

20.1 INTRODUCTION**20.1.1 CONTEXT**

Prior to the terrorist attacks on the Twin Towers on September 11, 2001, the World Trade Center (WTC) was one of the most vibrant and diverse workplaces in Manhattan. The WTC housed more than 430 companies from 28 countries.¹ Commentators noted that “the victims [of the terrorist attacks] were global, like the commerce in the twin towers themselves.”² The businesses and government agencies located in the towers employed over 42,000 people from over 80 nations and a wide range of social and economic backgrounds. The economic activity that took place there served as an anchor for other businesses in Lower Manhattan, from delicatessens on Broadway, to jewelry shops in Chinatown, to financial services firms on Wall Street. The profound loss of life, the elimination and relocation of jobs and residences, and the environmental and economic disruptions stemming from the terrorist attacks were felt in every segment of this diverse business and residential community, leading to an outpouring of support for the physical, financial, and emotional recovery efforts that continue to this day.

Lower Manhattan is a densely populated mixed use area of New York City and has been since colonial times. As a whole, it is economically, commercially, racially, and ethnically diverse, comprised of a wide variety of neighborhoods. With the WTC Site, the Financial District in Lower Manhattan constitutes the nation’s third largest business district and plays host to financial markets, independent retailers, light manufacturing and a wide array of other businesses both large and small. While the Financial District has long been a center of world finance and a major economic engine for the entire region, it has more recently become the fastest-growing residential neighborhood in the city, joining Battery Park City, Chinatown, Tribeca, and the Lower East Side as a center for residential activity downtown.

As in many parts of New York City, marked differences in the housing stock, and the income, race and ethnic composition of the population can be seen from one Lower Manhattan neighborhood to another. Residential buildings range from tenements, to modern apartment buildings, to converted lofts. Some buildings are comprised of owner-occupied cooperative or condominium units, others of rental apartments. The mix of owner versus rental occupancy, and the age and cost of units, vary from neighborhood to neighborhood, contributing to differences in the income levels of the residential population in each neighborhood. The proportion of minority residents also differs by neighborhood.

¹ Morse, Jane A., “World Trade Center Tragedy Hits All Nationalities,” Office of International Information Program, U.S. Department of State, September 14, 2001.

² *Wall Street Journal*, September 14, 2001.

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Lower Manhattan neighborhoods play host to a diverse array of public facilities. The area is comprised of a vast transportation network, including major bridges, tunnels and highways, dozens of parks, both large and small, and government offices and courts.

Recognizing that the scope of the devastation to this diverse environment necessitated a comprehensive recovery effort, Governor George Pataki and former Mayor Rudolph Giuliani created the Lower Manhattan Development Corporation (LMDC) in November 2001 to help plan and coordinate the rebuilding and revitalization for all of Lower Manhattan south of Houston Street. The Proposed Action is the central element of LMDC's revitalization efforts. A key aspect is the creation of a permanent Memorial remembering and honoring the innocent men, women, and children lost in the terrorist attacks on September 11, 2001 and February 26, 1993. Another aspect of the Proposed Action is cooperation with other public and private entities in the revitalization and redevelopment of the Project Site. The Proposed Action would include appropriate commercial and retail uses, as well as supporting utilities and infrastructures, for the Downtown area. These efforts are intended to re-establish the Project Site as a locus of commerce, civic space, and amenities, and to do so in a way that meets the needs of the affected communities, is compatible with the surrounding communities, and avoids disproportionate adverse impacts to low income and minority communities of concern..

To promote recovery and revitalization of Lower Manhattan for all residents and neighborhoods, LMDC efforts are directed at more than physical construction projects. For example, the Residential Grant Program provides financial incentives to encourage individuals of all income levels to remain in, or move to, housing in Lower Manhattan. LMDC is also sponsoring "History and Heritage in Downtown NYC," a joint initiative of 14 cultural institutions located in Lower Manhattan that is intended to encourage tourists and visitors to explore Downtown's cultural identity. In addition, the Chinatown Traffic and Transportation Study, recently commissioned by LMDC, will survey pedestrian and automotive traffic issues, congestion, parking, accessibility, and related quality-of-life concerns in Chinatown with the aim of improving the traffic flow and related conditions in Chinatown, as well as street connections with surrounding areas of Lower Manhattan.

The previous chapters of the GEIS evaluate the potential for effects related to construction and operation of the Proposed Action. The purpose of this chapter is to consider whether these effects are distributed equitably. Incorporating considerations of equity into all activities and policies of the Federal government is a key goal of environmental justice. Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," was issued on February 11, 1994 by President Clinton to outline this goal. The Executive Order was created so that each subject federal agency "shall make achieving *environmental justice* part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

Issues of particular importance to low income and minority populations during the construction and operation of the Proposed Action include:

- Human health and quality-of-life effects related to construction at the Project Site and construction truck traffic off-site;
- Continued availability of community facilities, services, and open space;
- Economic vitality and job opportunities;

- Preservation/enhancement of community character and cohesion;
- Indirect residential and business displacements arising from secondary development or change in community character;
- Human health impacts of the infrastructure needed to support the Proposed Action; and
- Cumulative effect of the Proposed Action and other construction and improvement projects in the next decade in Lower Manhattan.

This chapter describes low income and minority populations and then reviews the impacts of each alternative to those communities of concern. This assessment follows the guidance of the U.S. Council on Environmental Quality (CEQ) and New York State Department of Environmental Conservation (NYSDEC), and the environmental justice goals of the U.S. Department of Housing and Urban Development (HUD).

20.1.2 CONCLUSIONS

Because the focus of this chapter is the evaluation of the potential for disproportionate impacts on low income and minority communities rather than the identification of significant impacts themselves, this chapter relies on and incorporates the substantive analyses in other chapters of this document. In particular, this chapter refers to Chapter 8, “Community Facilities”; Chapter 9, “Socioeconomic Conditions”; Chapter 10, “Neighborhood Character”; Chapter 12, “Infrastructure”; and Chapter 21, “Construction Impacts.” The results identified in these and other chapters for the 2006 construction peak period, 2009, and 2015 are evaluated for their effect on communities of concern.

The Proposed Action would not produce disproportionately high or adverse effects on low income or minority communities. The proportion of low income and minority residents in the primary study area is lower than that for Lower Manhattan, New York County (Manhattan), or New York City as a whole, indicating a low potential for disproportionate impacts to communities of concern in the immediate vicinity of the Proposed Action. In the secondary study area, the portion of Chinatown within the study area boundaries represents a community of concern for environmental justice. This community is, however, far removed from the Project Site and would not be subject to disproportionately high or adverse impacts during the construction or operational periods. This evaluation of environmental justice issues, based on impacts identified in other chapters of the GEIS, demonstrates that:

- The Proposed Action would not result in disproportionately high or adverse human health or quality-of-life impacts to any community of concern related to construction at the Project Site and construction truck traffic off-site. Demographic and income conditions along routes necessary for construction-related truck traffic are similar to those of Lower Manhattan as a whole, the increase in traffic along these established truck corridors in communities of concern would not be disproportionately greater than that for other portions of the study areas, and the overall increase in truck traffic is anticipated to be low.
- Evaluation of community facilities and services, and open space indicates no significant impacts for the primary or secondary study areas.
- Construction activity would produce significant economic benefits in terms of output and jobs for New York City and the region as a whole during the 10-year construction period. Similarly, completion of the Proposed Action is expected to improve economic vitality and

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increase the number of job opportunities. This would benefit a wide range of residents and businesses, including those low income and minority communities. Jobs created on site during the operation of the Proposed Action are expected to encompass a wide range of skills, wage levels, and occupations in office, retail, government agency, and cultural facilities employment.

- An evaluation of the potential for indirect displacement of residents and businesses in the primary and secondary study areas finds no significant impacts resulting from the Proposed Action. The Proposed Action would enhance community character in the primary study area and Lower Manhattan in general as the blighted conditions of the largely vacant site are replaced with a WTC Memorial, cultural facilities, open space, the office towers, and other elements to create a critical mass of mixed use development that would help restore Lower Manhattan as a vibrant locus of activity which attracts and retains businesses, residents, and visitors. These new uses would be consistent with and supportive of existing and future land uses and community character.
- In 2009, the Proposed Action is anticipated to result in lower infrastructure demands and usage compared to pre-September 11 levels. In 2015, the level of infrastructure demands and usage would be comparable to pre-September 11 levels as build-out of the Proposed Action is reached. No significant adverse impacts are anticipated under the Pre-September 11 Scenario. When compared with the Current Conditions Scenario, the Proposed Action would require additional water, sewer, solid waste, and energy resources.³ Any additional facilities required to meet future needs would be subject to individual environmental review and permitting as appropriate.
- The cumulative benefits of recovery on the Project Site as a result of the Proposed Action, in combination with other access, infrastructure and community enhancements taking place in Lower Manhattan through 2015 would work to support the long-range goals of New York City to recover from the terrorist attacks, revitalize Lower Manhattan, promote a diverse 24-hour residential and business community, and enhance quality-of-life and community character for all.

20.2 METHODOLOGY

20.2.1 POLICY CONSIDERATIONS AND GUIDANCE

The CEQ developed guidance to complement Executive Order 12898 and outlined an approach to evaluation and implementation appropriate under NEPA. Public participation and outreach are especially important to environmental justice analyses, as is emphasized by the CEQ Guidance. The CEQ Guidance is comprised of seven steps to consider while addressing environmental justice issues in conjunction with NEPA. In particular, analysis begins with the collection of demographic data in order to identify populations of concern, and ends with an assessment of effects on the populations identified in comparison to other populations, as well as mitigation (if necessary).⁴

³ Evaluation of infrastructure demands relates only to the Proposed Action and does not reflect increases in demand due to background growth in the study areas.

⁴ Council on Environmental Quality, *Environmental Justice: Guidance under the National Environmental Policy Act*, December 10, 1997.

Guidance on environmental justice issued by NYSDEC outlines similar goals and analysis considerations. This guidance defines environmental justice as “the fair treatment and meaningful involvement of all people regardless of race, color, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies” so that “no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from” an action.⁵

20.2.2 ASSESSMENT METHODS

The assessment of environmental justice for the Proposed Action is based on elements of the methodology as described in the CEQ and NYSDEC guidance documents and is consistent with HUD’s environmental justice implementation report.⁶ The major steps in this process are:

- Identification of the study area(s);
- Compilation of the population characteristics;
- Identification of the population(s) of concern for environmental justice;
- Conducting public outreach;
- Identification of adverse effects on population(s) of concern; and
- Evaluation of the overall effects of the project.

The 2000 U.S. Census of Population and Housing is used to determine the population and income characteristics of the identified populations of concern for environmental justice. The information is collected for specific census blocks and block groups and aggregated to represent the study area, which is presented as follows:

- *Data on characteristics of race and ethnicity:* The population of each block within a census tract in the primary study area is characterized using the following categories: White (Hispanic and Non-Hispanic), Black or African American, Asian (including Native Hawaiian, and Other Pacific Islander), and Other, which includes American Indian and Alaska Native, and respondents classifying themselves as belonging to two or more racial categories.
- *Total percentage of minority population:* The total percentage of minority population is comprised of the proportion of respondents to the 2000 Census classifying their race in a category other than “White Alone” and their ethnicity as Hispanic. Since Hispanic residents may be of any race, those who identified themselves as White, Black or African American, Asian, and “Other” in the 2000 Census may also be of Hispanic origin. To account for persons of Hispanic origin in the calculation of minority population, Hispanic persons who identified themselves as White in the census have been included in the minority population category. The CEQ Guidance states that an area with more than 50 percent of the population identified as minority is considered to be a minority community. Furthermore, areas with a

⁵ New York State Department of Environmental Conservation, *DEC Policy CP-29: Environmental Justice and Permitting*, March 19, 2003.

⁶ U.S. Department of Housing and Urban Development, *A Commitment to Communities: Achieving Environmental Justice*, March 1996.

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percentage of a particular race or ethnicity “meaningfully greater”⁷ than in Manhattan and New York City as a whole are noted.

- *Low income population:* Two indicators were used to determine low income population by block group or census tract. The first indicator is the percentage of the population living below the poverty level, as defined in the 2000 Census. The second indicator is the median household income. Household is defined by the 2000 Census to mean all persons occupying one household unit. This definition covers both related and unrelated individuals sharing a household unit. The CEQ Guidance does not specify a threshold with which to determine low income populations. Therefore, areas that have a proportion of low income households that are “meaningfully greater” compared with Manhattan and New York City as a whole are noted.

20.2.3 STUDY AREA

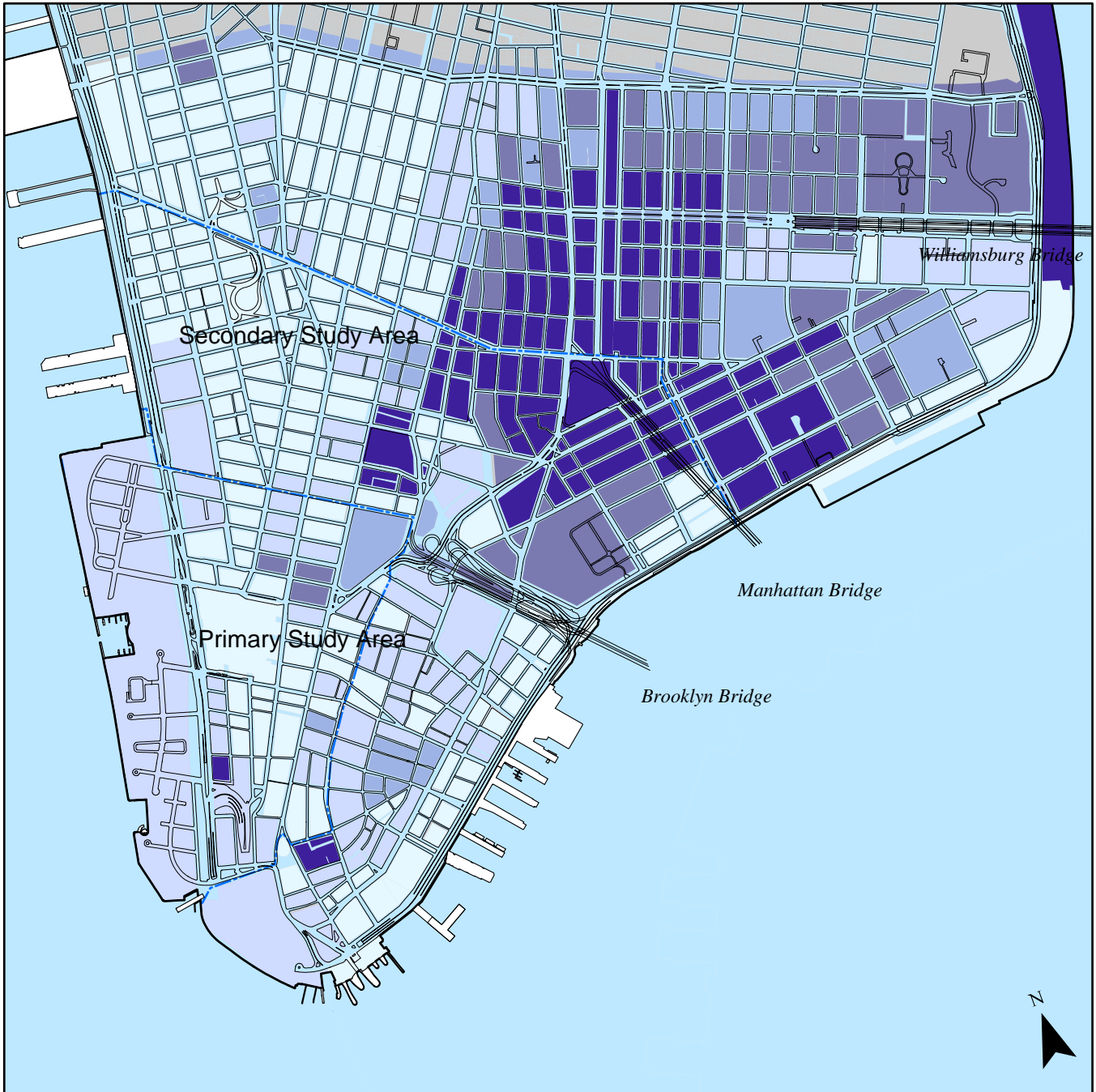
The environmental justice assessment uses the primary and secondary study areas employed in the evaluation of socioeconomic impacts (see Figure 20-1; see also Chapter 9, “Socioeconomic Conditions”) and in other chapters of this document. The primary study area includes the Project Site and surrounding neighborhood study subareas (North of Project Site, Broadway Corridor, Greenwich South Corridor, and Battery Park City). This study area reflects the limits of potential direct environmental impacts on communities of concern that may result from the construction and operation of the Proposed Action. Direct construction impacts include potential noise and air impacts, and temporary community disruption. A secondary study area comprising Lower Manhattan below Canal Street and Pike Street is included for the evaluation of cumulative impacts and indirect project effects including business and residential displacement and secondary development. In addition, a supplemental study area has been developed for the evaluation of potential impacts related to construction truck traffic. For that analysis, all census blocks immediately adjacent to construction truck routes have been selected. Truck routes evaluated include those to be employed in the Proposed Action and, for purposes of cumulative effects assessment, other future actions in Lower Manhattan.

20.2.4 PUBLIC OUTREACH

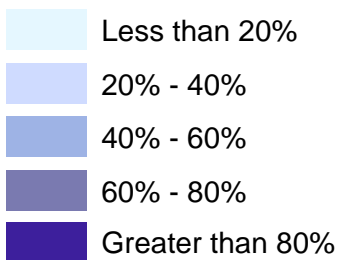
Applicable guidance on environmental justice emphasizes public participation and a variety of outreach strategies to encourage involvement. This public outreach process, if comprehensive and inclusive, can be an important component in addressing environmental justice issues. LMDC’s early efforts in post-September 11 redevelopment focused on public input and community needs, beginning with nine Advisory Councils, representative of a wide swath of the affected areas.

As part of the planning and environmental review process for the Proposed Action, LMDC has developed a public outreach and participation program to encourage meaningful participation for all residents of Lower Manhattan and beyond. LMDC created a website, www.renewnyc.com, to facilitate public information and participation including electronic comment forms. To address the needs of non-English speakers, the website contains components with Spanish and Chinese language materials. Many of LMDC’s printed information and outreach materials are also

⁷ Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, Section 1-1, Implementation, Minority Population.



Share of Minority Population, Census Block, 2000



Share of Minority Residents Residing in Lower Manhattan Census Blocks

available in these languages. The outreach conducted by the LMDC is focused on three general areas: the design and rebuilding of the Project Site and surrounding area; environmental issues and scoping for the Proposed Action; and public involvement for complementary LMDC recovery initiatives.

- *Design and Rebuilding Planning*—In spring 2002, LMDC released Principles and Revised Preliminary Blueprint for the Future of Lower Manhattan. Initial preliminary plans were released for public consideration in July 2002. LMDC then launched the Innovative Design Study, which began in August 2002 and yielded seven teams that developed concept plans for the Project Site. The entire design process was open to the public, with large-scale releases and exhibition of the design concepts, as was input into the planning process. LMDC's planning efforts have resulted in unprecedented public outreach. Nine designs concepts were chosen. The second initiative, "Plans in Progress," was geared toward public comment on the nine design concepts. This outreach effort ran from December 2002 to February 2003. Events were held in a variety of arenas, including public hearings, exhibits, advisory council meetings, community board meetings, mailings, videos, email, and the website. The main goal of the design and rebuilding segment of public outreach was to empower the public to comment on the various designs that would then help guide the rebuilding effort. The final choice of the Memory Foundations design for the World Trade Center was partly based on public preference expressed for the memorial focus and the skyline. An additional "Public Perspectives" outreach campaign was conducted with the intention of encouraging public participation in the development of the Memorial Mission Statement and Program. The effort included mailings to families of the victims, public meetings involving the Memorial jury and targeted meetings with Lower Manhattan community groups. A compilation of all the comments received was delivered to each of the World Trade Center Site Memorial Competition jurors.
- *Environmental Review Process*—The comprehensive environmental review of the World Trade Center Memorial and Redevelopment Plan is another way LMDC is seeking public participation, specifically garnering public comment. From June 22, 2003, to August 4, 2003, public comment was received on the draft scope, which is available on the website. Public notices were also placed in newspapers. The final scope was prepared in two forms, one reflecting public comments received and changes made to the plan and scope. It is also available on the website.
- *Complementary Involvement Programs*—LMDC has partnered with a variety of organizations in order to fulfill their mission of providing the public with a central role in the redevelopment and planning of Lower Manhattan. The most notable have been with the Civic Alliance to Rebuild Downtown (two town hall style meetings) and Listening to the City I and II, which gave over 5,000 people the opportunity to help formulate and direct the redevelopment process. LMDC also conducts numerous public hearings and meetings with community groups and organizations to "ensure the opinions of those who were affected are taken into account."⁸ Advisory councils have been set up by LMDC to continue an ongoing consultation on issues of interest to Lower Manhattan communities. Most recently, LMDC conducted community workshops to garner additional and updated information relating to existing and future redevelopment initiatives as detailed in the Partial Action Plans for the distribution of a \$2 billion Community Development Block Grant (CDBG) from HUD.

⁸ LMDC, Participate Section Public Input Shapes the Process, from www.renewnyc.com/Participate/default.asp

20.2.5 ANALYSIS SCENARIOS

Two scenarios (Current Conditions and Pre-September 11) and three analysis years (peak construction year 2006, and build years 2009 and 2015) are considered, as described in Chapter 2, “Methodology.” The first build analysis year of 2009 represents a time when the initial phases of the Proposed Action would be in place, while 2015 assumes full build-out. Changes in conditions for communities of concern that are expected to occur independent of the Proposed Action by each analysis year are identified, and potential impacts to communities of concern associated with the Proposed Action are assessed.

20.3 CURRENT CONDITIONS SCENARIO

This section identifies current 2003 conditions for communities of concern and impacts affecting these communities in future years with and without the Proposed Action. For purposes of this evaluation, the latest available demographic data (2000 Census) is used in the identification of low income and minority populations. Changes likely to have taken place since the last Census enumeration are noted where possible for the primary and secondary study areas.

20.3.1 EXISTING CONDITIONS 2003—CURRENT CONDITIONS SCENARIO

PROJECT SITE

The Project Site is currently vacant except for two public transit-related structures: the tunnel for the restored No. 1/9 subway lines and the temporary WTC PATH station. No population or housing is present on the site.⁹

PRIMARY STUDY AREA

At the time of the 2000 Census, the primary study area did not have large proportions of low income or minority populations. Table 20-1 presents the demographic and income characteristics for the primary study area in comparison with the secondary study area and Manhattan and the City of New York as a whole. In 2000, the population of the primary study area was 12,079. Of the total population, 3,401 or 28.2 percent of persons classified their race in a category other than “White Alone” and their ethnicity as Hispanic—a percentage of minority persons significantly below that of Manhattan (54.2 percent) or New York City as a whole (65.0 percent). The total proportion of persons of Hispanic origin (white or non-white) in the primary study area was, at 5.3 percent, also significantly lower than that of Manhattan or New York City (each at 27 percent). The population of the primary study area was predominantly of working age – it has a lower proportion of children under 18 and adults 65 and over than Manhattan or New York City. The poverty rate was low (6.8 percent in the study area compared to 19.4 percent in Manhattan and 20.8 percent in New York City). The median household income for 1999 was \$106,362, over twice the median income for Manhattan or New York City.

Since the 2000 Census, the population of the primary study area has grown by approximately 4,025 persons or 33 percent based on the construction of new housing units and the return of vacancy rates to pre-September 11 levels (see Chapter 9, “Socioeconomic Conditions”). Most of

⁹ Both the 2000 and 1990 Census of Population and Housing showed population at the WTC Site: 55 persons in 2000, and 234 in 1990. These persons are listed as residing in non-institutionalized group quarters and because their income levels were so low, it is likely that they were individuals receiving assistance from a New York State social service agency with an office at the WTC Site (see Chapter 9, “Socioeconomic Conditions”).

the growth in housing units took place in the North of Project Site, Battery Park City, and Greenwich South Corridor study subareas. While no information is available on the race/ethnicity composition of the population since the 2000 Census, it can be assumed for purposes of this evaluation that the proportion of low income persons in these neighborhoods has not changed. Many of the new units constructed since 2000 are for lease or purchase at market rates. Housing demand and prices have returned to pre-September 11 levels, and the LMDC Residential Grant Program and other emergency funding has been available to area residents of all income levels to cover costs associated with September 11 and its aftermath, as well as to provide financial assistance for the decision to remain in Lower Manhattan.

SECONDARY STUDY AREA

Low income and minority populations are present in higher proportions in the secondary study area, which covers those portions of Lower Manhattan not included in the primary study area (see Table 20-1 and Table 20-2, see also Figure 20-1, illustrating the location of high proportions of minority residents at the Census block level). At the time of the 2000 Census, 46,539 persons lived in this area—over 50 percent in the densely populated mixed-use neighborhood of Chinatown. The high proportion of Asian residents in Chinatown (74 percent) brings the overall proportion of minority residents in the secondary study area to just below 60 percent. The age distribution of the population is similar to that of Manhattan and the city as a whole, with a slightly higher proportion of persons over 65 (14.3 percent in the secondary study area compared with 12.1 percent in Manhattan and 11.7 percent in New York City). The proportion of persons below poverty at 22.6 percent is also somewhat higher in comparison to Manhattan (19.4 percent) and New York City (20.8 percent). The median household income (\$50,432) is higher than that for Manhattan (\$47,030) or New York City as a whole (\$38,293).

Table 20-2 details population and income characteristics for subareas within the secondary study area. With a minority population of 90.5 percent, the Chinatown subarea constitutes the only community of concern for evaluation of environmental justice issues within the primary and secondary study areas.

Since the 2000 Census, the population of the secondary study area is estimated to have increased by 5,430 persons or 11 percent based on the construction of new units and the return of vacancy rates to pre-September 11 levels. Most of this growth occurred in the Brooklyn Bridge to Battery Park City submarket. While, as with the primary study area, no information is available on the race/ethnicity composition of the population since the 2000 Census, it can be assumed for purposes of this evaluation that the proportion of low income persons in these neighborhoods has not changed substantially. It appears that, since the 2000 Census, rents in the Brooklyn Bridge to Battery Park City submarket have continued to rise as they did in the period from 1990 to 2000 (see Chapter 9, “Socioeconomic Conditions”).

20.3.2 FUTURE WITHOUT THE PROPOSED ACTION, CONSTRUCTION PEAK PERIOD 2006—CURRENT CONDITIONS SCENARIO

In this scenario, it is assumed that construction of the Proposed Action would not take place. Instead, the WTC Site would remain commercially underdeveloped, and low income and minority populations and other residents and businesses would not benefit from the substantial economic activity expected to be generated by construction spending (see section 20.3.3, below).

From a cumulative effect perspective, in the future without the Proposed Action, it is assumed

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**Table 20-1
Population and Income Characteristics for Impact Study Areas Comparison of Study Area with Surrounding Region**

	Primary Study Area		Secondary Area		New York County (Manhattan)		New York City	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Race								
White alone	9,087	75.2%	18,508	39.8%	835,298	54.3%	3,576,385	44.7%
Non-Hispanic White	8,678	71.8%	16,121	34.6%	703,462	45.8%	2,801,267	35.0%
Hispanic-White	409	3.4%	2,387	5.1%	131,836	8.6%	775,118	9.7%
Non-white alone ¹	2,992	24.8%	28,031	60.2%	415,728	27.0%	4,431,893	55.3%
Black or African American alone	428	3.5%	3,225	6.9%	233,383	15.2%	2,129,762	26.6%
Asian alone ²	1,983	16.4%	21,656	46.5%	143,382	9.3%	792,477	9.9%
Other ³	581	4.8%	3,150	6.8%	38,963	2.5%	1,509,654	18.9%
Total Population	12,079	100.0%	46,539	100.0%	1,537,198	100.0%	8,008,278	100.0%
Minority Population⁴	3,401	28.2%	30,418	65.4%	833,736	54.2%	5,207,011	65.0%
Hispanic Origin⁵	642	5.3%	4,669	10.0%	418,008	27.2%	2,160,554	27.0%
Age (Years)								
17 years and younger	1,686	14.0%	6,772	14.6%	272,586	17.7%	1,940,269	24.2%
18-64	9,967	82.5%	33,129	71.2%	1,077,963	70.1%	5,130,152	64.1%
65 years and older	426	3.5%	6,638	14.3%	186,649	12.1%	937,857	11.7%
Poverty								
Persons below Poverty	821	6.8%	10,710	22.6%	298,231	19.4%	1,668,938	20.8%
Median Household Income (1999)⁶	\$106,362		\$50,432		\$47,030		\$38,293	

Source: U.S Department of Commerce, Bureau of Census, U.S. Census of Population and Housing, 2000, SF1 and SF3.

Notes:

1. Includes persons of Hispanic origin classifying their race in a category other than "White alone." (see note 5).
2. Includes the census category "Native Hawaiian and Other Pacific Islander Alone."
3. Includes census categories "American Indian and Alaska Native alone," "some other race alone," and "two or more races."
4. The total minority population includes all those who are not non-Hispanic White---those listing race as Black, American Indian and Alaskan Native, Asian, Native Hawaiian, Other Pacific Islander, "some other race alone" and "two or more races," as well as persons of Hispanic origin classifying their race as White.
5. The Hispanic Origin category consists of those respondents who classified themselves in one of the several Hispanic Origin categories on the Census form. Persons in this ethnic classification may be of any race.
6. The median household income for 1999 was calculated by taking the weighted average of the median incomes of all the census tracts in a given study area.

**Table 20-2
Population and Income Characteristics for Subareas in Secondary Study Area**

	Tribeca		Civic Center ¹		Chinatown		Brooklyn Bridge to Battery Park	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Race								
White alone	7,347	83.5%	716	34.9%	3,591	14.0%	6,854	68.5%
Non-Hispanic White	6,953	79.0%	284	13.8%	2,434	9.5%	6,450	64.5%
Hispanic-White	394	4.5%	432	21.1%	1,157	4.5%	404	4.0%
Non-white alone ²	1,450	16.5%	1,335	65.1%	22,100	86.0%	3,146	31.5%
Black or African American alone	448	5.1%	931	45.4%	1,260	4.9%	586	5.9%
Asian alone ³	608	6.9%	172	8.4%	19,059	74.2%	1,816	18.2%
Other ⁴	394	4.5%	232	11.3%	1,780	6.9%	744	7.4%
Total Population	8,797	100.0%	2,051	100.0%	25,691	100.0%	10,000	100.0%
Minority Population⁵	1,844	21.0%	1,767	86.2%	23,257	90.5%	3,550	35.5%
Hispanic Origin⁶	579	6.6%	4,669	10.0%	2,621	10.2%	713	7.1%
Poverty								
Persons below Poverty	387	4.4%	N/A	37.5%	8,581	33.4%	1,040	10.4%
Median Household Income (1999) ⁷	\$97,228		\$8,392		\$23,867		\$57,525	

Source: U.S Department of Commerce, Bureau of Census, U.S. Census of Population and Housing, 2000, SF1 and SF3.

Notes:

1. Poverty and household income data for the Civic Center subarea are not comparable to the population statistics. It appears as though the 100% population count for this area includes persons listing the New York State Children and Family Service office as their home address and persons institutionalized in city correctional facilities (see Chapter 9, "Socioeconomic Conditions").
2. Includes persons of Hispanic origin classifying their race in a category other than "White alone." (see note 6).
3. Includes the census category "Native Hawaiian and Other Pacific Islander Alone."
4. Includes census categories "American Indian and Alaska Native alone," "some other race alone," and "two or more races."
5. The total minority population includes all those who are not non-Hispanic White--those listing race as Black, American Indian and Alaskan Native, Asian, Native Hawaiian, Other Pacific Islander, "some other race alone" and "two or more races," as well as persons of Hispanic origin classifying their race as White.
6. The Hispanic Origin category consists of those respondents who classified themselves in one of the several Hispanic Origin categories on the Census form. Persons in this ethnic classification may be of any race.
7. The median household income for 1999 was calculated by taking the weighted average of the median incomes of all the census tracts in a given study area.

that other construction activities will be taking place at the Project Site (permanent WTC PATH Terminal) and in other locations in Lower Manhattan (Fulton Street Transit Center, South Ferry Terminal, Route 9A Reconstruction Project, area street reconstruction; see Chapter 21, "Construction Impacts," for a more detailed discussion of anticipated construction activities and probable impacts). It is anticipated that these construction activities would produce localized short-term impacts, especially during their peak construction periods, but it is not anticipated that these activities would result in disproportionately high and adverse impacts to communities of concern given the distance between these activities and concentrations of low income and minority residents, and the nature of the impacts (see section 20.3.3, below). The construction spending and employment associated with these activities would also be expected to produce regional and local economic benefits during this period.

**20.3.3 PROBABLE IMPACTS OF THE PROPOSED ACTION,
CONSTRUCTION PERIOD PEAK PERIOD 2006—CURRENT
CONDITIONS SCENARIO**

This scenario compares conditions during the construction period to current conditions at the Project Site. In this scenario, a wide range of construction activities related to the Proposed Action would be taking place on the Project Site. These activities are described in detail in Chapter 21, “Construction Impacts,” which outlines the following general groupings of probable impacts that may be significant for communities of concern: human health and quality-of-life impacts at the Project Site and in the primary study area; and human health and quality-of-life impacts related to construction truck traffic.

PROJECT SITE AND PRIMARY STUDY AREA

The Proposed Action is anticipated to produce temporary localized adverse impacts at the Project Site and in the primary study area related to construction activity (see Chapter 21, “Construction Impacts”) including:

- *Pedestrian and Vehicular Traffic*: Temporary closing of sidewalks, roadway travel lanes, and streets to accommodate construction vehicles, staging, and construction activity would alter pedestrian and traffic flows in the vicinity of the Project Site. Pedestrian flow along Vesey Street and Liberty Street and access to the temporary WTC PATH station and MTA/NYCT subway stations would be maintained throughout the duration of construction. A Maintenance and Protection of Traffic Plan will be developed to preserve flows and maintain the separation of pedestrian and vehicular traffic.
- *Air Quality*: Direct emissions from demolition and construction site activity including fugitive dust and on-site diesel equipment are anticipated as are mobile source emissions of trucks and worker vehicles at nearby sensitive receptors and congested locations and from potential long-term traffic diversions.
- *Noise and Vibration*: Construction activities would be expected, at times, to produce noticeable and substantial increases in noise and vibration levels from stationary sources. The times and locations where these increased noise conditions would occur would vary depending on the location of construction, the equipment and methods employed, and distance between the noise source and receptor. Increases in noise level from mobile sources are not expected to increase substantially from existing conditions with the exception of sites on Liberty Street and Barclay Street.

Although construction of the Proposed Action is expected to produce temporary localized impacts as described above, these impacts would not be borne disproportionately by low income or minority populations. These impacts would occur on the Project Site, an area with no population, or in portions of the primary study area in close proximity to the Project Site, an area with relatively low proportions of low income and minority populations. Construction-related adverse impacts would be of limited duration. These activities would also be expected to result in an increase in local and regional economic activity and other benefits (see below), one of the public purposes and needs for the Proposed Action.

IMPACTS RELATED TO CONSTRUCTION TRUCK TRAFFIC

To accommodate the transport of construction materials to the site, and removal of materials from the site, routes for construction truck traffic have been identified (see Chapter 21,

“Construction Impacts”). To evaluate the potential for impacts to low income and minority populations related to this construction traffic, an analysis of the demographic and economic conditions in a supplementary study area surrounding these truck routes was conducted. The supplementary study area is comprised of Census blocks directly adjacent to streets in Manhattan that would be used by construction-related truck traffic.

Profile of Areas in Vicinity of Truck Routes

Figure 20-2 depicts the proportion of minority persons in census blocks immediately adjacent to the routes to be used by trucks servicing the Project Site. The map shows that the truck routes follow major thoroughfares designated by New York City Department of Transportation (NYCDOT) as New York City Truck Routes, and are limited to only those thoroughfares that allow for the most direct truck access from the Project Site to major river-crossing points including the Holland Tunnel, Brooklyn Battery Tunnel, and the Manhattan and Williamsburg Bridges. These truck routes pass mostly through neighborhoods with proportions of minority populations at or below the proportion for Manhattan or New York City as a whole. The exception is the portion of the route traversing Canal, Lafayette, and Kenmare/Delancey Streets in Chinatown, an area where the proportion of minority, primarily Asian, residents is higher than that for Manhattan or New York City as a whole.

Overall, the proportion of minority persons in blocks adjacent to the truck routes (60 percent) is lower than the proportion of minority residents in Lower Manhattan as a whole (the combined primary and secondary study areas—63 percent). This indicates that the location of the truck routes is not disproportionate in relation to its proximity to minority populations in Lower Manhattan. Similarly, in terms of proximity to low income populations, truck routes traverse neighborhoods with low levels of poverty and high levels of median incomes (primary study area including Greenwich South, Battery Park City and North of WTC; and Tribeca) as well as areas with relatively higher poverty levels and low median incomes (Chinatown subarea).

From a cumulative perspective, other construction projects in Lower Manhattan are expected to require additional routes for use by construction trucks (See Chapter 21, “Construction Impacts”). Figure 20-3 illustrates the truck routes required for all major projects anticipated for Lower Manhattan during the term of construction at the Project Site. As with the WTC route, truck routes required for other projects pass through neighborhoods reflecting a variety of demographic and economic conditions. An additional route for the Fulton Street Transit Center and Route 9A Reconstruction projects will pass through Chinatown on Pearl Street/St. James Place/Bowery. Overall, the proportion of minority persons in blocks adjacent to the truck routes required for all projects (65 percent) is only slightly above the proportion for Lower Manhattan as a whole (63 percent).

Effects on Communities of Concern

Construction truck traffic is not anticipated to have a disproportionate impact on minority and low income communities of concern. The volumes anticipated for construction truck traffic along these routes will not contribute significantly to overall truck or traffic volumes or create significant congestion, air, or noise impacts (see Chapter 21, “Construction Impacts”).

Trucks will be routed along thoroughfares appropriate for their use and designated by NYCDOT as New York City Truck Routes, and allowing for the most efficient entry and exit from Manhattan. The income and demographic profile of populations along truck routes is similar to that of Lower Manhattan as a whole. In addition, the Chinatown Traffic and Transportation Study, recently commissioned by LMDC, will survey pedestrian and automotive traffic issues,

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congestion, parking, accessibility, and related quality-of-life concerns in Chinatown with the aim of improving the traffic flow and related conditions in Chinatown, as well as street connections with surrounding areas of Lower Manhattan.

REGIONAL ECONOMIC BENEFITS

Due to the magnitude of the reconstruction effort and the construction spending required, the Proposed Action is expected to produce significant positive impacts to local and regional economies, benefiting a wide range of residents and businesses including those located in communities of concern (see Chapter 9, “Socioeconomic Conditions”).

Initiatives to promote the involvement of minority-owned, women-owned, and disadvantaged business enterprises (MBE/WBE/DBE), low income residents, and other members of diverse communities are an aspect in the development of the Project Site. MBE/WBE/DBE requirements for involvement of such firms will apply to contracts administered by the Port Authority and LMDC. In addition, Section 3 of the Housing and Urban Development (HUD) Act of 1968 will also apply to activities funded through HUD. Section 3 specifies that employment and economic opportunities generated by federal housing assistance must be allocated to the “greatest extent feasible,” toward low and very low income persons.

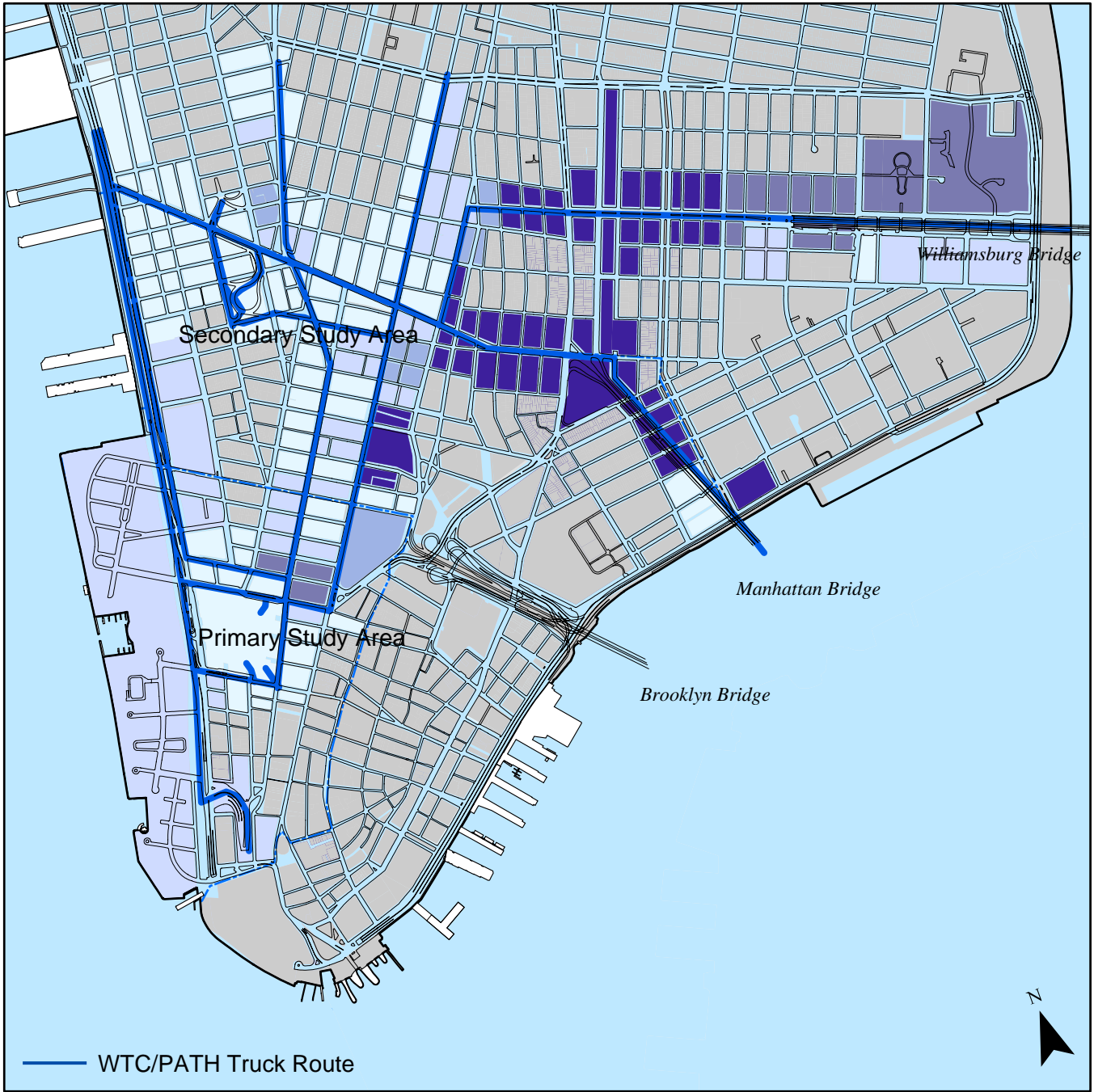
Locally, retail and food service businesses in the primary study area near the Project Site are likely to benefit from the patronage of the substantial construction workforce.

Throughout the construction period of the Proposed Action, other construction projects will be occurring in Lower Manhattan. The total spending and employment associated with these projects will produce economic benefits throughout New York City and the region, adding to the cumulative effect of the economic activity associated with the Proposed Action.

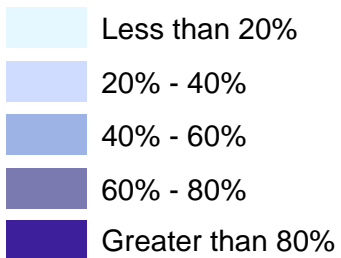
OTHER CUMULATIVE BENEFITS

As part of its mission to rebuild and revitalize Lower Manhattan, LMDC is administering several grant programs that will benefit low income and minority residents through the construction period. These activities are funded through a \$2 billion Community Development Block Grant (CDBG) from HUD, and are designed explicitly to ensure that all areas of Lower Manhattan share in the revitalization and recovery process. These benefits to communities of concern are part of the overall cumulative conditions in Lower Manhattan and will work in part to offset any cumulative adverse impacts related to construction and operation of the Proposed Action and other activities in Lower Manhattan. Activities of particular relevance to low income and minority communities include:

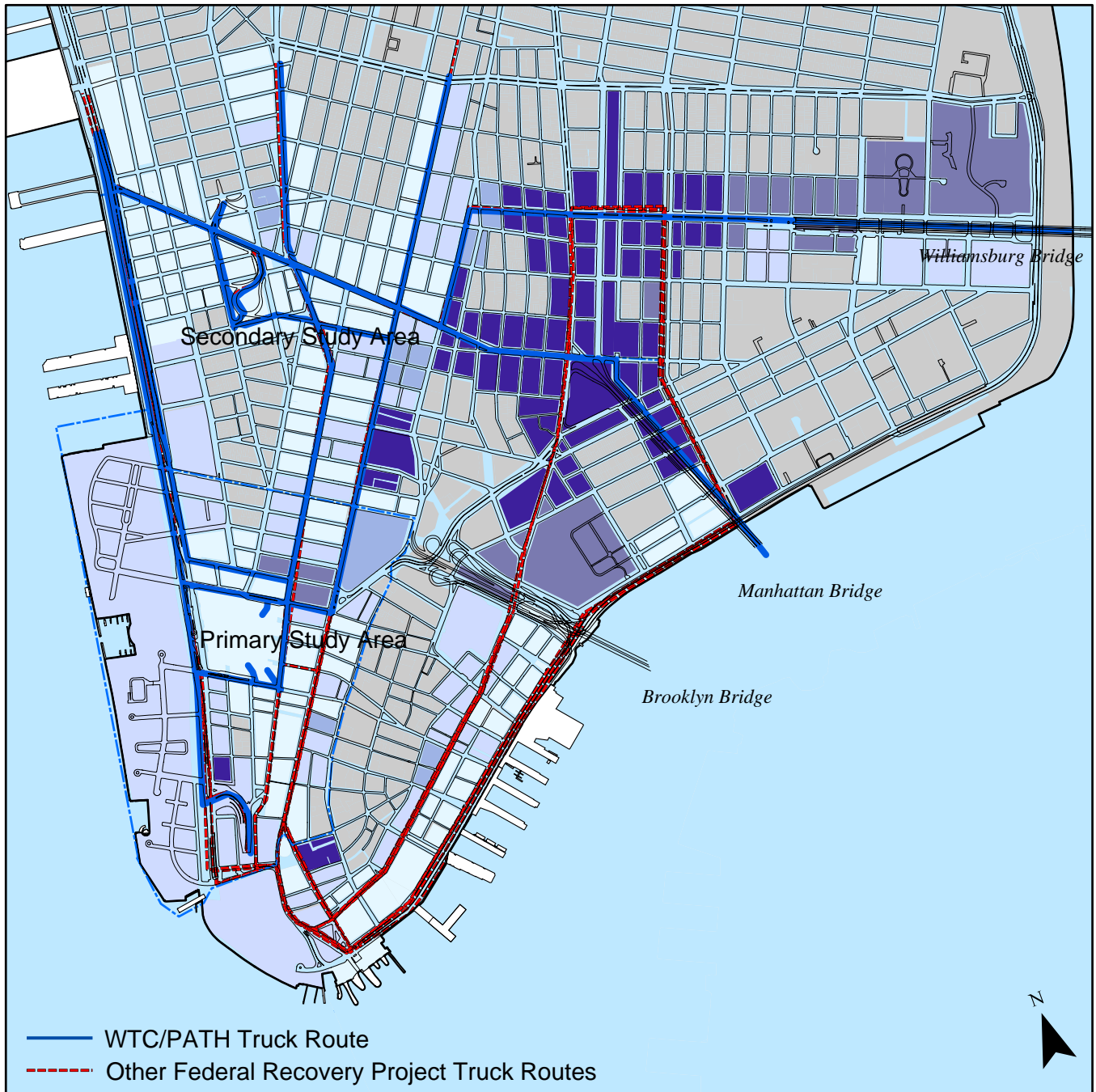
- *Residential Grant Program*—Approximately \$230 million in grants to maintain and encourage residential activity in Lower Manhattan in the aftermath of September 11. The program area fans out from the WTC Site and includes most of Chinatown, Little Italy, and the Lower East Side, covering and extending beyond the primary and secondary study areas.
- *Affordable Housing*—At the Listening to the City events sponsored by LMDC and the Port Authority to discuss the six preliminary design concepts for the Project Site, 55 percent of participants indicated that more housing for all income levels was the most important priority downtown. More residents would create a 24-hour neighborhood and attract businesses, while affordable units would further diversify the population. LMDC proposes to allocate \$50 million for an affordable housing subsidy program that will be administered by the New York City Housing Development Corporation (HDC). The program will require that 300 rental units developed in city-owned Site 5B (located between Warren Street, Park



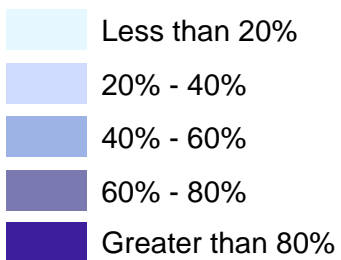
Share of Minority Population, Census Block, 2000



Share of Minority Residents Residing in Census Blocks Adjacent to WTC Truck Route



Share of Minority Population, Census Block, 2000



Share of Minority Residents Residing in Census Blocks Adjacent to all Truck Routes

Place, West Street, and Greenwich Street) be affordable to moderate- and middle-income households that earn between 80-135 percent of area median income (AMI). To accommodate working families, at least 75 percent of the affordable units will be two bedrooms or larger. The project will remain affordable for 20 years to moderate- and middle-income households.

- *Employment Training Assistance Program*—Job training and workforce development programs for current and prospective employees of businesses south of 14th Street.
- *Small Firm Attraction and Retention Grant Program*—Grants to firms employing less than 200 employees in a location south of Canal Street.
- *History and Heritage Downtown*—Grant to facilitate a joint initiative of museums whose mission is history and heritage, located in Lower Manhattan, including but not limited to: the Eldridge Street Project, Inc.; Fraunces Tavern Museum; Museum of Chinese in the Americas; Museum of Financial History; Museum of Jewish Heritage—A Living Memorial to the Holocaust; Smithsonian National Museum of the American Indian; New York City Police Museum; South Street Seaport Museum; the Skyscraper Museum; and the Statue of Liberty National Monument and Ellis Island. The project involves a marketing initiative that will promote downtown as a cultural destination.
- *Chinatown Tourism and Marketing Initiative*—Communications and marketing initiative to encourage regional, national, and international tourism to Chinatown.
- *Rehabilitation/Reconstruction of Neighborhood Parks and Open Spaces*—Improvements to small parks, open spaces, and athletic facilities covering all portions of Lower Manhattan with several projects in Chinatown and the Lower East Side.

20.3.4 FUTURE WITHOUT THE PROPOSED ACTION 2009—CURRENT CONDITIONS SCENARIO

In this scenario, it is assumed that, without the Proposed Action, the WTC Site will remain largely undeveloped at grade level with the exception of the permanent WTC PATH Terminal, with elements above and below grade, having replaced the temporary WTC PATH station.

Both residential and non-residential populations are expected to increase by 2009 due to a number of development projects (see Chapter 3, “Land Use and Public Policy”), many of which are funded by Liberty Bonds and other initiatives that were put into place as a result of the events of September 11. By 2009, the residential population is expected to rise by 10,006 to 26,729 in the primary study area and 7,183 to 60,004 in the secondary study area. The non-residential employment population is expected to rise by 14,236 to 368,989 for Lower Manhattan (see Chapter 9, “Socioeconomic Conditions”). The composition and size of low income and minority populations cannot be known. For purposes of this environmental justice analysis, patterns observed in the 2000 Census baseline condition are used as the reference point for future conditions with and without the Proposed Action.

Communities of concern will not be subject to disproportionately high and adverse impacts in 2009 without the Proposed Action compared to 2003 current conditions. Under this scenario, however, there would be little economic activity at the site. Employment and economic conditions in Lower Manhattan as a whole would have improved over 2003 as off-site office buildings damaged on September 11 are rehabilitated and additional residential and commercial development becomes operational (see Chapter 9, “Socioeconomic Conditions”). Overall,

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however, with the WTC Site largely vacant, economic activity will remain substantially below pre-September 11 levels and low income and minority communities and other residents and businesses will not benefit from job opportunities or indirect and induced impacts associated with the return of economic activity to the site that would result from the Proposed Action.

20.3.5 PROBABLE IMPACTS OF THE PROPOSED ACTION 2009—CURRENT CONDITIONS SCENARIO

In 2009, the Proposed Action would provide 2.6 million square feet of office space in Freedom Tower, up to 1 million square feet of retail space and cultural facilities, as well as the Memorial and related museum and new open spaces. Fulton and Greenwich Streets would be extended through the Project Site. Washington Street between Cedar and Liberty Streets would be closed, but Cedar Street between Washington and Greenwich Streets would be reopened.

During this initial period of operation of elements of the Proposed Action, it is not anticipated that there will be disproportionately high or adverse impacts to low income and minority populations (related to the Proposed Action or cumulative) when compared to existing 2003 conditions, as outlined below:

- A review of capacity and access to community facilities and services and open space indicates no significant impacts for the primary or secondary study areas (see Chapter 8 “Community Facilities,” and Chapter 6, “Open Space”).
- The Proposed Action is expected to promote gains in economic vitality and increase job opportunities, benefiting a wide range of residents and businesses, including low income and minority populations (see Chapter 9, “Socioeconomic Conditions”). Visitor spending and indirect and induced multiplier effects are expected to produce additional benefits to New York City and the region. Jobs created through operation of the Proposed Action during this period are expected to encompass a wide range of skills and occupations in office, retail, and government agency and cultural facilities employment.
- The Proposed Action would enhance community character in the primary study area and Lower Manhattan in general as the blighted conditions of the site are improved with tower, streetscape, open space, and memorial/cultural elements. These would create a critical mass of mixed-use development that would help restore Lower Manhattan as a vibrant locus of activity that attracts and retains businesses, residents, and visitors. These new uses would be consistent with and supportive of existing and future land uses and community character (see Chapter 3, “Land Use and Public Policy”).
- The Proposed Action would not result in significant disproportionate adverse human health impacts to low income and minority populations related to the provision of infrastructure. When compared to current conditions, the Proposed Action would result in substantial increases in water usage, sanitary sewage generation, solid waste generation, and energy use as development occurs through 2009 on the underdeveloped WTC Site. The infrastructure needs of the fully developed Project Site were met, however, prior to September 11 with existing waste disposal, energy generation, and other infrastructure facilities throughout New York City and beyond, which would again be sufficient to meet the needs of the Proposed Action as development is reintroduced to the Project Site. During this period, the level of office and retail use would be substantially lower than pre-September 11 conditions resulting in lower needs. Moreover, Freedom Tower would generate some of its own

electricity through its wind turbines. No new capacity, therefore, would be necessitated as a result of the Proposed Action in 2009.

- Populations vulnerable to indirect displacement most often include low income or minority residents in housing not subject to rent controls or stabilization, and small businesses. Indirect displacement can result from a change in community character or composition, secondary development, housing and commercial space prices, or demand and supply of various retail/service segments. A review of the potential for indirect displacements of residents and businesses in the primary and secondary study areas finds no significant impacts of this type in 2009 (see Chapter 9, “Socioeconomic Conditions”).

20.3.6 FUTURE WITHOUT THE PROPOSED ACTION 2015—CURRENT CONDITIONS SCENARIO

In this scenario, it is assumed that, without the Proposed Action, the WTC Site will remain largely undeveloped at grade level with the exception of the permanent WTC PATH Terminal replacing the temporary station, with elements above and below-grade, and that the Adjacent Sites would be developed independently by the respective owners.

Both residential and non-residential populations are expected to increase by 2015 due to a number of development projects (see Chapter 3, “Land Use and Public Policy”). The residential population is expected to rise by 1,257 to 27,986 in the primary study area and by 3,558 to 63,562 in the secondary study area. The non-residential employment population is expected to rise by 5.5 percent from 2009 to 2015, totaling 389,466 for Lower Manhattan (see Chapter 9, “Socioeconomic Conditions”). The composition and size of low income and minority populations cannot be known. For purposes of this environmental justice analysis, patterns observed in the 2000 Census baseline condition are used as the reference point for future conditions with and without the Proposed Action.

Low income and minority populations will not be subject to disproportionately high and adverse impacts in 2015 without the Proposed Action compared to 2003 current conditions. As with 2009 conditions, under this scenario there would be little economic activity at the site. Employment and economic conditions in Lower Manhattan as a whole would have improved as the additional residential and commercial activity described above continues the trend of Lower Manhattan’s transformation into a 24-hour mixed-use community. Overall, however, with the WTC Site vacant, economic activity will remain substantially below pre-September 11 levels and low income and minority communities, and other residents and businesses, will not benefit from job opportunities or indirect and induced impacts associated with the return of economic activity to the site.

20.3.7 PROBABLE IMPACTS OF THE PROPOSED ACTION 2015—CURRENT CONDITIONS SCENARIO

By 2015, the Proposed Action is expected to reach full build-out with 10 million square feet of office space and a conference center and hotel facilities, as well as up to 1 million square feet of retail space, the Memorial, a museum and other cultural facilities, transportation improvements, and new open space resources completed in 2009. The additional office space, hotel, and their associated populations would support and benefit the retail and cultural uses developed in the initial phase of the Proposed Action.

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As with conditions in 2009, the completion of the Proposed Action is not anticipated to result in disproportionately high or adverse impacts to low income and minority communities (related to the Proposed Action or cumulative) when compared to existing 2003 conditions, as outlined below:

- A review of capacity and access to community facilities and services and open space indicates no significant impacts for the primary or secondary Study areas (see Chapter 8, “Community Facilities,” and Chapter 6, “Open Space”).
- The Proposed Action is expected to promote gains in economic vitality and increase job opportunities, benefiting a wide range of residents and businesses, including those located within communities of concern. Visitor spending and indirect and induced multiplier effects are expected to produce additional benefits to New York City and the region. Jobs created on site during the operation of the Proposed Action are expected to encompass a wide range of skills and occupations in office, retail, government agency, and cultural facilities employment. The increase in office workers associated with the new office space would benefit area businesses, particularly restaurants and shops, well beyond the primary study area (see Chapter 9, “Socioeconomic Conditions”).
- The Proposed Action would enhance community character in the primary study area and Lower Manhattan in general as the blighted conditions of the vacant site are improved with tower, streetscape, open space, and memorial/cultural elements. These would create a critical mass of mixed-use development that would help restore Lower Manhattan as a vibrant CBD which attracts and retains businesses, residents, and visitors. These new uses would be consistent with and supportive of existing and future land uses and community character (see Chapter 3, “Land Use and Public Policy”).
- The Proposed Action would not result in significant human health impacts to low income and minority populations related to the provision of infrastructure. When compared to current conditions, the Proposed Action would result in substantial increases for water supply, sanitary sewage generation, solid waste, and energy as development occurs through 2015 on the underdeveloped WTC Site. The infrastructure needs of the fully developed WTC Site were met, however, prior to September 11 with existing waste disposal, energy generation, and other infrastructure facilities throughout New York City. These facilities would again be utilized as redevelopment proceeds on the Project Site. Any additional off-site facilities proposed to meet future needs of the city would be subject to individual environmental review and permitting as appropriate. The Proposed Action in 2015 may result in a decrease in demand for infrastructure due to the commitment of LMDC and the Port Authority to the *Sustainable Design Guidelines*. (The current draft is included as Appendix A.) When finalized and implemented, the *Sustainable Design Guidelines* could result in significant reductions in water usage, sewage generation, energy use and increases in wastewater and stormwater usage, recycling and renewable materials usage. Moreover, Freedom Tower would generate some of its own electricity through its wind turbines. No new capacity, therefore, would be necessitated as a result of the Proposed Action.
- Populations vulnerable to indirect displacement most often include low income or minority residents in housing not subject to rent controls or stabilization, and small businesses. Indirect displacement can result from a change in community character or composition, secondary development, housing or commercial space prices, or demand and supply of various retail/service segments. A review of the potential for indirect displacements of

residents and businesses in the primary and secondary study areas finds no significant impacts of this type in 2015 (see Chapter 9, “Socioeconomic Conditions”).

20.4 PRE-SEPTEMBER 11 SCENARIO

This section describes pre-September 11 conditions for communities of concern and impacts affecting these communities in future years with and without the Proposed Action. With regard to environmental justice considerations, most conditions and impacts in the Pre-September 11 Scenario are identical to the Current Conditions Scenario. Differences between the scenarios are noted below.

20.4.1 EXISTING CONDITIONS 2003—PRE-SEPTEMBER 11 SCENARIO

For the Pre-September 11 Scenario, baseline conditions are derived from the 2000 Census as described above in section 20.3.1.

20.4.2 PEAK CONSTRUCTION PERIOD 2006—PRE-SEPTEMBER 11 SCENARIO

Baseline conditions and impacts during the construction period are identical under the Pre-September 11 Scenario and the Current Conditions Scenario. See section 20.3.2, above.

20.4.3 FUTURE WITHOUT THE PROPOSED ACTION 2009—PRE-SEPTEMBER 11 SCENARIO

In comparison to pre-September 11 conditions, the residential and daytime employment populations in the primary and secondary study areas will have grown as new projects and residential conversions are completed. Both residential and non-residential populations are expected to increase by 2009 due to a number of development projects (see Chapter 3, “Land Use and Public Policy”), many of which are funded by Liberty Bonds and other initiatives that were put into place as a result of the events of September 11. By 2009, the residential population is expected to rise by 10,006 to 26,729 in the primary study area and 7,183 to 60,004 in the secondary study area. The non-residential employment population is expected to rise by 14,236 to 368,989 for Lower Manhattan (see Chapter 9, “Socioeconomic Conditions”). The composition and size of low income and minority populations cannot be known. For purposes of this environmental justice analysis, patterns observed in the 2000 Census baseline condition are used as the reference point for future conditions with and without the Proposed Action.

20.4.4 PROBABLE IMPACTS OF THE PROPOSED ACTION 2009—PRE-SEPTEMBER 11 SCENARIO

Completion of the first phase of the Proposed Action would bring the community closer to recovering the economic activity and vibrancy present prior to September 11, 2001 (see section 20.3.4, above). The level of economic activity on the site in 2009, however, would remain substantially below pre-September 11 levels. This continued loss of economic and social activity may affect low income and minority populations to a greater degree than less vulnerable groups in the population.

The Proposed Action would result in changes to neighborhood character both at the Project Site and throughout the study areas. The Proposed Action would strengthen and be a key element in the revitalization of Lower Manhattan by introducing a range of active and attractive uses and

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amenities, including new cultural uses which did not exist at the Project Site prior to September 11. The WTC Site would change from a commercial superblock with a large public plaza to a mixed-use development divided at-grade into four separate blocks with a Memorial and museum and office, cultural, retail, and open space uses. These changes would have a beneficial effect on neighborhood character at the WTC Site and throughout the study area.

In 2009, the Proposed Action is anticipated to result in lower infrastructure demand than prior to September 11, and no significant adverse effects (see Chapter 12, “Infrastructure”). During this period, the level of office and retail use would be substantially lower than pre-September 11 conditions resulting in less water usage, sewerage generation, stormwater runoff, solid waste generation, and energy usage. There would be no significant human health or other impacts to low income and minority communities related to energy generation, waste disposal or other infrastructure needs.

20.4.5 FUTURE WITHOUT THE PROPOSED ACTION 2015— PRE-SEPTEMBER 11 SCENARIO

In comparison to pre-September 11 conditions, the residential and daytime employment populations in the primary and secondary study area will have grown as new projects and conversions are completed. (see Chapter 3, “Land Use and Public Policy”). The residential population is expected to rise by 1,257 to 27,986 in the primary study area and by 3,558 to 63,562 in the secondary study area. The non-residential employment population is expected to rise by 5.5 percent from 2009 to 2015, totaling 389,466 for Lower Manhattan (see Chapter 9, “Socioeconomic Conditions”). The composition and size of low income and minority populations cannot be known. For purposes of this environmental justice analysis, patterns observed in the 2000 Census baseline condition are used as the reference point for future conditions with and without the Proposed Action.

20.4.6 PROBABLE IMPACTS OF THE PROPOSED ACTION 2015— PRE-SEPTEMBER 11 SCENARIO

Full build-out of the Proposed Action in 2015 would produce conditions for low income and minority populations much the same as those described under the Current Conditions scenario (see section 20.3.6, above). No disproportionately high or adverse impacts on communities of concern are anticipated, and economic and social activities at the Project Site and surrounding areas would have begun to return to pre-September 11 levels.

The Proposed Action, compared with pre-September 11 conditions, would result in a number of beneficial changes to neighborhood character. By replacing many of the uses that existed before September 11, adding new cultural uses, and creating new open spaces, the Proposed Action would enliven the Project Site and surrounding area.

In 2015, the Proposed Action is anticipated to result in an infrastructure demand similar to that required prior to September 11, with no significant adverse effects (see Chapter 12, “Infrastructure,”). The Proposed Action in 2015 may result in a decrease in infrastructure usage, as compared to the Pre-September 11 Scenario, through the inclusion of *Sustainable Design Guidelines* in the Proposed Action. When successfully implemented, among other things, the *Sustainable Design Guidelines* could result in reductions in water usage, sewerage generation, solid waste generation, and energy usage. Moreover, Freedom Tower would generate some of its own electricity through its wind turbines. *