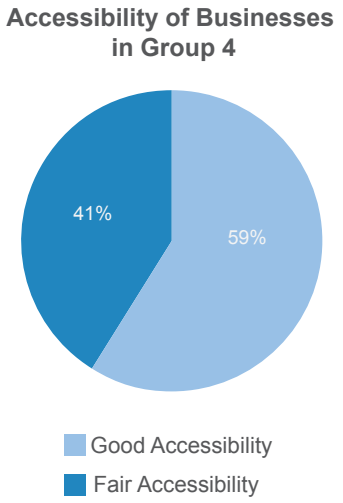


Figure 20: Accessibility of Businesses in Group 4
Source: Field Surveys

4.2 Services

All Ages Facilities and Program Sites

This feature refers to services in public and private facilities such as schools, social associations, religious organizations, libraries, parks, plazas, and social services for children among others (see figure 21). The study area has three parks and playgrounds (the Martin F. Tanahey, Coleman Square, and Sophie Irene Playground) one athletic field (Murry Bergtraum), and many medians with landscaped areas along Pike and Catherine Street. The study area also has four social service facilities for children, one school, and the Chatham Square Branch Public Library. Because of the nature of these facilities, these places are frequented by users of all ages and abilities, meaning that these places can serve as intergenerational and multicultural exchanges. Therefore, accessibility to these sites is of particular importance. See appendix D for field survey table.

Figure 21: All Ages Facilities and Program Sites
Source: NYC Department of City Planning, 2013

Staff members from the Chatham Square Library reported having seniors during the daytime before kids get out from school. The Chatham Square Library has a wheelchair lift that is used by senior residents who use a walker or a wheelchair, while cane users were reported to regularly take the stairs. The Chatham Square Library provides programming for seniors such as the weaving circle, which meets every week and AARP tax-aide workshops. The library also provides computer classes every week that, and although these classes are not intended to be specifically for seniors, these classes are frequented by seniors. Programming is also provided at senior homes where library staff tries to engage them in reading for about an hour.

The physical accessibility of these sites was evaluated using the rank system mentioned at the beginning of this section. Findings from the field surveys for the following services are available in the area:

- Arts, entertainment & recreation (e.g. dance studios, opera groups, party saloons)
- Civic and social organizations
- Educational services (e.g. schools, library, music school)
- Finance & insurance services (e.g. banks and Affinity Health Plans)
- Health care & social assistance (e.g. Lower East Side Services, Medical Centers, AgeWell NY)
- Immigrant services
- Laundry services
- Personal care services (e.g. hair salons, spas, massage places)
- Religious organizations (e.g. temples, churches and others)
- Social services (e.g. University Settlement)
- Car services
- Child care services
- Driving school services
- Employment services
- Legal services
- Offices
- Real estate services

Field surveys recorded 82 sites in the area of study where only 36 percent of them qualified as having good accessibility, where 38 percent qualified as having fair accessibility, and the rest (26 percent) qualified as having poor accessibility (see figure 22). Atten-

tion should be paid to civic and social organizations where five out of six of them have poor accessibility, followed by religious organizations where 11 out of 14 fair accessibility, and personal care services where 12 out of 17 have poor and fair accessibility. Attention should also be paid to parks and playgrounds where findings suggest that two out of the three entrances at the Coleman Playground are not ADA accessible. The Coleman Playground is the only playground in the area that has bathrooms that qualify as having fair accessibility as they have a step at their entrances. The Murry Bergtraum Athletic Fields are very well maintained, but the ramp to get to the locker rooms has a step. One of the plazas at the Tanahey Playground is in bad shape for seniors and persons with mobility disabilities because of broken and uneven floors, and because of stairs, which surround the plaza and make it difficult for seniors and persons with mobility disabilities to get to the court entrances. The Tanahey Playground has another plaza located at the other end of the park close to Catherine Street that is a very good example for accessibility because it has been recently renovated with benches, greenery and an even floor where seniors were found to be spending time during field surveys.

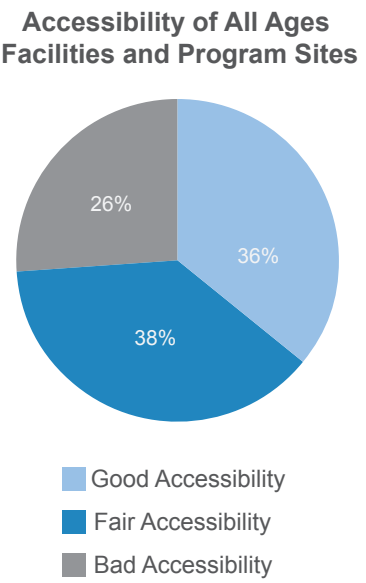


Figure 22: Accessibility of All Ages Facilities and Program Sites
Source: Field Surveys

Finally, professional services that are located in second floors with stairs as their only way of access present the most challenging accessibility difficulties for seniors and persons with mobility disabilities. Participants in the focus group showed their preference to use the renovated plaza over the other ones and the work out machines over the East River Greenway, however they also expressed their concerns with bicyclists that often do not yield to pedestrians.

Using GIS systems and public and private community facilities data (available at the Department of City Planning (DCP) website), it was found that the following services were available in the area of study or very close to it:

1. Lower East Side Service Center, located at 46 and 62 East Broadway, is an outpatient day program facility offering *health, human and chemical dependency services*. Located within the boundaries of the study area, it offers primary health services for treating people for whom medical treatment is often sporadic and administered only in emergency situations (lesc.org).

2. Prospect Place, located at 253 South Street, is a day program and outpatient *mental health facility* administered by the Hamilton-Madison House, and provides mental health services for adults with psychiatric disabilities (hamiltonmadisonhouse.org).
3. Metro NY, located at 2 Oliver Street, is a *Developmentally Disabled Service Office* (DDSO) administered by the State Office for People with Developmental Disabilities (OPWDD), some of the services they provide include residential alternative and developmental disabilities. Although not in the study area, it is located close to the study area.
4. UCPA of New York State, located at 265 Cherry Street, is another DDSO *offering residential alternatives and developmental disabilities services*, and which is also located outside of the study area.
5. The Cabrini Immigrant Services, located at 139 Henry Street, provides a diverse array of services including a food pantry where bags of food are distributed every Tuesday from 9:30 am to 12:30 pm on a first come, first served basis. They also assist with Supplemental Nutrition Assistance Program (SNAP) applications and are located one block away from the study area (cis-nyc.org).

Older Adult Related Facilities and Program Sites

According to the FY 2016 Manhattan community board borough-budget consultations, 99 percent of senior centers serve at capacity citywide while 1 percent are already serving over capacity. At the district level it was confirm in conversations with staff members from University Settlement, who expressed that senior centers in the district in fact serve already at capacities.

Information about older adult facilities and program sites can be found in many different sources. To avoid overlap, a list of older adults' facilities and programs was mapped (see figure 23). It was found that Community District 3 has the following services specifically for seniors:

- 12 Senior Centers
- 4 NORCs
- 12 Residential Adult Care Facilities
- 3 Residential Health Services: Nursing Homes

Although it is the district with the highest number of senior centers and NORCs in Manhattan, some senior centers and day care facilities provide services to members living in outer boroughs. However, services providers believe that the aforementioned doesn't really impede seniors from the district to access their own senior centers. Additionally, the

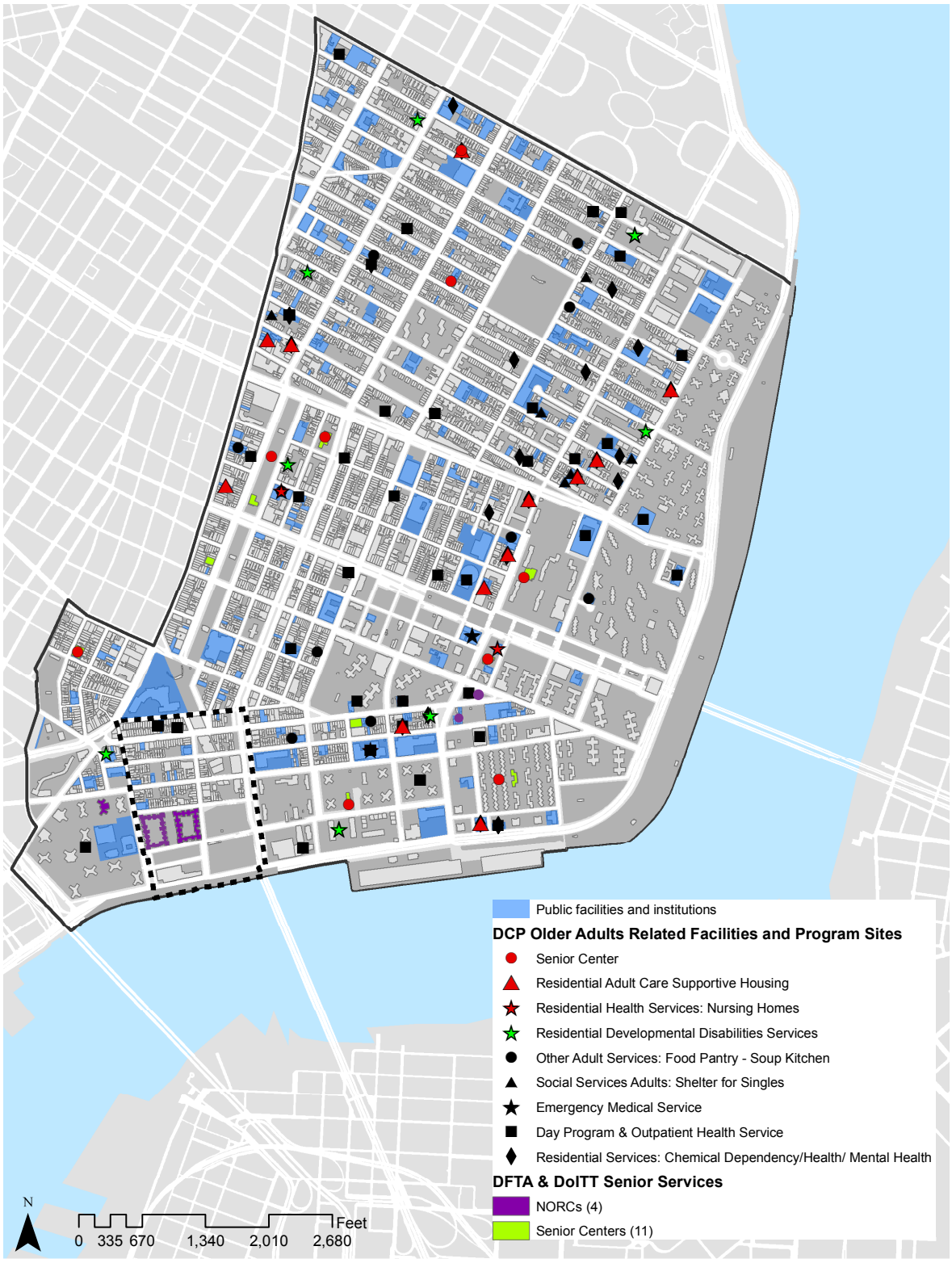


Figure 23: Older Adult Related Facilities and Program Sites
Source: NYC Department of City Planning, 2013 and Department of the Aging, 2015

loss of private senior centers like the Salvation Army Chinatown Corp has put additional pressure on the public centers. Public and private community facilities exclusively for seniors were mapped and the following services were available in the area of study or very close to it:

1. The Chinatown NNORC Program / NY Chinatown Neighborhood Senior Center at 70 Mulberry Street is a partnership of 4 organizations: the Chinese American Planning Council, Chinese Consolidated Benevolent Association, New York Downtown Hospital and The Visiting Nurse Service of New York. To help seniors in the community stay safe and independent in their homes, this program provides: regular home visits for the homebound seniors, help with translating and answering correspondence, assistance accessing benefits and referrals to other sources among other services. Being a Neighborhood NORC Supportive Service Program (NNORC –SSP), this program provides NORC services at a neighborhood level, serving part of the area of study. With an estimate of a maximum capacity of 2,000 members, today this center has 1,200 active members receiving social services, non-reimbursable health care, education, and recreational activities where 62 percent of active members are over 75 years old and 25 percent are over 85 (FY 2014, VNS Hearing Testimony). This center also addresses the needs of seniors that live in walk-up buildings who strongly rely on the services provided by this Neighborhood NORC. This facility is located outside of the study area boundaries and members walk to the center.

2. La Guardia Neighborhood Senior Center located at 280 Cherry Street and operated by The New York Foundation for Senior Citizens, provides its members with social events, and with a small contribution also provides meals. The Center counts with 5, 400 members from all five boroughs and no membership fee is required (nyfsc.org). This facility is also located outside of the study area boundaries.

In testimony presented by the Department of the Aging to the NY City Council Committee on Aging & Subcommittee on Senior Center in 2014, it was stated that one out of three seniors experience food insecurity according to a 2007 hungry study by the Council of Senior Centers and Services. The aforementioned facilities provide an average of 320 meals each per day according to data from Department of City Planning (DCP). These facilities are surrounded by census tracts having 13,424 senior residents aged 65 and over with median incomes between $11,700 and $20,000 per year.

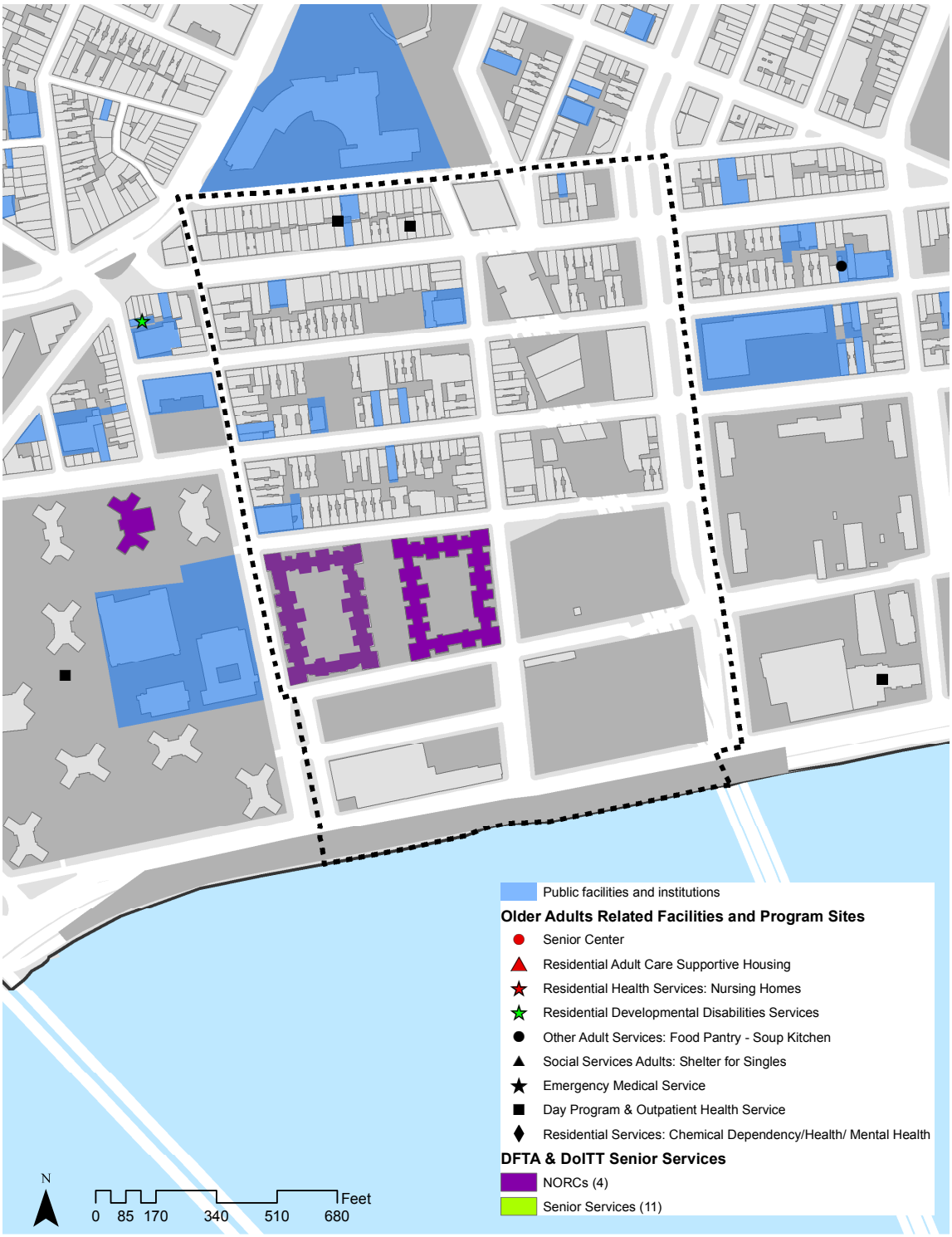


Figure 24: Older Adult Related Facilities and Program Sites in Study Area
Source: NYC Department of City Planning and Department of the Aging 2015

3. The Knickerbocker Village NORC / Hamilton Madison House Knickerbocker Village Senior Service, located at 36 Monroe Street, is within the boundaries of the study area, and serves only the village complex providing social services and activities.
4. The Alfred Smith Houses NORC, located at 50 Madison Street, is a part of a NYCHA development and is located in front of the area of study. These houses provide social services and have a senior center.
5. Healthy Living at Confucius Plaza is an adult day care center at 1 Bowery that provides social activities for the residents.
6. AgeWell NY, located at 7 Division Street, helps community members preserve their physical independence by offering to those who have insurance an array of services like management of long term care and Medicare advantage plans and dual advantage plans to help older adults and persons with mobility disabilities stay in their homes and communities for as long as possible.

According DCP, whose data is available in the following link (http://www.nyc.gov/html/dcp/pdf/bytes/selfac_datainfo.pdf), the district does not have the following facilities:

1. Residential Supportive Living[5]
2. Adult Day Health Care Center
3. Senior Citizen/Geriatric Services

Geriatric services for senior residents are a key component of the older adult care infrastructure. Without trained geriatricians "illnesses in older people are misdiagnosed, overlooked or dismissed as the normal process of aging simply because health care professionals are not trained to recognize how diseases and drugs affect older patients differently than younger patients" (Joanne Lynn, 2004). Although data from DCP does not show the existence of those facilities in the district, staff members from Visiting Nurse Services (VNS) of NY reported that those services do exist in the area within other facilities and with community physicians.

Residential Supportive Living is also important to the older adult population as people are aging in place, and many of them are living in non-designated senior housing facilities. Such older adults often need assistance because of age and health complication. Residential supportive living or assisted living may be suitable for older adults in need of long-term care, but is not covered by Medicare (Poo, 2015).

5 An alternative to nursing homes for older adults and the disabled, this type of service provides personal care while maintaining living independence. This type of service also helps seniors and the disabled with daily life activities.

Staff members from Visiting Nurse Services (VNS) of NY reported that there is a medical adult day care on Christie Street in Chinatown and many social adult day care centers in the district. However there is no city agency that provides information about the location, amount and capacities of adult day care centers. It is known that there are many in the Chinatown and the Lower East Side neighborhoods and that they are covered by Medicare. However, it is believed by services providers that eligibility of members could be improved as they possibly leave out the patients in need of help.

The Committee on Aging FY 2015 preliminary budget allocates $251.2 million in funding to:

- Senior centers: $107 million
- Home delivered meals: $31 million
- Case management: $16 million
- Home care for homebound who are not Medicaid eligible: $16 million

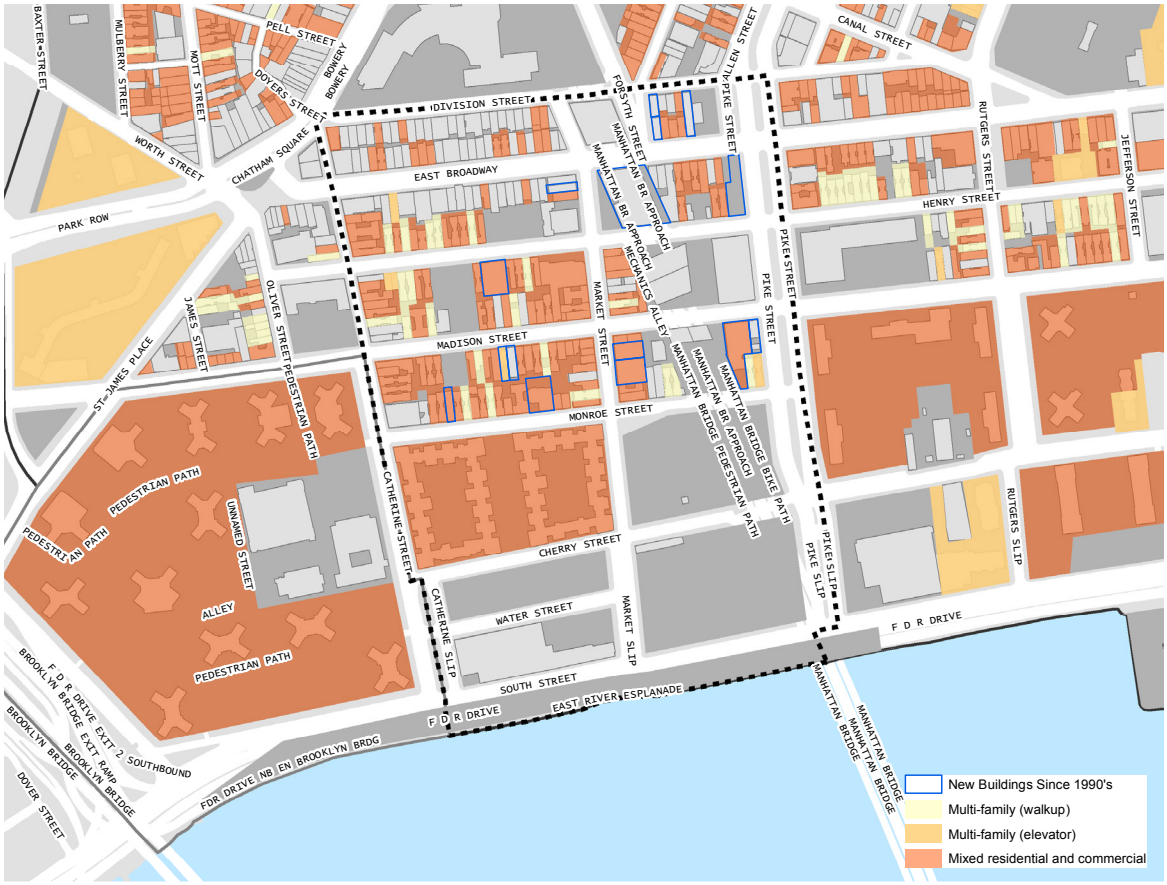


Figure 25: Housing Buildings in Study Area
Source: NYC Department of City Planning, 2013

- NORCs: $ 6.5 million
- Caregiver support services: $4 million

Adult day care centers provide a very important service to vulnerable older adults while providing time to their families and caregivers to go to work and to do other important activities. Nevertheless, the lack of regulation does not give the opportunity to day care centers to be properly managed and to effectively use allocated funds.

In the area of study, 17 percent of seniors need a form of support because they have a self-care difficulty while 11.2 percent of older adults live alone. In multiple community consultations conducted by the Age-Friendly NYC Commission, seniors living alone showed signs of isolation that could lead to depression and accidents.

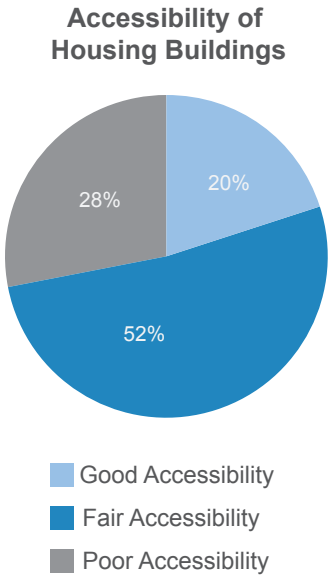


Figure 26: Accessibility of Housing Buildings
Source: Field Surveys

4.4 Housing Typologies

The field survey for this category was done for streets with predominantly residential buildings such as Henry, Madison, Market, Monroe, and Catherine Street, see figure 34. The majority of the residential buildings in the area of study are walk-up buildings. Field surveys reported that 94 percent have about 4 to 7 stories and that just 6 percent are high-rise buildings of about 12 to 15 stories with elevator service. According to data from DCP, only 14 buildings in the area were built after the 1990s when the ADA standards for accessible design for new construction and alterations were implemented. Thus, the majority of the buildings in the area of study are old buildings built between 1900 and 1918. See appendix E for a field survey table of the housing typologies.

In an area having 555 residents with mobility disabilities of which 78 percent are aged 65 and older, field surveys found that only 20 percent of the residential buildings in the area have good accessibility while 52 percent have fair accessibility (having one or two steps at the entrance and/or some degree of obstruction). The rest of the residential buildings, 28 percent, have poor accessibility, see figure 26. Most of the high-rise buildings (12 to 15 stories) have

The Cost of Housing in the Study Area

Number of Units	Rent
108	Less than $200
115	$200 to $299
271	$300 to $499
652	$500 to $749
1,530	$750 to $999
842	$1,000 to $1,499
279	$1,500 or more

Figure 27: The Cost of Housing in the Study Area
Source: U.S. Census, 2008-2012 ACS estimates

good accessibility, except for 2 entrances in the Knickerbocker Villages at Monroe Street. The majority of walk-up buildings have fair or poor accessibility and very few, just 16 percent, have good accessibility.

In the study area, there are about 3,800 residential units and only one designated residential building for seniors, the Knickerbocker Village (the K.V.). This residential building for seniors provides 1,590 housing units and is a designated NORC. Rents in the K.V. vary from $600 to 775 for a 1-bedroom apartment and from $ 708 to $ 1,001 for a 2-bedroom apartment. There are additional rent surcharges and rent increases range from 3 to 5 percent yearly (knickvill.com). In a focus group realized in the K.V., seniors expressed comfort and gratitude for living in a designated senior residence with the Hamilton Madison Houses providing them with the necessary services.

The rest of the seniors living in the study area, about 885 residents aged 65 and over, live in non-designated buildings for seniors. Such buildings probably include rent stabilized or rent control apartments that according Project Home, could vary from $200 to $400 per month. According to 2008-2012 ACS estimates, the median gross rent in the area was $854. See figure 27 for break down of estimated rents in the area of study.

In a study area with 1,805 residents aged 65 and over and with 1, 360 residents aged 55 to 64 who will soon become senior residents, there are only 494 housing units with rents that are less than $500. As Project Home noted in the focus group, this could represent rent burden (spending more than 30 percent of household income in rent) for the low-income immigrant population. This is especially true for those who do not have the support of social security. According to the Association of American Retired Persons (AARP), "Social Security is the principal source of income for nearly two-thirds for older American households and roughly one third of those households depend on Social Security for nearly all of their income" (AARP, 2012). In the study area, 1,383 residents have social security and supplemental security income that is 77 percent of the senior residents.

The average monthly social security retirement benefit as of December 2014 is $1,280 (http://www.ssa.gov/policy/docs/quickfacts/stat_snapshot/index.html). While all Americans face economic challenges when they age, this is particularly true for immigrants because social security is linked to how much income an individual has earned in their lifetime. During their lifetimes, immigrants typically have low wages and this means that they will have less financial resources when they age. In any event, having an average monthly check of $1,280 for living expenses in a city like New York and for covering

necessary health costs related to aging is a challenge.

Supplemental security income provides additional financial resources to low-income seniors and persons with mobility disabilities to help cover the costs of basic needs. Standard supplemental security income provides $721.00/month to an individual senior, $1,082/month to a couple, and $1,070/month to the non-blind disabled (http://www.ssa.gov/pressoffice/factsheets/colafacts2014.pdf).

Although the community in the study area is considered extremely low income by HUD standards (FY 2014, VNS Hearing Testimony), the mean social security income is $1,031 per month which is less than the average published on the Social Security Administration website and the mean supplemental security income is $524 which is lower than the federal standard.

Housing close to the study area:

Adjacent to the study area is the Confucius Plaza, which is a Mitchell Lama housing cooperative with approximately 762 apartments, a public school, shops, community space and an adult day care center (nymag.com). This housing cooperative previously applied for a NORC designation, but was not granted such designation. Today, one of the goals of this housing cooperative is to preserve affordable housing for senior residents.

In addition to Confucius Plaza, there is a designated NORC in the NYCHA Smith Houses that provides their senior residents with a senior center and has 1,934 housing units. There is also the UCPA of New York State, located at 265 Cherry Street, which is a Developmentally Disabled Service Offices (DDSO) offering residential alternatives and developmental disability services.

4.4 Public Right of Way

The study refers to the public right of way as sidewalks and street crossings. According to 311 complaints in a one-year period from March 2014 to March 2015, there have been 111 complaints in the sidewalks and streets category that affect seniors and persons with mobility disabilities. One third of the complaints in the area are “Street Light Out” complaints, followed by “Cave-in”, “Pedestrian Signal Condition”, “Blocked Construction” and “Defective Hardware” complaints. See figure 28. There are other types of complaints, but with less frequency such as “Broken Sidewalk” and “Street Cleaning” that still affect older adults and persons with mobility disabilities. To complement this information, field surveys were conducted for the streets with the highest amount of complaints and where DOT registered a killed or severely injured (KSI) event involving a person aged 65

311 Complaints	
Street Light Out	37
Cave-in	17
Pedestrian Signal Condition	0
Blocked - Construction	12
Defective Hardware	10
Broken Sidewalk	8
Street Cleaning	6
Plate Condition	2
Filed Street Repair	2
Damaged Crossing Sign	1
bus stop missing street sign	1
Sidewalk Condition	1
Construction Waste	1
TOTAL	98

Figure 28: 311 Complaints
Source: 311

and older. These streets were Madison, which had the highest amount of complaints, and followed by South Street, East Broadway, Monroe and Division Street.

In terms of public transportation, the study area has the M15 (South Ferry-East Harlem) and M22 (Lower East Side-Battery Park) bus routes on East Broadway and Madison Street. These streets also have bike lanes, and the East Broadway subway F station is one block away.

In a focus group conducted for this study, seniors expressed that the bus is their preferred form of transportation, although they also enjoy walking around the neighborhood. For seniors who walk around the neighborhood, they were concerned about the short time provided by traffic lights for crossing streets and potholes in the sidewalks. These seniors believe that their neighborhood is a safe place, but they said that they try to avoid traveling at night, especially walking under the Manhattan Bridge, which they described as isolated, dark and lonely. Finally, delays in snow plow increase the risk of falls that can undermine their health in places such as Chatham Square.

According to the Traffic Data Viewer from the New York State Department of Transportation, East Broadway is the street with the highest traffic annual average daily volume (AADV) having about 24,040 vehicles using this street daily. The next busiest streets are Madison Street (11,330 vehicles) and Henry Street (3,260 vehicles). In field surveys conducted in January and March, it was found out that:

Madison Street:

This street is a two-lane, two- way street with two MTA bus routes and bike lanes. This street experiences high truck transit between Market Street and Pike Street. The intersection with Catherine Street was found to be under construction, which completely blocked the pedestrian crossing making it difficult for pedestrians to cross Madison Street. Complaints have been made about the construction blocking the pedestrian crossing. There are three bus stops along Madison that have the bus route and schedule, but no shelter or benches for passengers. More specifically, the bus stop located at 139-141 Madison Street under the Manhattan Bridge has no map route or schedule. Broken sidewalks were found at the Sanitation Department property under the Manhattan Bridge. As it is a street with a high amount of vehicular traffic, the time for pedestrians at every intersection is very important. It was found that the time to cross Pike Street is shorter than the time to cross Madison, although Pike Street counts with a median and curve extensions. It was also found that the intersection at Madison and Catherine Street is the only intersection where time for a pedestrian to cross is longer at the longer crossing at Catherine Street (53 seconds) than Madison (25 seconds) and additionally it was the only intersection that had a pedestrian countdown light in the study area.

Division Street:

This street is a two lanes, one-way street and is a commercial corridor. Truck traffic was recorded between Pike and Forsyth Street. Also, broken sidewalks and sidewalk obstructions were reported at 8 Eldridge Street. The intersections of Forsyth, Eldrige and Division Street forming a triangle up to Broadway Street have a high pedestrian volume particularly because of the commercial corridors of East Broadway and Division Street. Because of heavy truck traffic at this triangle, some street crossings were found to have hummocks. NYC DOT has reported 1 killed or severely injured (KSI) event on pedestrians 65 and over at Division and Chatham Square. This particular intersection, where six streets meet, has high pedestrian and vehicular volumes. Time for a pedestrian to cross Chathman Square is shorter (23 seconds) than the time to cross Division Street (33 seconds), which has a shorter crossing distance.

East Broadway:

This street is a two lane, two- way street with high vehicular traffic, bike lanes and bus stops. Being a bustling commercial corridor with narrow sidewalks and street vending, the field surveys noted high pedestrian volume traffic particularly in the block between Catherine and Market Street. It was also registered snow not shoveled at 100 East Broadway, street vending obstruction at 64 East Broadway and 75 East Broadway, and broken sidewalks at 107 East Broadway. NYC DOT had recorded 3 KSI events on pedes-

trians 65 and over along the East Broadway section of the study area: 2 severe injuries at East Broadway and Katherine and East Broadway and Pike Street, and 1 fatality at this last intersection. Field surveys counted the time for pedestrians to cross at the intersections along East Broadway. Findings suggest that the time for a pedestrian to cross is shorter in long crossings with high vehicular traffic and longer in shorter crossings with lower vehicular volumes. For example:

- Intersection of East Broadway and Catherine street: 25 seconds to cross 3 lanes vs. 55 seconds to cross 1 lane
- Intersection of East Broadway and Pike Street: 35 second to cross 2 lanes vs. 30 seconds to cross 6 lanes and 2 medians

There are two bus stops on the street with a route map and schedule, but no benches or shelters for passengers. Finally, bike lanes are usually blocked by vehicles loading or unloading passengers or store supplies.

Monroe Street:

This street is a two-lane, one-way street that showed high truck transit. Most of the problems reported on this street were about snow not shoveled at three particular locations: 11 Monroe Street, 41 Monroe Street, and the crossings of the Coleman Square Playground. Also, broken sidewalks and potholes were reported at the Department of General Services (57 Monroe Street) located under the Manhattan Bridge. The time for pedestrians to cross an intersection is shorter in longer crossings like Catherine Street (28 seconds) and longer in shorter crossings like Monroe Street (45 seconds).

In summary:

- Bus stops have bus schedule and bus routes, but no benches or shelters for passengers.
- There is frequent sidewalk obstruction caused by street vending or garbage.
- At three different days and times, field surveys recorded obstruction at street crossings and sidewalks caused by a parked vehicle.
- Bike lanes are not protected from automobiles and are usually blocked by vehicles.
- Construction sites frequently impede the pedestrian walkway.
- Broken sidewalks are frequently found at city properties and construction sites.
- Time to cross streets is usually shorter in high vehicle volume traffic streets and in long crossings.
- There was only one countdown pedestrian light at Madison and Catherine St.

Accessibility in the Study Area

GOODS

Good

Fair

Poor

SERVICES

Good

Fair

Poor

HOUSING

Good

Fair

Poor

PUBLIC RIGHT OF WAY

Good

Fair

Poor

5. Recommendations

In this study, recommendations are broken down into two major objectives:

1. To make reasonable accommodations: this will address physical accessibility or alternatives if a reasonable accommodation is not viable.

2. To improve availability of businesses, services, housing, the public right of way, and programs for seniors and persons with mobility disabilities.

The Americans with Disabilities Act of 1990 (ADA) enables people with disabilities to fully participate in their communities. This law went into effect on January 26th, 1992 (United Spinal Association, 2011). The ADA along with the New York City Building Code requires that all new construction and renovations to existing buildings meet the requirements of the code along with accessibility provisions. However, most of the buildings in NYC and in the area of study are buildings built during the early 1900s and many have not been renovated after the 1990s. The ADA also requires "readily achievable barrier removal in existing buildings even if they are not being renovated" (King, Kleo; March 2015, MOPD). However, today there is no city agency in charge of monitoring the removal of barriers in existing buildings. Moreover, compliance with the law is enforced via complaints filed in federal district court or with the U.S. Department of Justice (United Spinal Association, 2011). In other words, a place becomes accessible only if someone asks for it. While the ADA provides regulations for barrier removal, the Human Rights Commission deals with the prosecution of complaints alleging violations (nyc.gov).

In order to comply with the ADA, a place should provide "reasonable accommodation" to employees, customers or tenants who live with a disability. For example, improving accessibility by widening doorways, rearranging racks, making counters accessible and more.

5.1 Goods

The ADA requirement for barrier removal in existing buildings requires businesses owners to evaluate the accessibility of their businesses for people with disabilities and if their business is not accessible, to determine how their business could become accessible (King, Kleo; March 2015, MOPD).

Objective 1: To make reasonable accommodations in existing businesses.

A. Provide adequate access to businesses

Even though 57 percent of businesses in the study area were found to have good accessibility, these businesses also present accessibility barriers such as entrance obstruction. In order to provide adequate access for seniors and people with physical disabilities, entrances need to be cleared. The Chinatown Partnership and community based organizations could raise awareness for maintaining clear entrances by delineating with stripes the area that has to be clear of obstruction at business entrances. See figure 29 and 30. This should be especially done for the typical food market stores found in Chinatown because it was seen from conducting the field surveys that these businesses often have obstructions (such as crates of food and cardboard boxes) that impede costumers from fully accessing the business.

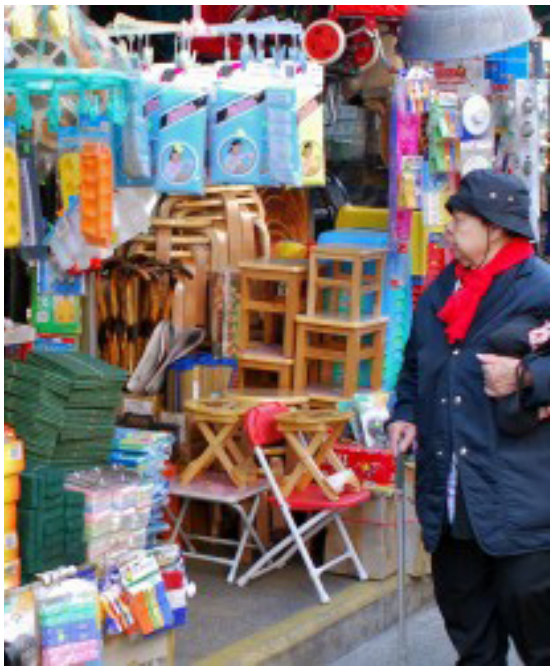


Figure 29: Difficult Access to Stores in Chinatown
Source: 12access.com

Figure 30: Clear Zone Entrances

For the stores that qualified as having fair accessibility, in addition to having clear entrances, temporary ramps could be provided by the Chinatown Partnership along with a sign in the entrances saying the business is ADA accessible. Also, a bell or phone number could be provided at the front of the business so that when a customer with a physical disability needs to enter, the customer can let the employees of the business know that they need to use the temporary ramp for entering the store. See figures 31

to 33. Temporary ramps are good for a first implementation phase as permanent ramps need a city permit and approval, which could result in delays. Thus, first installing temporary ramps could provide an immediate improvement before making such improvement permanent. See figure 34.

Figure 31: Businesses with Fair Accessibility

Figure 33: Example of Temporary Ramps
Source: wheelchair-ramps.co

Figure 32: Solution for Businesses with Fair Accessibility

Figure 34: Example of Permanent Ramps

For businesses that qualified as having poor accessibility, such as for example being located on a second floor or in a basement of a building with no wheelchair lift or elevator, alternatives are possible. First, multiple businesses can partner together to install and maintain a wheelchair lift or in some cases activate for seniors the use of an existing elevator, e.g. the Chinatown Supermarket of Manhattan is located in a building renovated after the 1990s and is not ADA accessible as has many stairs at their entrances and the elevator is used only for products. If a lift or elevator is not possible, then when such stores become available for rent, the building owner should be incentivized to require that future tenants make their business accessible, see figure 35. Business owners should be made to understand that accessibility is a business opportunity: it is a way of increasing the amount of potential customers. Also, by proactively making their business accessible, business owners should be made aware that this would prevent future complaints alleging an accessibility violation. Finally, businesses that qualified as having poor accessibility could also provide alternative means of service, such as home deliveries and phone placement orders.

Figure 35: Example of Wheelchair Lift in Underground Business

This study first recommends targeting businesses categorized in group 1, those with food services, food stores and health and personal care stores. These are the businesses that are most frequented by seniors. In particular, improvements should be made to the Chinatown Supermarket of Manhattan located at 109 East Broadway.

Accessibility goes beyond clear entrances and temporary ramps, but these im-

provements are a good start as they are quick, cheap and light (QCL) implementations. Additional improvements could come in a second phase such as providing automatic doors, rack re-adjustments, and making counters and bathrooms wheelchair accessible. These additional improvements would enormously facilitate access, however, they require further analysis and study.

Businesses could also provide effective communication to their clients. For example, restaurants could print larger font menus and stores could use larger price tags. Also, bathrooms could be made accessible for seniors and if a business does not have an ADA bathroom, it could partner with another business that is nearby who does have an ADA bathroom so that their customers can use it. Finally, winter shelters should be made to provide enough space for a wheelchair or a walker.

The Community Board could partner with community-based organizations and implement a Business Access Program where business owners are provided with information on how to make their businesses more accessible. This would let business owners know about QCL options and also about compensation for such improvements. For example, there is a tax credit (section 44 of the IRS Code) that provides up to $5,000 and a tax deduction (section 190 of the IRS Code) of up to $15,000 for removal of barriers for ADA compliance.

Two case studies are worth looking at: (1) the MOPD's Restaurant Access Program and (2) the One-Step Campaign. Both studies have led to improving the accessibility of businesses, but have also encountered severe limitations and challenges. In the case of the MOPD, this program gives conferences to BIDs and businesses on accessibility to help inform business owners on how to improve accessibility and how can they be compensated for it.

Objective 2: To provide availability of businesses and programs.

A. Turn vacant retail spaces into businesses

Before vacant retail spaces become available to businesses as a result of gentrification as they are located close to new developments, the Chinatown BID could work on a market analysis and reach out to businesses focusing on the needs and preferences of senior residents and persons with mobility disabilities to fill those vacancies. These vacant retail spaces are located where a big majority of senior residents live, and older adults strongly depend on the local stores of their block, street and neighborhood. This strategy could also help reduce the sense of isolation felt by seniors and residents with mobility

disabilities that live in rent control apartments.

Figure 36 and 37: Retail Vacancies in Study Area

B. To expand the number of businesses on the food stamps program

Only twenty out of 53 food stores accept food stamps in the study area. Community-based organizations, such as Two Bridges Neighborhood Council and Cabriani Services, could provide information to businesses on how to qualify with the U.S. Department of Agriculture's Food and Nutrition Service division for accepting food stamps. Especially the NY Supermarket located at 79 Henry Street could benefit from this recommendation, as it is one of the few full-service grocery stores in the study area.

Figure 38: Business that Accept Food Stamps

5.2 Services

Objective 1: Reasonable accommodation of services.

A. Provide adequate access to parks, playgrounds, public libraries, civic social and religious facilities, and professional services located on second floors.

Parks and playgrounds are an important component in the quality of life of older adults and people with disabilities. Seniors like to be part of the action of daily life and to chat with each other in a comfortable space. The renovated plaza located at Catherine Slip and Cherry Street is a good example of making parks

Figure 39: Accessible Plaza

Figure 40: Bathrooms in Athletic Field are not fully accessible

and public spaces accessible. This renovated plaza has new benches and greenery, and even the floor makes it easy and comfortable for seniors in the Knickerbocker Village. To visit this plaza and enjoy the day, see figure 39. However, this plaza is the only open space in the area of study that is fully accessible. Therefore, improvements to other parks and playgrounds could be made by the Parks Department in partnership with the public schools in the area and the Knickerbocker Village to provide accessible bathrooms in each park, to renovate the plaza located at Cherry Street and Market Slip, and to make all park entrances ADA accessible. See figure 40 to 43.

Figure 41: Bathrooms in Coleman Playground are not fully accessible

Figure 42: Tanahey Plaza not fully accessible

The Chatham Square Public Library Branch has a small lobby in the entrance and in order to get to the main space, you have to use the stairs or the wheelchair lift. At the

moment, there is no way to tell the staff at the front desk located at the main space that someone in the lobby needs to use the wheelchair lift. Thus, an improvement would be to provide a bell or phone so that an elderly or a person with mobility disabilities can let the staff know that they need to use the lift. Additionally, a sign should be located at the entrance indicating that the facility is ADA accessible.

Figure 43: Coleman Playground entrance not ADA accessible

Civic, social and religious facilities are spaces frequently visited by senior residents and most have poor or fair accessibility. The Access Program could also include these facilities to provide temporary ramps. Also, further study should be made in order to eliminate interior barriers in bathrooms and common space areas. See figure 44 and 45.

Professional services located in basements or second floors could partner with other businesses or services to install and maintain a wheelchair lift and/or provide alternative means of service such as phone consultations or in house visits.

Finally, although this area is designated as a primary area for snow removal, areas were found to be without plowing when conducting the field surveys and focus groups. Since this area has a high concentration of seniors and residents with mobility disabilities, Community Board 3 could request to the Department of Sanitation the removal of snow on sidewalks and crossings that are next to parks, banks and grocery stores.

Figure 44: Religious facility without temporary ramps

Figure 45: Religious facility with temporary ramps

Objective 2: Availability of services.

B. Improve senior centers capacities.

Even though service providers expressed concerns that some senior centers in CD3 already serve at capacity and some have members from all boroughs, they also believe attendance is based on preferences of the type of services provided. Senior centers could improve cultural sensitive choices for their members based on resident preferences. In particular, seniors have shown interest in English and computer classes in the Chinatown NNORC and the Chatham Library.

C. Support the regulation of adult day care centers.

Council member Margaret Chin has fought for the regulation of adult day care centers, which are facilities that are prevalent in the Chinatown and Lower East Side neighborhoods. The Community Board could closely monitor the centers' registration with the city and the adoption of state regulations. Additionally, the community board could provide its residents with a list of centers that have been approved by the city.

D. Supplemental services to seniors living outside the area covered by the Chinatown NNORC.

Half of the study area is outside of the Chinatown NNORC boundaries, but that does not mean that there are no senior services for senior residents living in those areas. First, senior service providers could inform senior residents about other centers that provide services such as the Hamilton Madison House which provides services for seniors in the Knickerbocker Village and also provides services to seniors even if they do not live in the NORC building. Second, if an aging improvement district along with a seniors and

Figure 44: Religious facility without temporary ramps

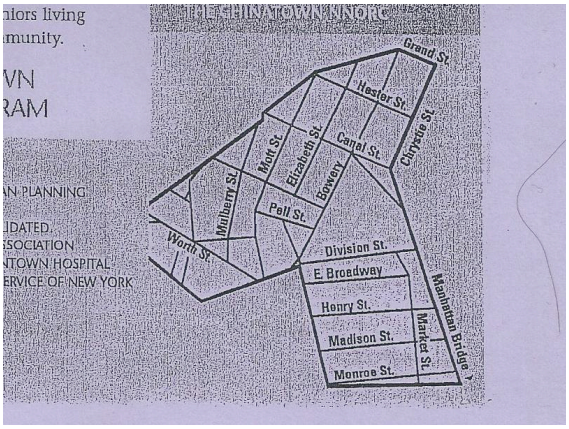


Figure 45: Religious facility with temporary ramps

residents with mobility disabilities task force is established, these agencies could provide information about other options for obtaining services providers.

E. Inform senior residents about Medicare supplemental plans.

Residents strongly rely on resources such as Medicare, however, Medicare does not completely cover all of the health costs seniors face. Service providers and the DFTA could inform older adults about other financing sources so that they can afford to have the care they need. Places for workshops could be the Chinatown NNORC, the Chatham Library, and the Knickerbocker Villages.

F. Inform senior residents about Supplemental Nutrition Assistance Program (SNAP).

Currently only 50 percent of eligible seniors participate in the Supplemental Nutrition Assistance Program (SNAP) (Corrado, 2014). Cabriani Services, which are located close to the area of study at 139 Henry Street, assist with SNAP applications. Therefore, they could partner with the Chinatown NNORC, Knickerbocker Village NORC, and the Chatham Public Library to provide assistance in these facilities that are frequently visited by senior residents in the area.

G. Inform senior residents and residents with mobility disabilities about Access-A-Ride

Community organizations such as the Hamilton Madison Houses and the Chinatown NNORC could inform seniors and residents with mobility disabilities how and when they could request Access-A-Ride services. In the following link http://web.mta.info/nyct/paratran/guide.htm community organizations will find all the details regarding such service.

H. Better inform residents about existing community services

Some senior services are not located in individual facilities, but are rather located in other service facilities that are unknown to some seniors. Therefore, an information campaign could be done to better inform seniors about all senior services, including those that are located in facilities related to other types of services, so that seniors are aware of all the services that are available to them in the district.

I. Create an inventory of local community services

It could be concluded from DCP's data of senior facilities that services are missing in the district, however service providers reported that such services do exist in the area among the community. An inventory of these services could be conducted to better inform residents and the community board about the provision of such services.

5.3 Housing

Objective 1: Reasonable accommodation of housing.

A. Improve the physical accessibility of housing buildings.

Only twenty percent of the residential buildings in the area have good accessibility. Today, "the Law requires the landlord to pay for an accommodation if it is deemed reasonable – that is architecturally and financially feasible" (nyc.gov). If an aging improvement district along with a seniors and residents with mobility disabilities task force is established, these agencies could inform residents and homeowners about this law and about what a reasonable accommodation means. For example, landlords could provide ramps at the entrances of the buildings that qualified in field surveys as having fair acces-

Figure 48: Housing with Fair Accessibility

Figure 49: Alternative for Housing Buildings with Fair Accessibility

sibility meaning that they have 1 or 2 steps at the entrance. See figures 48 and 49. These buildings accounted for 52 percent of the housing in the study area. For buildings that have stairs, non-slipping materials and handrails could be installed. See figures 50 and 51. Additional improvements could also be made to common spaces such as laundries that are usually located in the basement of a building, but further analysis is required.

Figure 50: Poor Maintained Housing Entrance

Figure 51: Well Maintained Housing Entrance

Objective 2: Housing Availability.

A. Inform service providers and residents about point persons and organizations managing lists of available housing units.

Community organizations such as Asian Americans for Equality (AAFE) and Cooper Square Committee provide information and counseling and could inform seniors and people with mobility disabilities about available housing units in the districts.

B. Provide information about the Senior Citizens Rent Increase Exemption (SCRIE) and the Disability Rent Increase Exemption (DRIE).

The Community Board in partnership with service providers such as the Chinatown NNORC, the K.V., the Developmentally Disabled Service Offices (DDSO) (which is close to the study area) and an Aging Improvement District if established could provide informational sessions to seniors and residents with mobility disabilities about rent increase exemptions and how to qualify for them.

C. Create tax incentives for accessible ground floor apartments

The Department of City Planning is working on the Quality and Affordability Text Amendment Proposal, that includes a goal of creating quality and affordable housing for seniors. Coupled with this aspect of the zoning text amendment, the Department of Housing and Preservation could also incorporate tax incentives for landlords to rent their ground floor units to seniors or people with mobility disabilities, especially in walk-up buildings located in residential streets.

5.4 Public Right of Way

Objective 1: Reasonable accommodation of sidewalks and streets.

A. Improve the accessibility of public transportation.

Bus stops

Different sources and studies (e.g. Age Friendly NYC Commission) reported that senior residents in NYC strongly rely on buses as their main source of transportation. In the study area, benches could be added to bus stops through DOT's CityBench program as there is not sufficient space in the sidewalks for shelters, see figures 52 and 53. Additionally, DOT's Mobility Division has indicated that enforcement through the Police Department is the best way to maintain bus stop areas clear of vehicles. The obstruction of bus stops by vehicles is a problem that is faced throughout the district, which increases the risk of accidents to vulnerable residents such as seniors and persons with mobility disabilities. In particular, this is a problem in articulated bus stops that need more space. Besides police enforcement, implementing bus bulbs in articulated bus stops would keep the area permanently free of parked cars and will also give additional space to passengers when waiting at the bus stop. See figure 54. For bus stop maintenance and improvements, the community board could contact DOT's Bus Stop Management Division who is in charge of approving changes, management and maintenance of bus stops.

Figure 52: Bus Stops in Study Area

Figure 53: Example of Bus stop with CityBench

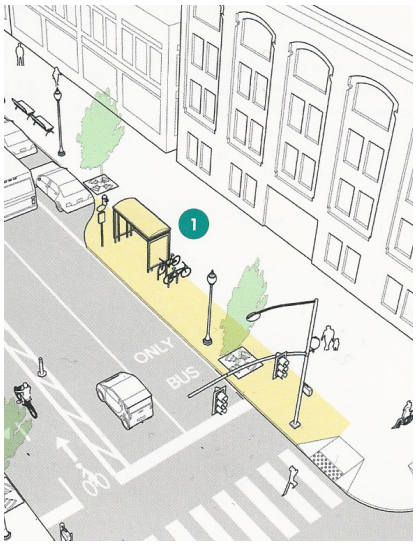


Figure 54: Bus Bulbs
Source: Urban Street Design Guide

Subway Stations

The ADA requires that subway key stations should become ADA accessible by 1993, however, extensions in time have been granted because of construction cost to the year 2010 and even 2020. The MTA's 2015-2019 Capital Program will provide elevators at 13 key stations by 2020 and provide full or partially accessibility improvements at non-key stations (mta.info).

The East Broadway station is located a couple blocks away from the study area and is not classified as a key station, but it nonetheless already has an escalator. If an elevator is not going to be installed for this station, signage could be improved for two purposes: (1) to guide people to the escalator along the platform, and (2) to indicate where to board for an ADA accessible subway car (this would be similar to the current G train platforms where signage indicates where passengers should wait to board the G train). These types of signage should be installed at this station because it serves many seniors and residents with mobility disabilities. See figure 55 and 56.

Figure 55: G Train Boarding Area Signage

Figure 56: ADA Boarding Area Signage

Figure 57: How Senior Residents Rest in the Study Area

Figure 58: Example of City Bench Program
Source: nyc.gov

Figure 59: Construction Site in Study Area

Figure 60: Example of Protection for Pedestrians

B. Improve the quality of sidewalks and street crossings.

Sidewalks and construction sites

The community board should also request DOT's CityBench program along sidewalks where seniors and residents with mobility disabilities live and along commercial corridors such as East Broadway and Division Street. This will provide resting spots for seniors and residents with mobility disabilities who walk in the neighborhood and will enhance their interaction with their community. The community board should also request DOT to fix the broken sidewalks usually located at the City's properties under the Manhattan Bridge. Furthermore, the community board should request the proper management of construction sites, particularly protecting pedestrians by providing pedestrians with an adequate space to walk or cross a street. See figures 57 to 60.

The East Broadway and Division Streets are two bustling commercial corridors with narrow sidewalks that are often made even narrower because of street food vending, loading and unloading of products, pedestrian traffic, garbage and more. The Access Program implemented by the Chinatown BID and other community organizations could also include beautification of commercial corridors where:

- Clearly mark street vending areas on sidewalks. The Chinatown BID could also inform businesses owners about avoiding obstruction of sidewalks caused by street vending. See figures 61 and 62.
- Install benches and improve the conditions of tree pits by adding tree guards and plantings along the commercial corridors. See figures 63 and 64.
- Apply for the DOT Public Plaza program in the current concrete triangle between East Broadway and Division Street by the Manhattan Bridge. This will not only connect vibrant commercial corridors, but also will also improve the space

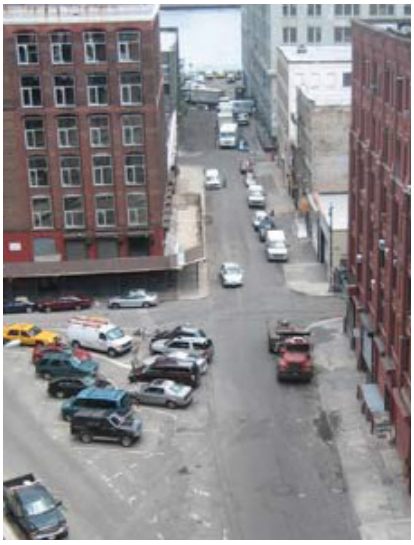
Figure 61: Street Vending Blocking Housing Entrance¬ in Study Area

Figure 62: Street Vending Zones

Figure 63 and 64: Example of Tree Pits Improvements
Source: myrtleavenue.org

Figure 65: Existing Conditions of Triangle

Figure 68: Sidewalk Extensions With Gravel
Source: blogspot.com



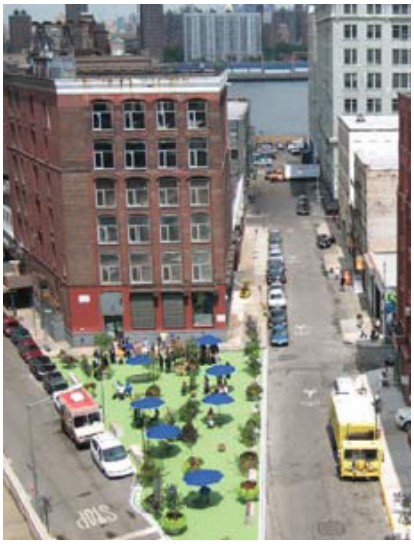


Figure 66 and 67: Example of Plaza in Similar Sites
Source: nyc.gov

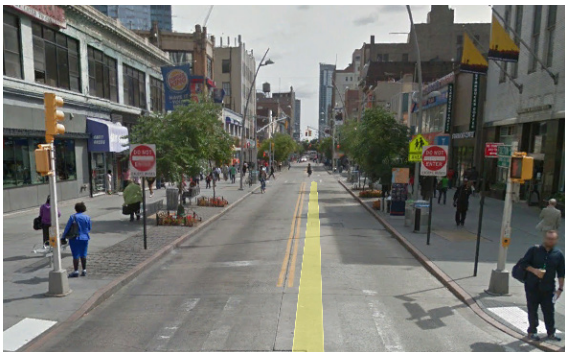


Figure 69: Permanent Sidewalk extensions

for residents and provide a much needed public space in the area. See figures 65 to 67.

- Request for sidewalks extensions in East Broadway and Division Street. Fulton Street in Brooklyn is one example of a street that has implemented an extension for improving the space for pedestrians. The study area has high concentrations of seniors and people with disabilities that will be enormously benefited if more space for mobility devices and benches is provided, especially in commercial streets. There are many different ways to do sidewalk extensions and it depends on what is adequate to the space and budget. For example, solutions could be just gravel and paint or a more permanent solution could be implemented such as that shown figures 68 and 69. Whatever the solution, the bicycle lanes of East Broadway should be taken into consideration.

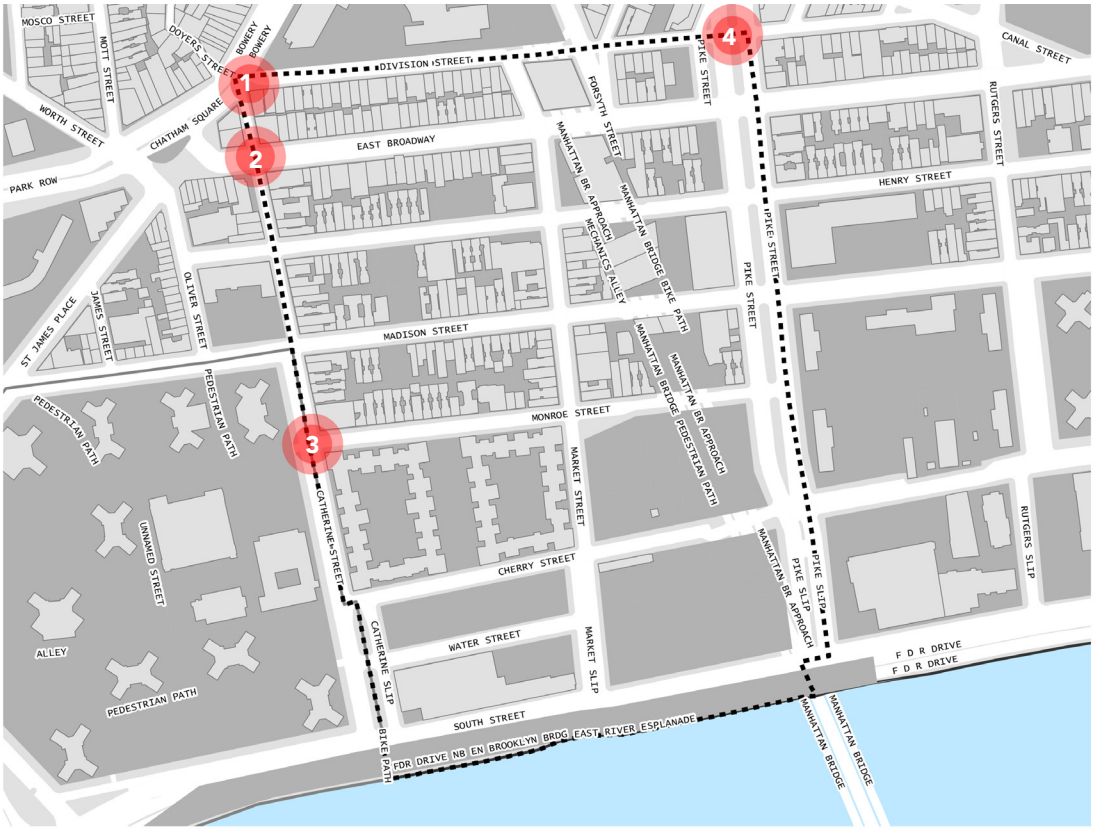


Figure 70: Dangerous Intersections in Study Area

1

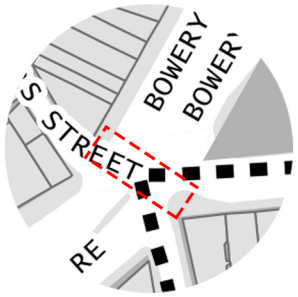


Figure 71: Division and Chatham Square

2

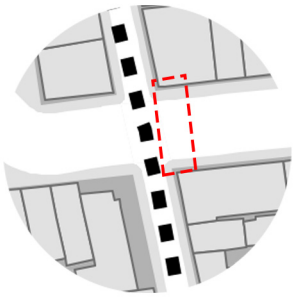


Figure 72: East Broadway and Catherine Street

3

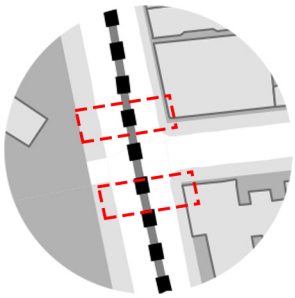
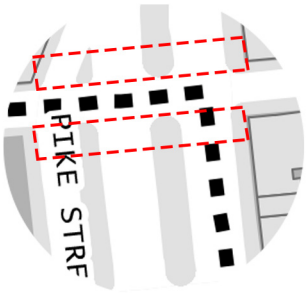


Figure 73: Monroe Street and Catherine Street

4



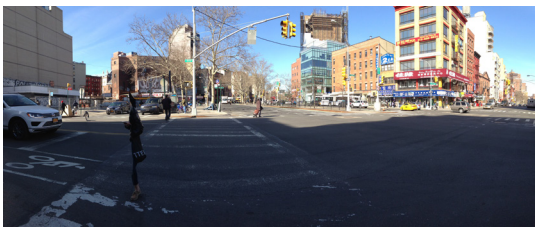


Figure 74: Pike Street and East Broadway

Street crossings

Community Board 3 in partnership with community organizations in the area could request to DOT for increasing the time for pedestrians to cross streets at the intersections of:

- East Broadway and Catherine Street in the East Broadway crossing (KSI event, 25 seconds to cross 4 lanes).
- Division and Chatham Square in Chatham Square crossing (KSI event, 25 seconds to cross 6 lanes, no median).
- Pike Street and East Broadway in Pike Street crossing (KSI event, 30 seconds to cross 12 lanes, 2 medians).
- Monroe Street and Catherine Street in Catherine Street crossing (28 seconds to cross 5 lanes), see figures 70 to 74.

Additionally, Community Board 3 could request the installation of countdown lights that will let a pedestrian know how many seconds they have left to cross the street, as well as curb bulbs or extensions to narrow the distance a pedestrian has to cross, see figure 75 to 76.

Figure 75: Countdown Pedestrian Light
Source: blogspot.com

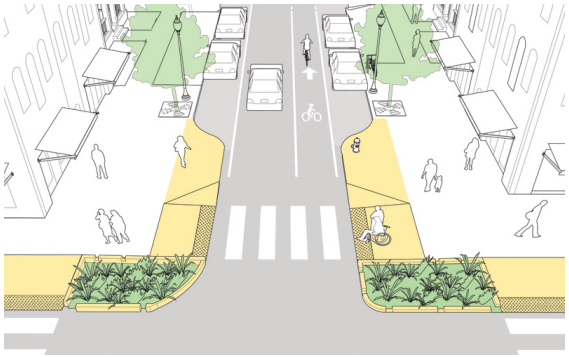


Figure 76: Curb bulbs or extensions
Source: Urban Street Design Guidelines

Courtesy among different transportation modes

Finally, an educational campaign for drivers and pedestrians should be implemented through different types of advertisements in the area. The educational campaign should raise awareness and create a conscious chain that the area is an area with a high concentration of seniors and residents with mobility disabilities, that drivers should yield to bicycles and pedestrians, that bicycles should yield to pedestrians, that cyclists should

not ride on sidewalks, and that pedestrians should not jay walk and should comply with pedestrian lights.

5.5 Recommendations at the District and City Level

A. To Establish an Aging Improvement District and Residents Task Force

To make a community accessible to all people of all ages and with all type of abilities, it is necessary to address different elements of the urban context and to give continuity over time. An Aging Improvement District (AID) should be implemented in the study area to make improvements at the neighborhood level and enable seniors and residents with mobility disabilities to better interact with their environment The AID should establish a group of leaders from institutions in the study area, along with directors of senior service providers, to lead the initiative of the project. In the study area, there are many organizations and service providers that could come together to form the AID, and act as a point organization for the needs of seniors and residents with mobility disabilities. An AID could lead community consultations and implement change. An AID could also refer seniors and residents with mobility disabilities to existing organizations and services providers according to their needs and concerns. For example, an AID could refer seniors and residents with mobility disabilities to banks, grocery stores, and housing that are accessible. Additionally, a task force comprised of residents (especially seniors and residents with mobility disabilities) could be established to implement change in the neighborhood.

B. Designate the Department of Buildings as the city agency responsible for monitoring the removal of ADA barriers in existing buildings

Today, there is no city agency responsible for monitoring the removal of ADA barriers in existing buildings. The Department of Buildings, however, is in charge of registering building violations such as construction violations, alterations, demolitions, land use and more, and this department could also be used to monitor compliance with ADA standards. Before such allocation of responsibility is implemented, building owners could be notified and be made aware of the tax incentives for complying with ADA standards. The Mayor´s Office for the People with Disabilities (MOPD) and the Committee on Human Rights Commission are possible agencies that could be used for organizing conferences and workshops for educating stakeholders on incentives for complying with ADA standards as well as the consequences for not complying for building and businesses owners. Additionally the Department of Buildings could incorporate to the Building Code requirements beyond ADA standards such as the Inclusive Design Guidelines undertaken by the MOPD or even Universal Design principles.

6. Study Challenges and Limitations

One of the first challenges faced at the beginning of this study was developing the scope of the study, *i.e.*, whether the study should address just seniors or whether the study should also address residents with mobility disabilities. After beginning the study, I began to realize that both seniors and residents with mobility disabilities share common needs in the built environment. Also, during interviews with service providers, organizations and city agencies, I realized that most address both seniors and residents with mobility disabilities. Thus, I recognized that this study could include both seniors and residents with mobility disabilities as requested from the Community Board so that the potential for change could be even stronger.

This study is limited to outdoor spaces and to the transition between outdoor and indoor because it only addresses the accessibility of entrances and of public spaces. Thus, further study is needed inside facilities and buildings to analyze common spaces in residential buildings and to analyze sales floor areas and bathrooms in businesses. Studies that examine the role of both indoor and outdoor environments on physical activity might be useful.

Most of the field surveys were realized during winter. Although the field surveys shed light on how seniors and residents with mobility disabilities interact with the neighborhood's built environment during this time of the year, the weather conditions prevalent during this time of the year limited the use of public spaces. Also, interviewing residents during the winter makes their responses more relevant for this time of the year than for other seasons.

7. Methodology

7.1 The Approach

The approach of the study was organized in two phases based on the following objectives:

a. To analyze the existing conditions for seniors and persons with mobility disabilities.
b. To determine the geographic area of study based on a selection criteria.
c. To identify accessibility gaps between the selected population and if local goods, services, the public right of way and physical housing elements are ade-

quate.

d. To recommend potential solutions to CB3 to bridge the accessibility gaps and overcome challenges particular to the selected population.

Phase 1 included the literature review on community accessibility to identify important themes and assessment of the existing conditions. The community district needs statement was a valuable resource at the beginning of this phase. The primary delivery of this stage was the proposal of three geographic areas for study to the Health and Human Services Committee. With their feedback, one geographic area of study was selected for Phase 2, which involved the elaboration and implementation of field surveys and focus groups, the identification of accessibility gaps, and the elaboration of recommendations and alternatives.

The criteria for selecting the area of study was based on the following:

- High concentrations of the "older- old adult age group" population (75+);
- High concentrations of the "older-old adult age group" population with mobility disabilities (75+);
- High concentrations of older adults (65+) with low median household income;
- Good mix of housing typologies; and
- Complicated intersections, wide roadways, and high concentration of collisions.

I used the U.C. Census Bureau 2010 data at the census tract level to determine where in the District "older-old adults" live. As mentioned above, this age group is one of the priorities of CB3 and for that reason this study focuses on residents aged 75 and older.

An analysis of the location of residents with mobility disabilities was also conducted. The U.S. Census uses the technical term "ambulatory difficulties" that refers to mobility disabilities. The ACS asks for specific disabilities such as: hearing disabilities, visual disabilities, cognitive disabilities, ambulatory disabilities, self-care disabilities, and independent living disabilities. As this data is only available in the American Community Survey, I used the ACS 5 year estimate from 2008 to 2012 in order to reduce as much as possible the margin of error.

The same process applied for locating the population of residents with low median household income with the difference that this data set only had data for residents aged 65 and older.

The tables downloaded from the American Fact Finder website were: Profile of General Population and Housing Characteristics, Sex by Age by Ambulatory Difficulty, and Median Income in the Past 12 Months. I later used ArcMap GIS in order to find the population concentrations broken into high medium or low ranges.

A land use map with data from the Department of the City Planning PLUTO 2013 was used to define a census with a good housing mix. At the time, I did not count with 65+ Killed or Severely Injured (KSI) data from the NYC Department of transportation so I had to rely on data from websites such as http://crashstat.org and nyc.crashmapper.com to locate areas with high pedestrian collisions.

7.3 Comparison of Census Tract 8 with Census Tract 25

I then compared population characteristics at the tract level such as:

- Older adult concentrations;
- Ambulatory difficulties concentrations;
- Older adults with low median household income; and
- Public assistance, retirement and social security income.

The tables downloaded from the American Fact Finder website were: Profile of General Population and Housing Characteristics, Sex by Age by Ambulatory Difficulty, Median Income in the Past 12 Months, Public Assistance Income for Households in the Past 12 Months, Public Assistance Income for Food stamps in the Past 12 Months, and Retirement Income.

7.4 Field Surveys

First a study area inventory was realized with the input of consultation resources such as the THA toolkit for the four features: goods, services, the public right of way, and housing typologies. For each feature, a map was elaborated using GIS systems to help guide the collection of data on field. The maps showed the location of:

1. Retail and commercial corridors;
2. Services such as public libraries, schools, senior centers, and parks;
3. Public transportation and KSI data for the population aged 65 and over; and
4. Residential buildings.

Later in the study, simple field survey tables were elaborated to capture data on field based on the information gathered in the area inventory. When conducting the field surveys, the maps realized for the inventory proved to be very useful. The data used for

creating the maps was as follows:

1. Retail and commercial corridors: DCP PLUTO Data.
2. Services: DCP PLUTO and DCP Selected Facilities Data.
3. Public Transportation: DCP Lion Data and DOT KSI 65 and over.
4. Housing Buildings: DCP PLUTO Data.

A ranking system was then elaborated for assigning a degree of accessibility to each site on filed. The ranking system was as follows:

- **1 (Good Accessibility)** = no step at the entrance, could have a ramp or not, there is some degree of obstruction.
- **2 (Fair Accessibility)** = having one or two steps at the entrance, there is some degree of obstruction.
- **3 (Poor Accessibility)** = requires the use of stairs, usually second floor or underground stores.

Finally, because of the limited time to elaborate the study, streets were prioritized for each feature (businesses, services, sidewalks and crossings, and housing). The following section details the criteria used.

7.5 Data Analysis

Goods:

Because of mixed residential-commercial uses and the overlap with the housing typology feature, the field survey of goods was realized in most of the study area. When digitizing the data and after community consultations, businesses were grouped according to their degree of importance based on what stores and businesses seniors and residents with mobility disabilities visited most frequently. These businesses were prioritized to make them as accessible as possible. The study used the 2012 NAICS US Code to categorize each business. See http://www.census.gov/cgi-bin/sssd/naics/naicsrch?chart=2012 for the categorization of Industry Groups used for this study and for a detailed industry description. The multiple store entrance category used in this study is not from the NAICS Code and was used solely for the purpose of this study.

Services:

Services were categorized into two groups: services for all ages and services for older adults. Also, the NAICS Codes were used. Interviews with service providers, wheelchair

users, and senior residents were very helpful for this section.

Housing Typologies:

Data from DPC and GIS proved to be very useful for locating residential buildings and walk-up buildings versus buildings with elevators. Also, it was helpful for locating buildings built after the 1990s when the ADA standards for accessible design for new construction and alterations were implemented. This data showed, like in many places in New York, most of the buildings were built in the early 1900s. Like the other categories, the study analyzes accessibility from two perspectives: (1) the physical accessibility of buildings and (2) their availability for seniors and residents with mobility disabilities. Meetings with Project Home from University Settlement provided me with better understanding of the community's residents, how much income they receive, and how much rent they can afford. As for the physical perspective, access to buildings was qualified with the same ranking system used for goods.

Public Right of Way:

The ranking system used for the previous categories did not apply for this category because I could not rank a sidewalk with the previous criteria due to the fact that the condition of a sidewalk could change many times along different parts of the sidewalk. Similarly, a street crossing could also change along its path. Therefore, new criteria were needed. After locating bus stops, bike lanes, and KSI sites for pedestrians aged 65 and older, I also identified 311 complaints in a one-year period. The 311 complaint classification criteria proved to be the most useful way to both realize the field surveys and to classify the findings. Not only was it the best way to inform the Community Board about the quality of sidewalks and crossings, it will also be useful for the Community Board when it requests the DOT to make improvements to the area.

Resources:

AARP, "AARP to CONGRESS AND THE PRESIDENT: DON'T CUT SOCIAL SECURITY", press release, December 18, 2012, www.aarp.og/about-aarp/press-center/info-12-2012/AARP-to-Congress-and-the-President-Don't-Cut-Social-Security.html.

Age-Friendly NYC (2012). Creating an Age-Friendly NYC One Neighborhood at a Time. A Toolkit for Establishing an Aging Improvement District in Your Community.

Americans with Disabilities Act of 1990 (ADA) Publication L, No. 101-336, 104 Stat, pp. 327-378.

Centers for Disease Control and Prevention. (2006). *Programs in brief: Birth defects and developmental disabilities*. Retrieved August, 31, 2006, from <http://www.cdc.gov/PROGRAMS/bd07.htm.>

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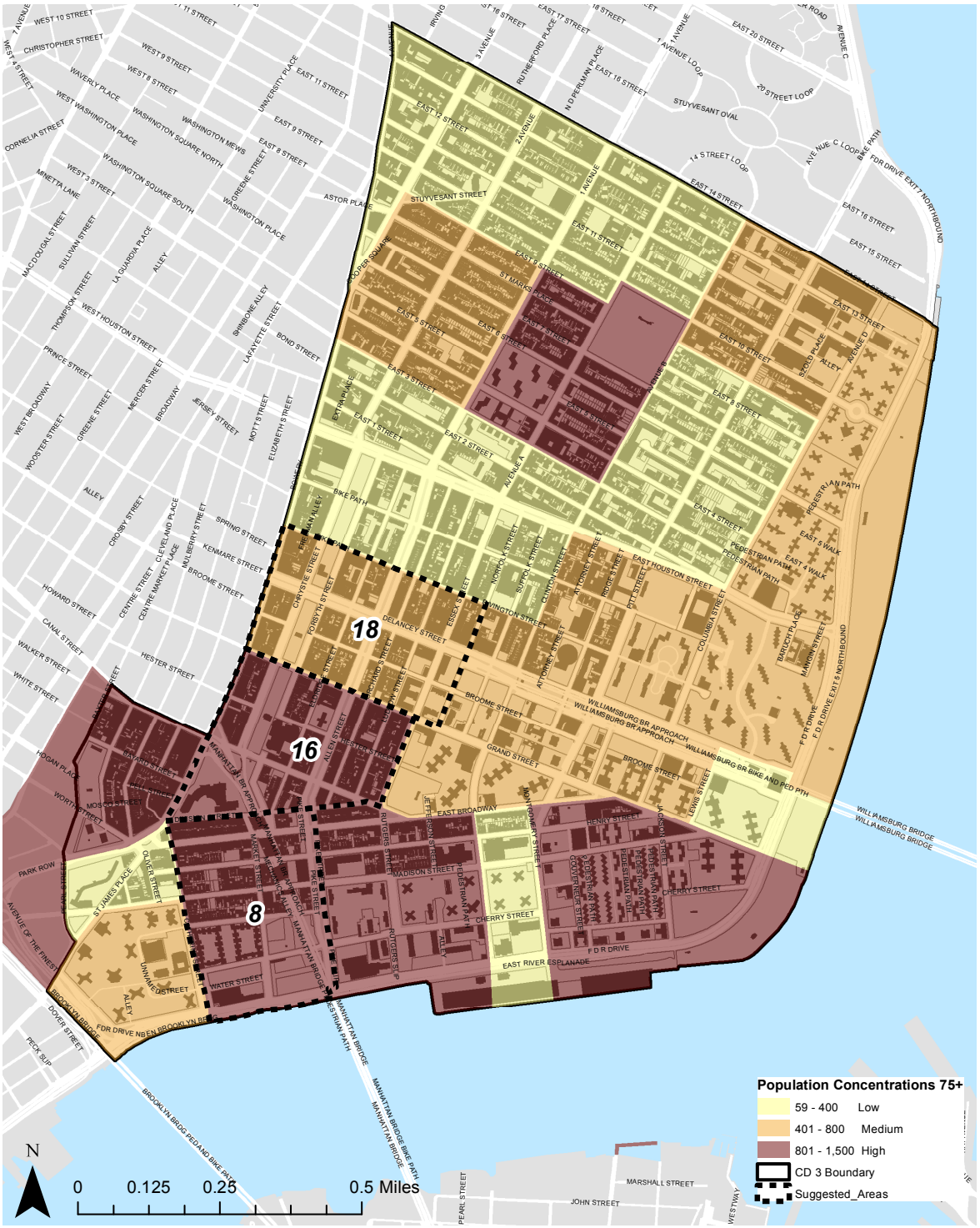
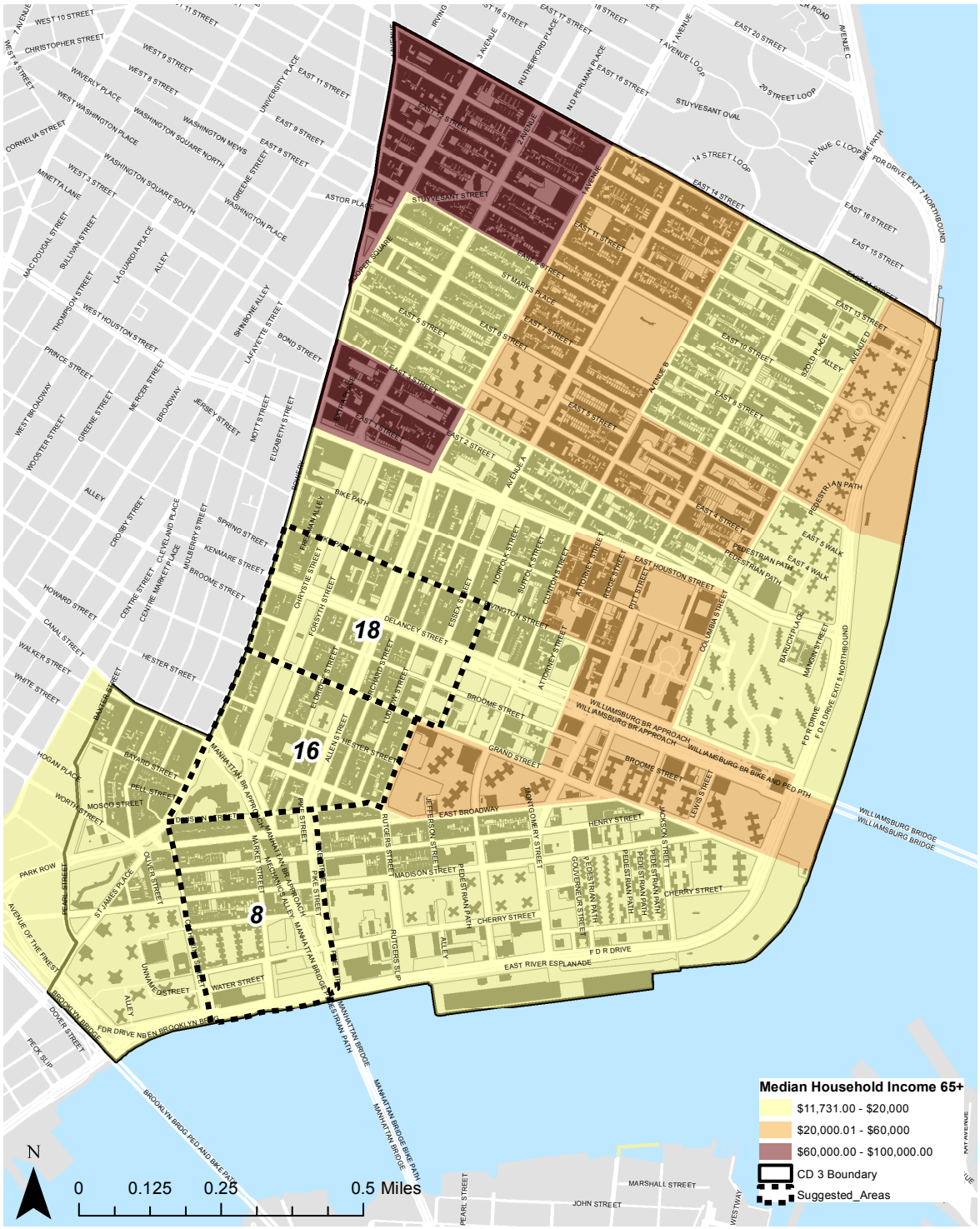
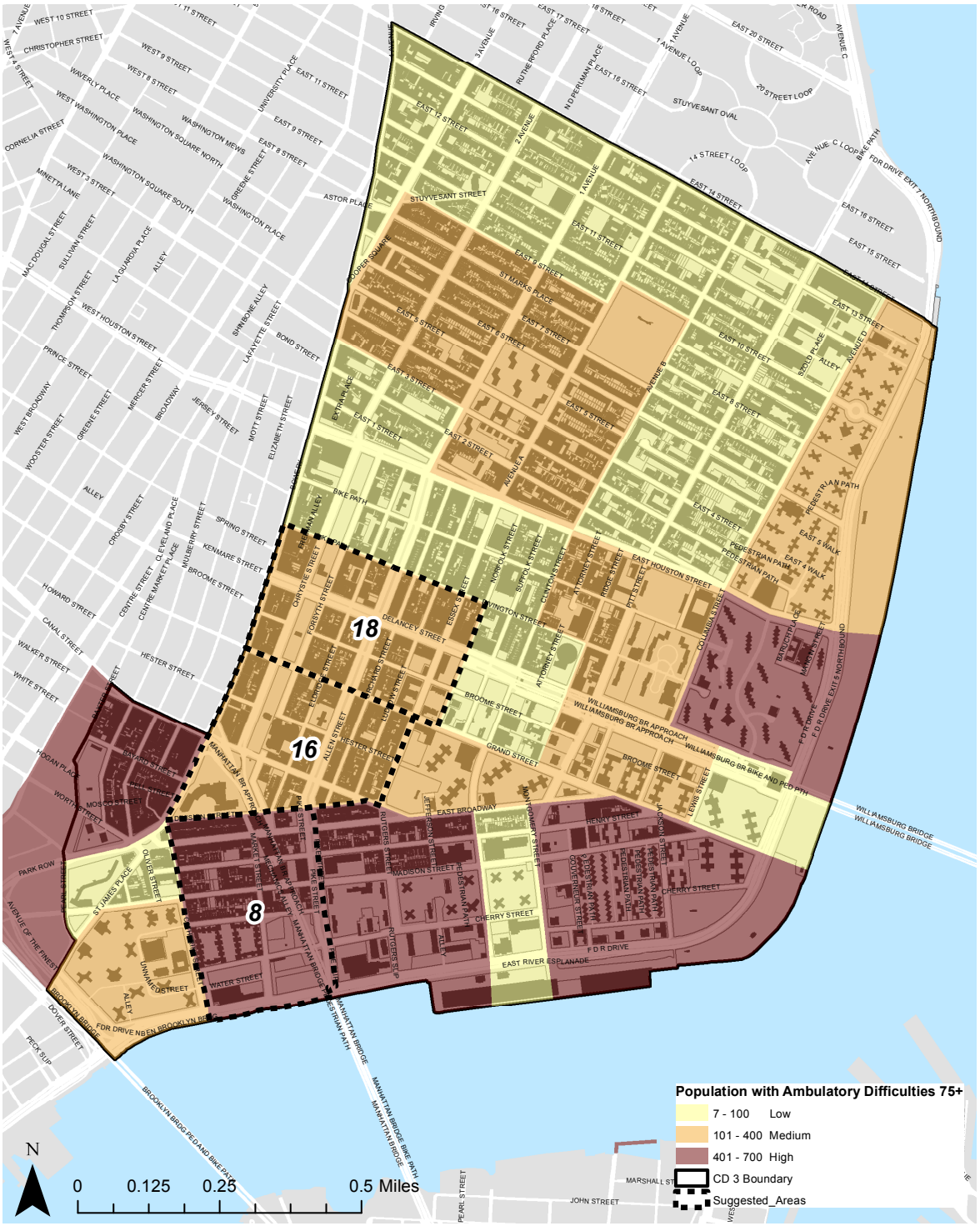
Appendix A



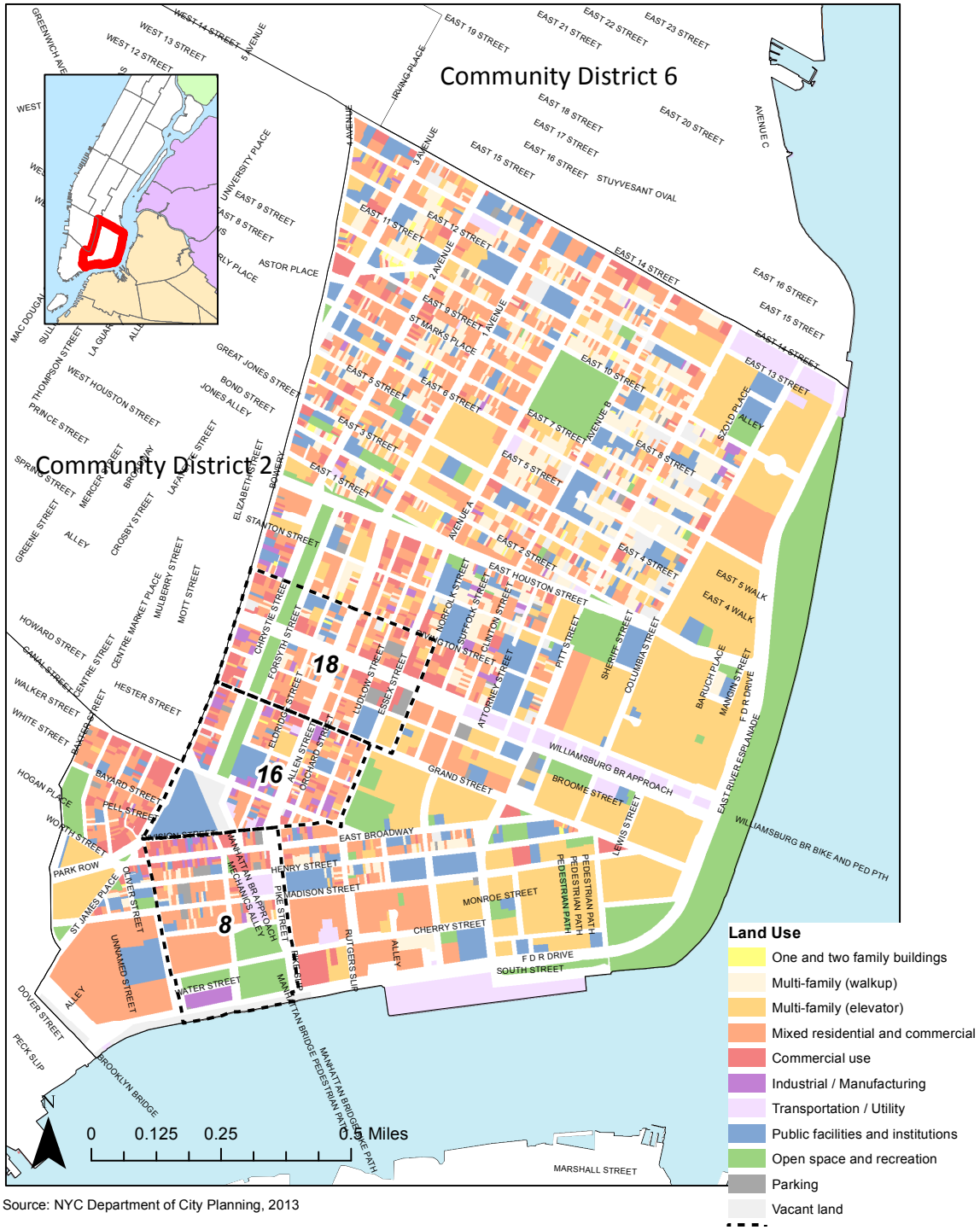
Appendix A.1: Concentrations of 75+ by Census Tract
Source: Department of City Planning, 2013 and U.S. Census Bureau 2010



Appendix A.2: Median Household Income 65+ by Census Tract
Source: Department of City Planning, 2013 and U.S. Census Bureau, ACS 2008 - 2012



Appendix A.3: Population with Ambulatory Difficulties 75+ by Census Tract
Source: Department of City Planning, 2013 and U.S. Census Bureau, ACS 2008 - 2012



Source: NYC Department of City Planning, 2013

Appendix A.4: Land Uses
Source: Department of City Planning, 2013

Appendix B: Memorandum

To: Manhattan Community Board 3, Health and Human Services Committee
From: Mariana Rich, 2014 – 2015 FCNY Community Planning Fellow
Date: December 18th 2014
Re: Comparison of Older Adult Population

Executive Summary:

This memo was prepared to compare the conditions of the older adult population of the selected geographic area of study, Census Tract 8, to Census Tract 25, which encompasses all of NYCHA's Smith Houses, per the suggestion of the Human Services Committee at the December meeting. Findings suggest that:

- Tract 8 has a higher amount of seniors.
- The amount of mobility disabilities in all age groups is higher in Tract 25, however mobility disabilities among older adults are higher in Tract 8.
- Tract 8 has a more economically diverse population but at the same time the amount of older adults in the lower income brackets is higher.
- The percentage of seniors receiving services such as food stamps, public assistance and retirement income is lower in tract 8
- Tract 8 has more diverse conditions (housing typologies [high rises and tenement houses], streets, intersections, and land uses) that could result in a more extensive pilot project.

Main Findings:

When analyzing the characteristics of the older adult population in Census Tracts 8 and 25, we can observe that Tract 8 has a higher number of older adults (1,807 persons) in comparison to Tract 25 with 1,064 seniors. The amount of the older adult population with a mobility disability is also higher in Tract 8, with 435, which is more than in Tract 25 with 364 (See appendix B.1). Census Tract 25 has a higher percentage of seniors with a mobility difficulty (36%), but that does not mean they have higher concentrations of seniors with physical disabilities (see appendix B.1).

According the American Community Survey (ACS), the median household income of older adults 65 and older in Community District 3 in 2012 was $16,173.00 dollars. In Census Tract 25, it is significantly lower than the district median, where the median household income is $12,943.00, but Tract 8 median income is $16,004.00 (See Figure 17). This difference could be because tract 8 has a larger older adult population than tract 25. An analysis of older adults by income brackets, (see appendix B.2) shows that

the amount of older adults with low-income is actually higher in Tract 8, with a population of 696 seniors, than in Tract 25 which has 451 older adults in the lower income brackets.

Another factor that contributes to the higher median income in Tract 8 is that it has slightly more seniors in the medium and high-income brackets than Tract 25, but that doesn't mean its population in the lower income bracket is smaller. At the same time, a larger percentage of seniors in Tract 25 receive services such as food stamps, public assistance and retirement income than in Tract 8 (see appendix B.1).

Census Tract 25 counts with 698 people with mobility difficulties while Census Tract 8 counts with 555, including all age groups; but Tract 8 counts with older adults with mobility disabilities (435) than Tract 25 (364) (See appendix B.3). Finally, looking at both areas, Census Tract 8 has more diverse conditions than census tract 25, including housing typologies (high rises and tenement houses), streets, intersections, and land uses (See appendix B.4). Therefore, we recommend tract 8 for the community accessibility study.

	Census Tract 25			Census Tract 8		
Age Group	65 - 74	75 - 80+	**Total**	65 - 74	75 - 80+	**Total**
Population	517	547	**1,064**	905	902	**1,807**
Ambulatory Difficulties	100	264	**364**	84	351	**435**
Age Group	65+			65+		
Median HH Income	$12,943.00			$16,004.00		
	Without	With	**% With**	Without	With	**% With**
Food Stamps	958	906	**49%**	2,953	997	**25%**
Public Assistance Income	1,682	182	**8%**	3,805	145	**4%**
Retirement Income	1,672	192	**35%**	3,488	462	**12%**
Ambulatory Difficulties (65+)	645	364	**36%**	1,266	435	**26%**

Appendix B.1: Comparison of the Conditions of Older Adults 65+
Source: U.S. Census Bureau, ACS 2008 – 2012

Income of Older Adults 65+

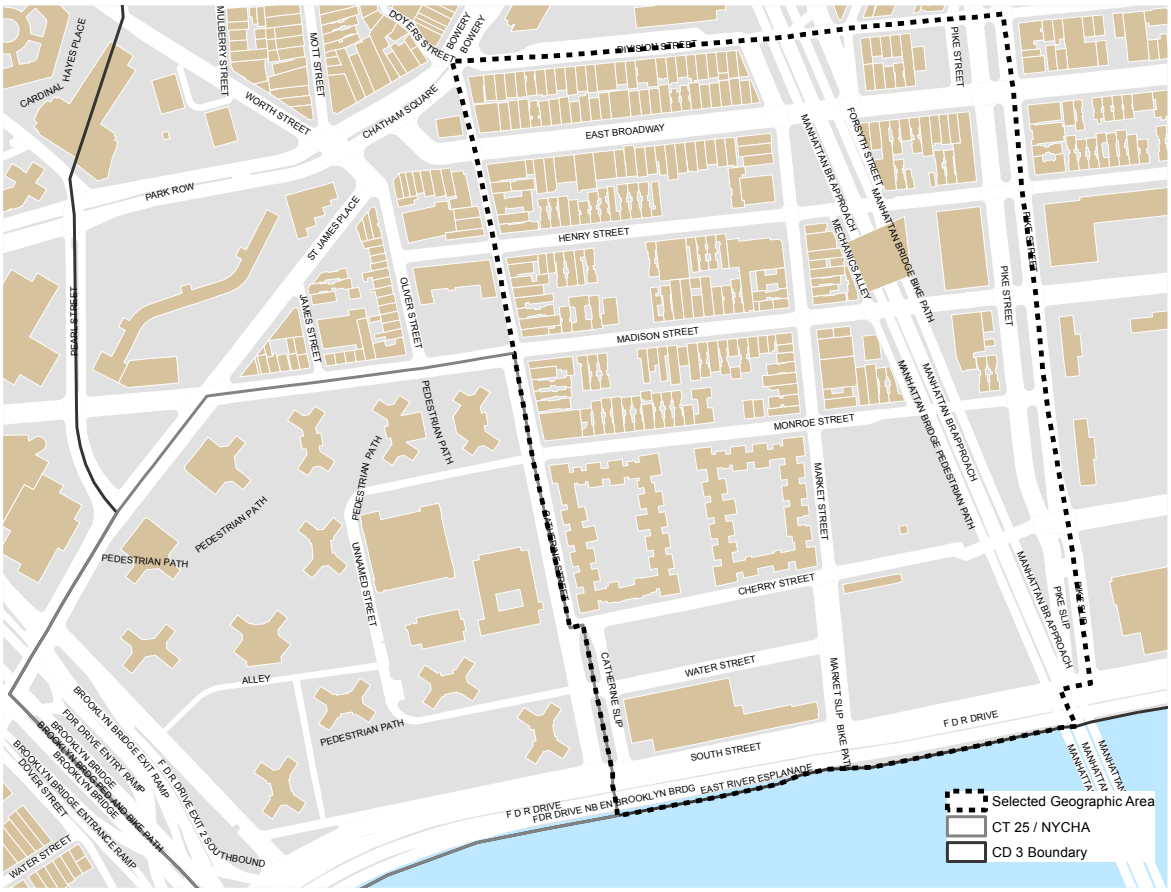
	Census Tract	25		8		Difference
Low	Less than $10,000	193		334		
	10,000 - 19,999	258		362		
	TOTAL	**451**	**66%**	**696**	**64%**	**245**
Medium	20,000 - 29,999	77		90		
	30,000 - 39,999	81		86		
	40,000 - 49,999	9		14		
	50,000 - 74,999	23		74		
	TOTAL	**190**	**28%**	**264**	**24%**	**74**
High	75,000 - 99,999	33		98		
	100, 000 - 125,000	5		0		
	125,000 - 199,999	0		29		
	TOTAL	**38**	**6%**	**127**	**12%**	**89**

Appendix B.2: Income of Older Adults
Source: U.S. Census Bureau, ACS 2008 – 2012

Comparison of the Population with Ambulatory Disabilities

Age Group	Census Tract 25			Census Tract 8		
	Without	With	% With by age group	Without	With	% With by age group
5 to 17	849	29	3%	1,541	0	0%
18 to 34	1,193	30	2%	2,036	0	0%
35 to 64	1,711	275	14%	5,075	120	2%
65 and over	645	364	36%	1,266	**435**	26%
TOTAL	**4,398**	**698**	**14%**	**9,918**	**555**	**5%**

Appendix B.3: Comparison of Population with Ambulatory Difficulties
Source: U.S. Census Bureau, ACS 2008 – 2012



Appendix B.4: Census tract 8 and 25
Source: NYC Department of City Planning, 2013

Appendix C

GOODS					
St. Id	**Name of Store**	**Category**	**Address**	**ADA Accessible**	**Notes**

Appendix D

HEALTH SUPPORT AND SOCIAL SERVICES					
St. Id	**Name of Facility**			**ADA Accessible**	**Notes/Capacity**

Appendix E

HOUSING							
St. Id	Address	Pre-1990	Post-1990	No-Stories	ADA Accessible	Commerce at Ground Level	Notes