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Chapter 7: Open Space and Recreational Facilities

A. INTRODUCTION

The Proposed Action would integrate many new acres of open space into the urban fabric of the existing Hudson Yards area in order to accommodate new workers, visitors, and residents. Proposed open spaces include: a new Midblock Park and Boulevard System in the Project Area between Tenth and Eleventh Avenues; a full-block passive open space between West 33rd and West 34th Streets, west of Eleventh Avenue; an open space located on the eastern portion of Caemmerer Yard; a full-block active open space between West 29th and West 30th Streets, west of Eleventh Avenue (Block 675); and a new passive open space on the roof of the Convention Center. These new open spaces would create an extensive new open space network that would connect to Hudson River Park, the potential High Line open space, and the Clinton and Chelsea neighborhoods to the north and south. This chapter examines the extent and character of existing resources and population, and addresses the effects of the Proposed Action on the area's open spaces.

1. Issues

Under the New York City Environmental Quality Review (CEQR) criteria, an analysis of open space is conducted to determine whether the Proposed Action would have either a direct impact resulting in the elimination or alteration of open space or an indirect impact resulting from overtaxing available open space. According to the *CEQR Technical Manual*, an initial quantitative open space assessment may be useful to determine if a detailed open space analysis is necessary, or whether the open space assessment can be targeted to a particular user group. This initial assessment calculates the existing open space ratio by determining the existing residential and non-residential populations and the total open space in the study area. It then compares that ratio to the open space ratio in the Future With the Proposed Action. If the change in the open space ratio would approach or exceed 5 percent or, as in this case, the study area exhibits a low open space ratio, indicating a shortfall of open spaces, a detailed analysis is warranted. In addition to being located in an area with an open space deficit, and adding substantial new residential and non-residential populations, the Proposed Action would directly displace the 0.76-acre Jacob Javits Convention Center Plaza (Javits Plaza). Therefore, a detailed open space assessment has been conducted.

The Proposed Action would require the construction of six new layup tracks at Corona Yard in Queens, where No. 7 Subway cars are stored and maintained, in order to accommodate the additional subway cars needed to provide service to the Hudson Yards area in the Future With the Proposed Action. Because this proposed capacity expansion would not introduce any new residential populations or generate significant new employment, no analysis of open space impacts in this area is required.

2. Principal Conclusions

The Proposed Action would not result in significant adverse impacts on open space and recreational facilities. Although the Proposed Action would introduce large new residential and non-residential populations, it would also add over 23 acres of new active and passive open spaces. The Existing and Future Without the Proposed Action ratios of open space to user populations fall below the City's open space guidelines (Table 7-1). In both the 2010 and 2025 analysis years in the Future With the Proposed Action, most open space ratios would increase (with the exception of the active open space ratio per 1,000 residents in 2025), although all open space ratios, with the exception of passive open space for the residential population, would remain below the City's open space guidelines.

TABLE 7-1
SUMMARY TABLE, 2010 AND 2025

Study Area	Ratio	Existing Ratio	Future Without the Proposed Action Ratio	Future With the Proposed Action Ratio
Without High Line, 2010				
Non-Residential Study Area	Passive/Non-Residents	0.073	0.088	0.126
	Passive/Total Population	0.057	0.068	0.101
Residential Study Area	Total/Residents	0.558	0.594	0.768
	Passive/Residents	0.398	0.396	0.534
	Active/Residents	0.160	0.198	0.234
	Passive Total Population	0.068	0.073	0.092
With High Line, 2010				
Non-Residential Study Area	Passive/Non-Residents	0.073	0.115	0.149
	Passive/Total Population	0.057	0.088	0.118
Residential Study Area	Total/Residents	0.558	0.642	0.811
	Passive/Residents	0.398	0.449	0.583
	Active/Residents	0.160	0.193	0.228
	Passive Total Population	0.068	0.084	0.102
Without High Line, 2025				
Non-Residential Study Area	Passive/Non-Residents	0.073	0.085	0.099
	Passive/Total Population	0.057	0.065	0.081
Residential Study Area	Total/Residents	0.558	0.561	0.646
	Passive/Residents	0.398	0.374	0.466
	Active/Residents	0.160	0.187	0.180
	Passive Total Population	0.068	0.071	0.078
With High Line, 2025				
Non-Residential Study Area	Passive/Non-Residents	0.073	0.111	0.114
	Passive/Total Population	0.057	0.084	0.092
Residential Study Area	Total/Residents	0.558	0.602	0.678
	Passive/Residents	0.398	0.421	0.502
	Active/Residents	0.160	0.181	0.176
	Passive Total Population	0.068	0.081	0.086

Because the proposed new open spaces would provide more available open space to users than is currently available, and would establish a greater connection between existing and future open spaces in the area, the Proposed Action would not result in a significant adverse impact on open space.

The Proposed Action is expected to add approximately 24 acres of open space to the study area. Unlike the existing and sparsely used Javits Plaza (which is to be eliminated with the Proposed Action), the new open space created by the Proposed Action would provide greater accessibility and connectivity to existing and future open spaces in the study area, as well as communities to the north and south of the Project Area.

B. METHODOLOGY

The methodology for determining potential impacts on open space resources is detailed in the *CEQR Technical Manual*. As outlined in the manual, current and proposed residential and non-residential populations must be studied. Additionally, existing open space and recreational facilities must be inventoried in order to determine the potential impacts of the Proposed Action.

This analysis adheres to the definition of open space set forth in the *CEQR Technical Manual*. According to the manual, open space is characterized by being publicly accessible; by being designated for leisure, play, or sport; or by being set aside for the protection and enhancement of the natural environment.

As described in Chapter 2, "Description of the Proposed Action," the reasonable worst-case development scenario associated with the proposed rezoning includes a scenario in which Madison Square Garden (MSG) relocates and a scenario in which MSG remains at its present site. Because the scenario in which MSG would not relocate would result in a higher number of new residential units in 2010, and therefore a large residential population, the open space analysis conservatively assumes MSG would not relocate.

As described in Chapter 3, "Analytical Framework," the Proposed Action assumes expansion of the Convention Center north to West 42nd Street by 2010, with 5 acres of rooftop publicly accessible open space. However, the full expansion of the Convention Center would not be complete in 2010. The building would be extended northward to West 40th Street and contain approximately 2 acres of publicly accessible open space on the roof. If this were the case, the complete expansion would occur by 2025, at which time the full 5 acres of rooftop public open space would be available. The open space analysis considers the latter, more conservative scenario in which the Convention Center Expansion would not be complete by 2010 and only 2 acres of rooftop public open space would be available in 2010. The open space provided on the roof of the expanded Convention Center would include passive open space amenities.

1. Open Space Study Areas

The Project Area for the Proposed Action includes the area of the proposed rezoning and the sites of the proposed Multi-Use Facility and the expanded Convention Center. The first step in assessing potential impacts on publicly accessible open spaces serving the Project Area is to establish appropriate "study areas." As described below, study areas differ for non-residential populations and residential populations, because their use of publicly accessible open space differs.

a) Non-Residential Study Area

As set forth in the *CEQR Technical Manual*, workers typically use passive open spaces within walking distance of their workplaces, i.e., roughly ¼-mile. As recommended in the manual, the "non-residential" open space study area comprises all census tracts that have 50 percent of their area located within a ¼-mile of the Project Area. All open spaces, as well as all residents and employees within census tracts that fall at least 50 percent within the ¼-mile radius, are included in the study area for non-residents (Figure 7-1).

b) Residential Study Area

Residents are more likely to travel farther to reach parks and recreational facilities, and they use both passive and active open spaces. Residents will typically walk up to ½-mile for recreational spaces. While they may also visit certain regional parks (like Central Park), such open spaces are not included in the quantitative analysis but can be described qualitatively. Therefore, the open space study area includes all census tracts that have at least 50 percent of their area located within a ½-mile of the Project Area. All open spaces and the residents and employees of all census tracts that fall at least half within this radius are included in the study area (Figure 7-1).

2. Study Area Population

Demographic data were used to identify potential open space users (residents and non-residents) within the residential and non-residential study areas. To determine the number of residents currently located within the study areas, data were compiled from the 2000 U.S. Census of Population and Housing for the tracts in each study area (Table 7-2). The age distribution of the residential population was noted because children and elderly residents are typically more dependent on local open space resources (Table 7-3).

TABLE 7-2
EXISTING POPULATIONS IN THE NON-RESIDENTIAL AND RESIDENTIAL USE STUDY AREAS

Census Tract	Residential Population	Non-Residential Population	Total User Population
Non-Residential Use Study Area			
91	4,553	5,548	10,101
93	8,714	1,633	10,347
95	2,694	5,601	8,295
97	4,852	1,312	6,164
99	1,155	5,663	6,818
101	239	17,669	17,908
103	1,463	6,590	8,053
109	208	30,742	30,950
111	3,048	7,702	10,750
113	322	39,919	40,241
115	1,467	10,083	11,550
117	340	862	1,202
119	1,405	25,459	26,864
121	8,288	5,810	14,098
127	7,278	8,550	15,828
129	4,457	6,955	11,412
Total Non-Residential Area	50,483	180,098	230,581
Residential Use Study Area			
58	659	18,316	18,975
74	3,712	26,971	30,683
76	2,493	12,586	15,079
84	1,041	23,848	24,889
87	4,626	9,750	14,376
89	5,320	1,894	7,214
96	210	53,153	53,363
125	1,762	34,127	35,889
133	5,805	6,167	11,972
Total Residential Area	76,111	366,910	443,021

Sources: Residential Data: U.S. Department of Commerce, Bureau of the Census, 2000 Census of Population and Housing. Worker Data: 1990 Reverse Journey to Work data compiled by DCP, 2000 NYS Department of Labor estimates of employment by zip code.

TABLE 7-3
AGE DISTRIBUTION OF NON-RESIDENTIAL AND RESIDENTIAL STUDY AREAS

Non-Residential Study Area			Manhattan
Age	Number of Residents	Percentage of Total Population	Percentage of Total Population
Under 5	1,429	2.8	5.0
5 to 9	1,210	2.4	4.8
10 to 14	1,139	2.3	4.5
15 to 19	1,736	3.4	4.9
20 to 64	38,872	77.0	68.7
65 and over	6,097	12.1	12.2
Residential Study Area			
Under 5	2,084	2.7	5.0
5 to 9	1,664	2.2	4.8
10 to 14	1,603	2.1	4.5
15 to 19	2,498	3.3	4.9
20 to 64	60,052	78.9	68.7
65 and over	8,210	10.8	12.2

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

Employment in 2000 was also estimated for each study area census tract. Because "reverse journey-to-work" data for 2000 are not yet available, the number of non-residents in each of the census tracts included in the study areas was determined based on year 2000 New York State (NYS) Department of Labor estimates of employment by zip code, allocated to census tracts based on 1990 reverse journey-to-work data compiled by the Census Bureau and DCP. In addition, since development resulting from the Proposed Action is being analyzed for two build years, population and employment estimates were projected from 2010 to 2025. Estimates were based on a population growth rate of 0.5 percent per year as well as known development that is expected to be completed by 2025. Applying the 0.5 percent growth rate to the 2010 population conservatively accounts for future development that is not yet known or proposed. This ensures that development-induced changes to open space ratios could be compared to the Future Without the Proposed Action.

3. Study Area Open Spaces

All publicly accessible open spaces and recreational facilities within the non-residential and residential study areas were inventoried to determine their size, character, and condition. Public spaces without useable recreational areas (such as spaces where seating is unavailable) were excluded from the quantitative analysis, as were open spaces that are not open to the general public, although these are noted as part of the open space inventory. The information used for this analysis was gathered through field studies conducted in April 2003, from the New York City Department of Parks and Recreation (NYCDPR), and from *Privately Owned Public Space: The New York City Experience* (2000), a collaboration of DCP, Jerold S. Kayden, and the Municipal Art Society. At each open space, active and passive recreational spaces were noted. Active facilities are intended for vigorous activities, such as jogging, field sports, and children's active play. Such features might include basketball courts, softball fields, and play equipment. Passive facilities encourage such activities as strolling, reading, sunbathing, and people watching. Some spaces, such as lawns, public esplanades, and dog runs, can be both active and passive recreation areas. The open space inventory also notes any changes planned for existing facilities and whether any new spaces will be added to the area.

4. Adequacy of Open Space

The adequacy of open space in the study area is quantitatively assessed using a ratio of useable open space acreage to the study area population—referred to as the open space ratio. As a planning goal, the City attempts to achieve a ratio of 2.5 acres per 1,000 population for large scale proposals. However, this goal is often not feasible for many areas of the City and does not constitute an impact threshold. Rather, it is a benchmark that represents an area well served in open space. The following guidelines have been used in this analysis:

- 0.15 acres of passive open space per 1,000 workers and visitors.
- 0.5 acres of passive open space per 1,000 residents, and 2.0 acres of active open space per 1,000 residents, resulting in a ratio of 2.5 acres of total open space per 1,000 residents.
- The needs of these populations are considered together, because it is assumed that both residents and non-residents will use the same passive open spaces. Therefore, a weighted average of the amount of open space necessary to meet the DCP guideline of 0.50 acres of passive open space per 1,000 residents and 0.15 acres of passive open space per 1,000 non-residents is considered in this analysis. Because this ratio changes depending on the proportion of residents and non-residents in each study area, Table 7-4 outlines the amount of open space needed in each condition in each study area, and calculates the weighted average ratio of passive open space acres per 1,000 combined residents and non-residents.

TABLE 7-4
WEIGHTED AVERAGE PASSIVE OPEN SPACE RATIOS
FOR COMBINED RESIDENTIAL AND NON-RESIDENTIAL POPULATIONS

Condition	Non-Residential Study Area				Residential Study Area			
	Acres needed for Non-Residents*	Acres needed for Residents**	Total Acres Needed	Ratio: Acres/1,000 people***	Acres needed for Non-Residents*	Acres needed for Residents**	Total Acres Needed	Ratio: Acres/1,000 people***
Existing Condition	27.01	25.24	52.25	0.227	55.04	38.06	93.10	0.210
2010								
Future Without Proposed Action	31.24	30.80	62.04	0.230	59.49	44.79	104.28	0.214
Future With Proposed Action	37.48	31.58	69.06	0.221	65.73	45.48	111.20	0.210
2025								
Future Without Proposed Action	32.45	32.74	65.19	0.231	61.12	47.43	108.55	0.216
Future With Proposed Action	57.37	43.40	100.85	0.215	88.22	59.18	147.39	0.209

Notes:
* Based on the number of non-residents in the study area and the DCP guideline recommending 0.15 acres of open space per 1,000 non-residents.
** Based on the number of residents in the study area and the DCP guideline recommending 0.50 acres of passive open space per 1,000 residents.
*** Accounts for the total open space acres needed for both residents and non-residents, as well as the total residential and non-residential population in each study area.

In addition to the open spaces located within the residential study area and the non-residential study area, open spaces falling outside the study areas were considered qualitatively. These spaces provide additional open space resources to the residential and non-residential populations. Also included are "destination parks," such as Central Park and portions of Hudson River Park located beyond the ½-mile radius of the Project Area, but likely to be visited by the user populations studied.

5. Impact Significance

In accordance with *CEQR Technical Manual* guidelines, a detailed open space analysis has been conducted because the Proposed Action would introduce a large new population to an area considered to have an existing deficiency in open space (i.e., below 1.5 acres of open space per 1,000 residents or below 0.15 acres of passive open space per 1,000 non-residents) and, although total open space ratios would increase in the Future With the Proposed Action, there would be a 3.74 percent decrease in the active open space ratio in 2025 (Table 7-1). A decrease in the open space ratio that approaches or exceeds 5 percent generally warrants more detailed analysis, and, where existing ratios are very low, even a decrease of less than 1 percent should be further assessed.

To determine the significance of any potential adverse impacts in the Future With the Proposed Action, the *CEQR Technical Manual* suggests both a quantitative and qualitative evaluation compared with the Future Without the Proposed Action condition. A significant quantitative impact can result if the action would reduce the open space ratio or further exacerbate a deficiency in open space. Significant quantitative impacts on open space resources are typically further assessed in the qualitative assessment to determine overall significance of the impact.

C. EXISTING CONDITIONS

1. Study Area Population

a) Non-Residential Study Area

Sixteen census tracts are included within the non-residential study area (see Figure 7-1), which stretches from West 50th Street to the north, Sixth Avenue to the east, West 22nd Street to the south, and dips southward between Tenth and Eleventh Avenues as far south as West 14th Street.

Non-Residential Population

Much of the non-residential population in the non-residential use study area is clustered along its eastern boundary. Stretching east to Sixth Avenue, the non-residential study area includes some of the fringe of West Midtown and Midtown South, areas in which worker populations are dense. Additionally, moderately dense worker populations are found in the Garment Center District, located between West 42nd and West 34th Streets from Eighth to Sixth Avenues.

Based on year 2000 NYS Department of Labor estimates of employment by zip code, allocated to census tracts based on 1990 reverse journey-to-work data compiled by the Census Bureau and DCP data, the non-residential population within the non-residential study area was 180,098 in the year 2000.

Residential Population

The non-residential study area includes two major clusters of residential population. Chelsea, to the south, and Clinton, to the north, are historically residential areas and account for much of the residential population within this study area. As shown in Table 7-2, the residential population in the non-residential study area was 50,483 in 2000.

According to 2000 Census data, approximately 77 percent of the non-residential study area residential population is between 20 and 64 years old (see Table 7-3), which is higher than the approximately 69 percent figure for Manhattan as a whole. Children and teenagers account for only approximately 11 percent of the entire residential population in the non-residential study area, while persons 65 and over account for approximately 12 percent of the residential population. Therefore, it is not expected that young children or the elderly—two populations that typically would not travel beyond a ¼-mile radius of their residences—would place a disproportionately heavy burden on the ¼-mile study area, as these populations are relatively low within the study area.

Total User Population

Within the non-residential study area, the total population (residents plus non-residents) is 230,581. This count assumes that no one both resides and works within this area. As a result, there is likely to be some double counting of the daily user population in which residential and non-residential populations overlap, resulting in a more conservative analysis.

b) Residential Study Area

Compared to the non-residential study area, the residential study area includes the 16 census tracts plus nine additional census tracts extending northward to 54th Street, eastward as far as Park Avenue South, and southward to 18th Street (see Figure 7-1).

Non-Residential Population

The residential study area includes portions of West Midtown and Midtown South, areas with very dense worker populations. These additional areas are dense enough to more than double the non-residential population. The inclusion of the blocks between Fifth and Sixth Avenues from West 45th

to West 21st Streets and the blocks between Fifth and Park Avenues from East 35th to East 28th Streets accounts for much of the large non-residential population in the residential study area.

Although there is no quantitative analysis dedicated exclusively to the non-residential population within the residential study area, the *CEQR Technical Manual* calls for a quantitative analysis of the total population within the residential study area, which includes the non-residential as well as the residential populations.

Residential Population

Much of the residential populations within the study area are clustered within the Chelsea and Clinton neighborhoods. The residential study area, which includes the non-residential study area, has a residential population of 76,111 (see Table 7-2). As in the non-residential study area, persons within the residential study area between the ages of 20 and 64 constitute the highest percentage (approximately 78.9 percent) of the residential population (see Table 7-3). Among residents, the number of children and teenagers is only approximately 10.3 percent of the combined age groups. The smallest population concentration is, again, persons between the ages of 10 and 14. The 65 and Over population accounts for approximately 11 percent of the residential study area population.

Total User Population

Within the residential study area (and including the population within the smaller non-residential study area) the total residential and non-residential population is 443,021. Again, this count conservatively assumes that the residential and non-residential populations are entirely distinct from each other.

2. Study Area Open Spaces

a) Non-residential study area

Twenty-six public open space and recreational resources are located within the non-residential study area. These open spaces include publicly owned open spaces and privately owned spaces that are open to the public. Arcades associated with outdoor plazas have been included in this inventory as well. Altogether, the open space resources in the non-residential study area total 23.65 acres (see Figure 7-1 and Table 7-5). Within the total, 13.13 acres are passive and 10.52 acres are active.

Eight mapped City parks are located within the non-residential study area. The largest City park is Chelsea Park, which occupies an entire block between Ninth and Tenth Avenues, south of West 28th Street (No. 18 on Figure 7-1). Chelsea Park is devoted to both active and passive uses. Amenities include play equipment such as swings and jungle gyms, basketball courts, and ball fields. Additionally, the park has trees, planters, and lighting for passive users.

Southeast of Chelsea Park, the Penn Station South Houses playground is located on West 25th Street between Eighth and Ninth Avenues (No. 22 on Figure 7-1). Most of this park is used for active recreation. Basketball courts and jungle gyms are available for play; paved walkways, benches, and landscaping are available for relaxing.

TABLE 7-5
INVENTORY OF OPEN SPACE RESOURCES

Map#	Name	Location	Owner	Acres	Acres		Amenities	Condition	Use Level
				Total Acres	Passive	Active			
Non-Residential Study Area									
1	2 Penn Plaza	W. 31st to 33rd Sts. Seventh to Eighth Aves.	Vornado Two Penn Plaza LLC, Madison Square Garden LP	0.42	0.42	0.00	Planters, Lighting	Good	Moderate
2	Bob's Park	456 W. 35th St.	Clinton Housing West 40th Partners LP	0.05	0.04	0.01	Playground, Seating, Landscaping	Good	Low
3	Jacob Javits Convention Center Plaza	418 Eleventh Ave.	National Railroad ETA	0.76	0.76	0.00	Benches, Platforms, Sculptural Seating and Other Sculptural Elements. Escalator/Stairway to Access Lower Level is Currently Closed.	Fair	Low
4	640 W. 42nd St. Plaza	W. 42nd St. between Eleventh and Twelfth Aves.	River Place I LLC	0.74	0.74	0.00	Landscaped Hills, Seating, Paved Paths, Lighting	Excellent	Moderate
5	Gregory J.M. Portley Plaza	576 Tenth Ave.	Manhattan Plaza Apt.	0.33	0.33	0.00	Paved Walkways, Benches, Trees, Planters, Lighting	Good	Moderate
6	McCaffry Playground	W. 43rd St. between Eighth and Ninth Aves.	NYCDPR	0.44	0.09	0.35	Swings, Basketball Courts, Trees, Benches, Spray Shower, Jungle Gym, Landscaping, Flowers	Good	Moderate
7	May Matthews Playground	W. 46th St. between Ninth and Tenth Aves.	NYCDPR	0.48	0.11	0.37	Play Equipment Swings, Slides, Basketball Courts, Handball Courts, Benches, Lighting	Good	Heavy
8	Hell's Kitchen Park	Tenth Ave. between W. 47th and 48th Sts.	NYCDPR	0.58	0.40	0.17	Play Equipment, Trees, Plants, Basketball and Handball Courts, Benches, Paved Walkways, Lighting	Good	Heavy
9	Clinton Community Garden	W. 48th St. between Ninth and Tenth Aves.	NYCDPR, Green Thumb	0.35	0.35	0.00	Flowers, Plants, Trees, Grass, Paths, Benches	Good	Moderate
10	Ramon Aponte Park	351 W. 47th St.	NYCDPR	0.17	0.12	0.05	Basketball and Handball Courts, Play Equipment, Benches, Trees, Slides, Paved Walkways	Fair	Moderate
11	Marion S. Heishel Garden	W. 48th St. between Eighth and Ninth Aves.	Community Garden	0.15	0.15	0.00	Trees, Plants, Flowers, Benches	Excellent	Light
12	Golda Meir Square	Broadway between W. 39th and 40th Sts.	1412 Trizec Hahn-Swig LLC	0.38	0.38	0.00	Seating, Trees, Planters	Good	High

TABLE 7-5 (CONT'D)
INVENTORY OF OPEN SPACE RESOURCES

Map#	Name	Location	Owner	Acres Total Acres	Acres Passive	Acres Active	Amenities	Condition	Use Level
Non-Residential Study Area (cont'd)									
13	Herald Square	W. 34th to 36th Sts. between Broadway and Sixth Ave.	NYCDPR	0.04	0.04	0.00	Seating, Planters, Lighting, Trees, Food Kiosks, Comfort Station, Statues	Excellent	High
14	Greely Square	W. 32nd to 33rd Sts. between Sixth Ave. and Broadway	34th St. Partnership	0.18	0.18	0.00	Benches, Tables And Chairs, Trees, Planters, Lighting, Fences	Good	Heavy
15	1250 Broadway Plaza	1250 Broadway	Carlyle/SL Green 1250 Broadway LLC	0.22	0.22	0.00	Trees, Planters, Benches	Good	Good
16	230 W. 27th St. Plaza	230 W. 27th St.	Fashion Institute of Technology (FIT)	0.07	0.07	0.00	Trees, Planters, Fences, Benches	Good	Low
17	FIT Plaza	W. 27th St. and Seventh Ave.	FIT	0.05	0.05	0.00	Paved Area, Sculpture	Good	Moderate
18	Chelsea Park	W. 28th St. between Ninth and Tenth Aves.	NYCDPR	3.90	0.98	2.93	Swings, Slides, Basketball Courts, Baseball/Softball Fields, Paved Walkways, Benches, Jungle Gyms, Trees, Planters, Lighting	Good	Good
19	Elliott Houses Open Space	W. 26th St. between Ninth and Tenth Aves.	NYCHA	0.60	0.30	0.30	Slides, Benches, Jungle Gyms, Trees, Planters, Lighting, Basketball Courts	Good	Low
20	Chelsea Houses Open Space	W. 25th St. between Ninth and Tenth Aves.	NYCHA	0.34	0.03	0.31	Benches, Play Equipment	Good	Good
21	Penn Station South Houses Open Space	W. 23rd to W. 28th Sts. between Eighth and Ninth Aves.	Mutual Redevelopment Houses, Inc.	1.42	1.05	0.37	Basketball Courts, Benches, Trees, Planters, Play Equipment, Lighting	Good	Low
22	Penn Station South Houses Playground	W. 26th St. between Eighth and Ninth Aves.	NYCDPR	0.60	0.06	0.54	Basketball Courts, Paved Walkways, Benches, Jungle Gym, Trees, Planters,	Good	Moderate
23	1 Penn Plaza	W. 33rd to 34th Sts. between Seventh and Eighth Aves.	One Penn Plaza LLC	1.15	1.15	0.00	Benches, Trees, Planters, Lighting	Good	Good
24	Chelsea Waterside Park	W. 23rd to 24th Sts. between Eleventh and Twelfth Aves.	Hudson River Park Trust	2.50	1.25	1.25	Basketball Courts, Paved Walkways, Benches, Sprinkler Area, Picnic Tables, Soccer Fields, Fences, Rock Landscaping, Trees, Planters, Lighting, Dog Run	Excellent	High

TABLE 7-5 (CONT'D)
INVENTORY OF OPEN SPACE RESOURCES

Map#	Name	Location	Owner	Acres Total Acres	Acres Passive	Acres Active	Amenities	Condition	Use Level
Non-Residential Study Area (cont'd)									
25	Hudson River Park	W. of Route 9A from 14th St. to 59th St.	NYS and NYC	**7.75**[1]	3.87	3.87	Walking, Jogging, Biking Path, Various Kiosks, Piers, Sport Fields, Seating Lawns	Excellent	High
26	Community Dog Run	near north tube of Lincoln Tunnel	N/A	N/A	N/A	0.00	Dog Run	N/A	N/A
			Total	23.65	13.13	10.52			
Residential Study Area									
27	Clement Clarke Moore Park	W. 22nd St. between Ninth and Tenth Aves.	NYCDPR	0.49	0.12	0.37	Swings, Slides, Paved Walkways, Benches, Jungle Gyms, Trees, Planters	Excellent	High
28	Robert S. Fulton Houses Playground	W. 19th St. between Ninth and Tenth Aves.	NYCHA	0.28	0.14	0.14	Paved Walkways, Benches, Jungle Gym, Trees, Planters	Good	Low
29	Robert S. Fulton Houses Open Space	W. 19th St. between Ninth and Tenth Aves.	NYCHA	0.13	0.03	0.10	Slides, Benches, Jungle Gyms, Trees Planters	Good	Low
30	P.S. 11/ William J. Harris School playground	W. 21st St. between Eighth and Ninth Aves.	NYC Department of Education (NYCDOE)	0.39	0.02	0.37	Slides, Basketball Courts, Jungle Gyms, Trees	Good	Moderate[2]
31	10 East 29th St. Plaza	East 29th St. between Madison and Fifth Aves.	Rose 29 LLC	0.29	0.29	0.00	Benches, Trees, Planters, Lighting, Fences	Good	Moderate
32	Bryant Park	W. 40th to 42nd Sts. between Fifth and Sixth Aves.	NYCDPR	9.60	9.60	0.00	Trees, Benches, Monuments, Lawn, Food Kiosks, Restaurant, Tables, Planters, Fountain	Excellent	High
33	1095 Sixth Ave. Plaza	1095 Sixth Ave. at 42nd St.	NYNEX Long Distance/Verizon	0.39	0.39	0.00	Seating, Lighting, Trees, Planters, Gated Park	Good	Moderate
34	Grace Plaza	SE corner of W. 43rd St. and Sixth Ave.	Trizec Hahn Office Properties	0.52	0.52	0.00	Trees, Planters, Sitting Area	Good	Moderate
35	1155 Avenue of the Americas Plaza	1155 Avenue of the Americas at W. 44th St.	White & Case, LLP	0.22	0.22	0.00	Trees, Lighting	Good	Moderate
36	DeShaw & Co. Plaza	120 W. 45th St.	DeShaw & Co.	0.07	0.07	0.00	Paved Walkways, Tables and Chairs, Trees, Planters, Lighting	Good	Low

TABLE 7-5 (CONT'D)
INVENTORY OF OPEN SPACE RESOURCES

Map#	Name	Location	Owner	Acres	Acres		Amenities	Condition	Use Level
				Total Acres	Passive	Active			
Residential Study Area (Cont'd)									
37	1177 Avenue of the Americas Plaza	1177 Avenue of the Americas at NW corner of W. 45th St.	Price Waterhouse Coopers	0.08	0.08	0.00	Landscaped Sitting Area	Good	Moderate
38	1166 Avenue of the Americas Plaza	1166 Avenue of the Americas between W. 45th and 46th Sts.	Marsh and McLennan/ Edward Minskoff	0.63	0.63	0.00	Trees, Planters, Flagpole, Artwork, Tables and Chairs, Fountain, Lighting	Good	Moderate
39	1185 Avenue of the Americas – Westpoint Stevens Tower	1185 Avenue of the Americas at W. 46th St	Fleet Boston Financial	0.37	0.37	0.00	Trees, Plants, Seating, Paved Walkways, Fountain, Lighting	Good	Moderate
40	Father Duffy Square	Between Broadway and Seventh Aves., W. 46th and 47th Sts.	NYCDPR	0.08	0.08	0.00	Statues, Paved Walkways, Benches, Fountains, Tables and Chairs, Trees, Planters, Lighting	Good	High
41	1211 Avenue of the Americas Plaza	1211 Avenue of the Americas between W. 47th and 48th Sts.	Fox News Corporation	0.63	0.63	0.00	Benches, Shrubbery, Trees	Good	Low
42	Rockefeller Center	Fifth Ave. at W. 49th St.	RCPI Landmark Properties	0.65	0.52	0.13	Benches, Trees, Planters, Seating, Lighting, Ice Rink	Excellent	Heavy
43	1221 Avenue of the Americas Plaza	Avenue of the Americas between W. 48th and 49th Sts.	McGraw Hill Companies	0.86	0.86	0.00	Sunken Plaza With Benches, Trees, Bushes	Good	Moderate
44	235 W. 48th St. Plaza	W. 48th St. between Broadway and Eighth Ave.	CS Ritz Holdings, LP	0.17	0.17	0.00	Trees, Planters, Benches, Tables and Chairs, Paved Walkways	Good	Low
45	High School of Graphic Commun-ication/Gutt-enberg Playground	W. 49th St. between Ninth and Tenth Aves.	NYCDPR	0.55	0.00	0.55	Bleachers, Basketball and Handball Courts	Good	Moderate
46	Worldwide Plaza	W. 49th to 50th Sts. between Eighth and Ninth Aves.	EOP - Worldwide Plaza LLC	0.84	0.84	0.00	Food Pavilions, Fountain, Planters, Paved Paths, Trees, Seating Walls, Tables and Chairs, Restrooms, Lighting	Excellent	Heavy
47	945 Seventh Ave. Plaza	945 Seventh Ave. between W. 49th and 50th Sts.	Rock-Forty-Ninth LLC	0.29	0.29	0.00	Tables, Chairs, Trees, Bushes, Fountain, Benches, Refreshment Stands	Good	Moderate
48	1251 Avenue of the Americas Plaza	1251 Avenue of the Americas between W. 49th and 50th Sts.	Rockefeller Management Corp.	0.46	0.46	0.00	Trees, Bushes, Benches, Fountain, Seating Walls, Landscaping	Good	Moderate
49	1633 Broadway/ Paramount Plaza	1633 Broadway, between W. 50th and 51st Sts.	Broadway Pl. Assoc. Ltd. Pr	0.88	0.88	0.00	Paved Walkways, Trees, Planters, Garbage Cans, Lighting, Benches	Good	Moderate
Total Non-Residential and Residential Study Areas				42.49	30.32	12.17			

Notes:
1 Hudson River Park acreage includes the three segments of Hudson River Park located within the census tract boundary that falls within the open space study area (see Figure 7-1).
2 This park is open to the public while school is not in session.
All numbers are rounded to nearest hundredth of an acre.

The remaining six open space resources in the non-residential study area are located to the north, in Clinton. Two resources are located between Ninth and Tenth Avenues between West 47th and West 48th Streets. Hell's Kitchen Park (No. 8 on Figure 7-1), the larger of the two, has a variety of passive and active recreation amenities. Handball courts, basketball courts, and play equipment provide the opportunity for active usage, while benches and walkways allow for passive enjoyment of the space. The second open space resource located on this block, Clinton Community Garden, is operated by Green Thumb (No. 9 on Figure 7-1). Although membership is required to partake in this facility, anyone living in the area can apply to become a member of the garden. Clinton Community Garden is a neatly manicured space filled with trees, flowers, grass and other plants, as well as paths and benches.

Ramon Aponte Park is located east of the Clinton Community Garden, between Eighth and Ninth Avenues on West 47th Street (No. 10 on Figure 7-1). This park is devoted mainly to active recreation, providing basketball courts, handball courts, and play equipment. This park also has benches, trees, and paved walkways. McCaffry Playground (No. 6 on Figure 7-1) is located on West 43rd Street between Eighth and Ninth Avenues. This playground includes amenities such as basketball courts, a spray shower, jungle gym, and swings. Additionally, benches and landscaping encourage passive enjoyment of this space. Herald Square (No. 13 on Figure 7-1), which is operated by the NYCDPR, is located near Macy's located between West 34th and 35th Streets and Broadway and Sixth Avenue. This passive space contains seating, food kiosks, plantings, and statues. The eighth City park in the non-residential study area is the May Matthews Playground (No. 7 on Figure 7-1), located on West 46th Street between Ninth and Tenth Avenues. This playground contains a jungle gym, swings, slides, basketball and handball courts, and benches.

The New York City Housing Authority (NYCHA) owns and operates many open spaces in connection with the Elliott Houses and Chelsea Houses developments (No. 19 and No. 20, respectively, on Figure 7-1). These open spaces are equipped with jungle gyms, slides, basketball courts, swings, benches, and paths.

Chelsea Waterside Park (No. 24 on Figure 7-1) located between Eleventh and Twelfth Avenues and West 22nd and West 24th Streets is another major open space located within the non-residential study area. This large park is equipped with a wide variety of amenities, such as basketball courts, soccer fields, a sprinkler area, dog run, paved walkways, picnic tables, and benches.

Hudson River Park (No. 25 on Figure 7-1), a joint New York State and New York City resource, stretches from Battery Park at the south to West 59th Street to the north. The 5-mile park is divided into geographic areas called "segments." Segments 5, 6, and 7 of Hudson River Park fall within the study area. Although construction on segment 6 is scheduled to begin this year, parts of this park are currently finished and useable. The continuous paved bikeway that was built as part of the Route 9A project allows users to stroll, bike, jog, or rollerblade along the Hudson River. The "float bridge" at Pier 66 is a newly restored historic pier that provides a kayak launch.

Within the non-residential study area, there are also numerous public plazas, arcades, and open spaces associated with residential and commercial buildings. These plazas vary considerably in terms of attractiveness, scale, and amenities. However, all spaces included in this analysis are accessible to the public, and all are generally well-maintained and litter-free. Many plazas are suited to the needs of workers seeking space for outdoor lunches or breaks, containing amenities for passive recreational use, such as benches, trees and other plantings, steps, and water features. Open spaces associated with residential buildings often have playgrounds, benches, landscaping, and grass areas.

b) Residential Study Area

Within the residential study area, a total of 49 public open spaces and recreational facilities serve the surrounding residential and commercial populations. This count includes the 26 open spaces within

the non-residential study area, as listed in Table 7-5. Including all of the public parks and open spaces listed in the non-residential study area, the residential study area contains a total of 42.49 acres of public open spaces, 30.32 of which are passive spaces and 12.17 of which are active (see Figure 7-1 and Table 7-5).

In addition to the open spaces identified within the non-residential study area, the residential study area includes four New York City Parks. The largest of these parks is Bryant Park, which shares a superblock with the New York Public Library at 42nd Street and Fifth Avenue (No. 32 on Figure 7-1). This landmark park is devoted entirely to passive uses. Amenities include a large lawn, trees, decorative monuments, food kiosks and restaurants, tables and chairs, benches, and a fountain. The entire park is well-manicured with a variety of flowers, plants, and landscaping.

Father Duffy Square, located between Broadway and Seventh Avenue between West 46th and West 47th Streets is another City park devoted to passive uses (No. 40 on Figure 7-1). Amenities include statues and fountains, as well as landscaping, such as trees and planters with flowers.

Guttenburg Playground at the High School of Graphic Communication is located on West 49th Street between Ninth and Tenth Avenues (No. 45 on Figure 7-1). This City park contains such amenities as bleachers, basketball courts, and handball courts. Devoted entirely to active use, this park is well-kept and closes at dusk daily.

Clement Clarke Moore Park in Chelsea is located on West 22nd Street between Ninth and Tenth Avenues (No. 27 on Figure 7-1). This park has amenities such as swings, slides and jungle gyms for active use. It also contains walkways, benches, trees, and planters for passive uses.

The NYCHA owns and operates the Robert S. Fulton Houses development and its two associated playgrounds. Located on West 19th Street between Ninth and Tenth Avenues, these playgrounds contain swings, play equipment, slides, paved walkways, benches, trees, and planters (No. 28 on Figure 7-1).

There are various privately owned, publicly accessible open space resources within the residential study area. These spaces are associated with adjacent residential and office buildings, providing open space for residents and employees, as well as passers-by. Many office plazas along the Avenue of the Americas in the northern portion of the residential use study area are well-kept spaces, providing such passive amenities as benches, tables and chairs, landscaping, and fountains.

3. Adequacy of Open Spaces

a) Non-Residential Study Area

The non-residential study area includes a total of 23.65 acres of open space, of which 13.13 acres are passive space. A total of 50,483 residents live within this vicinity, and 180,098 people work within the non-residential study area boundary. The combined residential and non-residential population is 230,581.

The area has a passive open space ratio of 0.073 acres of passive open space per 1,000 non-residents; this is substantially less than the City's guideline of 0.15 (Table 7-6). The non-residential population of 180,099 workers and visitors would require 27.01 acres of passive open space to satisfy the DCP guideline of 0.15 acres per 1,000 non-residents, and the 50,483 residents would require 25.24 acres of passive open space to satisfy the DCP guideline of 0.5 acres per 1,000 residents. In total, the combined need of residents and non-residents is for 52.25 acres of passive open space (0.227 acres per 1,000 total open space users). The study area provides 13.13 acres of passive open space, or 0.057 acres per 1,000 residents and non-residents combined, resulting in a ratio of 0.057 acres of passive open space per 1,000 combined residents and non-residents. This combined ratio, as well as the ratio for non-residents, falls far short of planning guidelines.

TABLE 7-6
ADEQUACY OF OPEN SPACE RESOURCES IN THE RESIDENTIAL AND NON-RESIDENTIAL USE STUDY AREAS

	Total Population	Open Space Acreage			Open Space Ratios Per 1,000 People			DCP Open Space Guidelines		
		Total	Passive	Active	Total	Active	Passive	Total	Active	Passive
Non-Residential Study Area										
Non-Residents	180,098	23.65	13.13	10.52	N/A	N/A	0.073	N/A	N/A	0.15
Combined Non-Residents and Residents	230,581				N/A	N/A	0.057	N/A	N/A	0.227*
Residential Study Area										
Residents	76,111	42.49	30.32	12.17	0.558	0.160	0.398	2.50	2.00	0.50
Combined Non-Residents and Residents	443,021				N/A	N/A	0.068	N/A	N/A	0.210*

Source: AKRF, Inc. 2003

Notes:

* Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents.
Non-Residents typically use only passive spaces, so for the non-residential study area, only passive open space ratios are calculated. For the residential study area active, passive, and total park space ratios are calculated.

b) Residential Study Area

The following analysis of the adequacy of open space resources within the residential study area takes into consideration the ratios of active, passive, and total open space resources per 1,000 residents, as well as the ratio of passive open space per 1,000 combined residents and non-residents.

With a total of 42.49 acres of open space, of which 12.17 are for active use and 30.32 are for passive use, and a total residential population of 76,111, the ½-mile study area has an overall open space ratio of 0.558 acres per 1,000 residents (see Table 7-6). This is far less than the City's planning guideline of 2.5 acres of combined active and passive open space per 1,000 residents. The area currently has a shortage of open space that is typical of a number of neighborhoods in Manhattan.

The residential study area's residential passive open space ratio is only 0.398, less than the planning guideline of 0.5 acres per 1,000 residents. The area's residential active open space ratio is 0.160 acres per 1,000 residents—again less than the City's planning guideline of 2.0 acres per 1,000 residents.

When the employees who work within the residential use study area are added to the population, the passive open space ratio is much lower. As described earlier, non-residents typically use passive open spaces during the workday, so the passive open space ratio is the relevant ratio for consideration. The 76,111 residents in the residential study area require 38.06 acres of passive open space to satisfy the DCP's 0.5-acre guideline. The 366,910 non-residents require 55.04 acres of passive open space to meet the DCP's 0.15-acre guideline. With the combined worker and residential population of 443,021, the total needed passive open space is 93.10 acres, or 0.210 acres for every 1,000 non-residents and residents combined. The study area provides 30.32 acres of passive open space, or 0.068 acres per 1,000 non-residents and residents combined, falling far short of the planning guideline.

Although quantitatively the open space resources located within the study areas do not provide sufficient open space resources to the user populations, a handful of "destination parks" are located nearby but not within the ½-mile radius of the Rezoning Area. Hudson River Park extends south of the study area to Battery Park. In addition to the continuous bikeway along Route 9A, segment 4 of the Hudson River Park is completed. This section begins at Clarkson Street and continues north to Horatio Street. Landscaped areas, recreational piers, and a completed pedestrian pathway along the riverfront are among the amenities this segment provides. Although this segment of Hudson River

Park falls outside of the study area, it is likely that visitors to the Park from the study area would venture south into this segment, and the linear pathway would allow people to access other open spaces north and south of the Project Area along the Hudson River.

Madison Park is located between Fifth Avenue and Madison Avenue from East 23rd Street to East 26th Street. This approximately 6.77-acre park is dedicated to both active and passive recreational uses, with paths, lighting, benches, trees, fountains, and manicured gardens and grass areas. The park also contains a playground and dog run. This park is in excellent condition and well-used, especially by nearby workers.

Union Square Park, located between Park Avenue South and Broadway from East 14th Street to East 17th Street, is used for both active and passive recreation. The approximately 3.57-acre park includes food kiosks, benches, plantings, trees, tables and chairs, sculptures, and subway access, as well as a dog run and playgrounds. Union Square Park is extremely heavily used, as it is also a major transportation hub in a highly trafficked and central location.

Central Park is located approximately six blocks north of the residential study area boundary. The 843-acre park is a destination park that provides a large mix of active and passive recreational facilities. Among the park's many facilities are lawn areas used for passive recreation, ball fields, volleyball courts, a band shell, skating rinks, swimming pools, row boating facilities, a recreation center, tennis courts, a bike/running/pedestrian path, horseback riding trails, and numerous playgrounds and statues. The presence of Central Park to the north helps alleviate the open space deficiency in the study area, particularly for the residential population.

Several private recreational facilities are also located within the residential study area. While these are not open to the public, they likely serve residents and workers within the study area, thereby alleviating some of the demand on other parks in the vicinity. Some of these parks include the 34th Street Community Garden, a plaza at 345-347 West 48th Street, and a private gated playground at 349 West 50th Street. These additional parks and facilities would be used by residents and workers within the study area and, although not calculated in the open space ratios, would augment the amount of active and passive open space available to residents and non-residents.

D. 2010 FUTURE WITHOUT THE PROPOSED ACTION

1. Study Area Population

Many new residential and commercial developments are currently planned and expected to be completed within the study areas by the year 2010, as described in Chapter 3, "Analytical Framework." These new developments would increase both the residential and non-residential populations within the study areas.

For the FGEIS, changes have been made to this section to include a description of new development projects that have become known since the publication of the DGEIS. This section also reflects changes in the status and development program of several projects originally described in the DGEIS. As shown in Chapter 3, several large residential projects are included in the Future Without the Proposed Action that were not identified in the DGEIS.

As described in Chapter 3, the City is pursuing the Special West Chelsea District Rezoning and Highline Open Space initiative. The DEIS for this project is currently being prepared and will be issued shortly. The Special West Chelsea District Rezoning DEIS is expected to identify a net increase of approximately 4,708 residential units. The DEIS will also consider a "Base FAR Scenario" which assumes the proposed High Line publicly accessible open space would not be created and the transfer of development rights and bonus mechanisms would not be available. This Base FAR Scenario would generate less residential floor area and result in a net increase of 3,041 residential units.

a) Non-Residential Study Area

Within the non-residential study area, the residential population is expected to increase to 61,592 by 2010 if the High Line is not created as an open space (the Special West Chelsea District Base FAR Scenario), or increase to 63,762 if it is converted to publicly accessible open space. This overall increase in population is in large part attributable to several large, new residential projects that are anticipated to be complete by 2010 (see Chapter 3, "Analytical Framework").

Several large commercial projects would also introduce a substantial number of new workers to the study area. These projects would bring the total non-residential population within the non-residential study area to 208,265 by 2010. The 2010 combined residential and worker population in the non-residential study area is projected to be 269,857 without the High Line and 272,027 with the High Line.

b) Residential Study Area

Residential and worker populations within the residential study area are expected to increase by 2010. Projects that are in the study areas are listed in Chapter 3, "Analytical Framework." Adjusting for additional residential growth expected to occur within the non-residential study area, the residential use study area residential population for 2010 is estimated to be 89,589 without the High Line and 91,759 with the High Line.

The number of new workers would also increase by 2010, due to several commercial developments expected to be constructed within the residential study area. Thus, by 2010, the total working population within the residential study area (including the new working population within the non-residential study area) is expected to increase to 395,606. Total residential and non-residential populations within this area are estimated to be 486,195 without the High Line and 488,365 with the High Line by 2010.

2. Study Area Open Spaces

a) Non-Residential Study Area

Within the non-residential study area, one recently completed open space and two new open spaces expected to be completed in the study area prior to 2010, as enumerated in Table 7-7, were included in the analysis of the Future Without the Proposed Action. The Chelsea Recreation Center at 430 West 25th Street opened in May 2004 (No. 1 on Figure 7-2). This added an estimated 0.39 acres of predominantly active open space to the study area. The six-story building contains a swimming pool, full-court basketball court, arts and crafts space, gymnasium, and weightlifting and aerobics area. The NYCDPR also has plans to develop a 0.46-acre parking lot site on Tenth Avenue between West 48th and West 49th Streets as parkland (No. 2 on Figure 7-2). The site would initially be used by the New York City Department of Environmental Protection during construction of City Water Tunnel 3. After completion of this infrastructure project, the land would be converted to open space use. The site would likely contain a mix of active and passive recreational facilities.

TABLE 7-7
PROPOSED OPEN SPACE RESOURCES, FUTURE WITHOUT THE PROPOSED ACTION

Map Key	Name	Location	Acres	Acres		Amenities
			Total Acres	Passive	Active	
1	Chelsea Recreation Center[1]	430 W. 25th Street	0.39	0.00	0.39	Swimming pool, basketball court, weight-lifting, aerobics area
2	NYCDPR Park	Tenth Avenue between W. 48th and 49th Street	0.46	0.23	0.23	N/A
3	Segment 5,6,7 Hudson River Park	Hudson River Park between W. 14th and 59th Street	9.83	4.92	4.92	Boathouse, promenade, playgrounds, decks, comfort stations
4	High Line		5.70	5.70	0.00	N/A
		Total	**16.38**	**10.84**	**5.54**	

1 Opened in May 2004 but included in analysis of Future Without the Proposed Action.

Segments 5, 6, and 7 of Hudson River Park, beginning at West 14th Street and stretching north to West 59th Street, are expected to be completed by 2010 (No. 3 on Figure 7-2). Altogether, these sections of Hudson River Park would provide 9.83 acres of publicly accessible open space to the study area. Although the specific design elements of Hudson River Park would change from segment to segment, the continuous bikeway along Route 9A would remain, a continuous landscaped area directly west of that bikeway would be built, and a continuous pedestrian walkway immediately adjacent to the river would be constructed. Other amenities such as piers, docks, boathouses, recreational facilities, playgrounds, restrooms and food kiosks would be located throughout the Park. In addition to the 9.83 acres of publicly accessible open space, there are a few commercial or cultural recreational facilities, such as the Intrepid Museum at Pier 86 and the Circle Line and World Yacht tours on Piers 81 and 83, which would remain as part of the Hudson River Park project. Several hundred water acres included in the Hudson River Park Act are not counted in the open space inventory, but have restricted uses under the sanctuary management plan, allowing for active recreational uses, such as sailing and kayaking.

Thus, as a result of the three proposed open space projects in the study area, the total amount of open space acreage in the non-residential study area would increase to 34.33 acres, with an increase in passive open space to 18.28 acres and an increase in active open space to 16.05 acres.

In addition to the three new open spaces mentioned above, there is the possibility that a fourth new open space—the High Line, to be created on an unused elevated rail right-of-way—would be created in the study area (No. 4 on Figure 7-2). Preliminary plans for this space are currently being prepared by a design team. Potential amenities include a walkway, benches, landscaping, and kiosks. Approximately 85 percent or 5.7 acres of the High Line fall within the study area. This analysis examines both the future in which the High Line would not be converted to open space as well as the condition in which the High Line would be converted to useable passive open space. If the High Line is included in the open space inventory, there would be 40.03 acres of open space in the non-residential study area. If it is not included in the open space inventory, there would be 34.33 acres of open space.

b) Residential Study Area

No new additional open spaces are expected in the residential use study area by 2010.

3. Adequacy of Open Spaces

By the year 2010, in the Future Without the Proposed Action, residential and non-residential populations within the study areas would increase, as would the open space stock. The deficit of open

space resources would be slightly alleviated, as all open space ratios would increase as compared to present day conditions.

a) Non-Residential Study Area

In 2010, in the Future Without the Proposed Action, the number of non-residents in the non-residential study area is expected to increase to 208,265 and the total open space is expected to increase to 34.33 acres if the High Line open space is not built. The increase in passive recreational space would offset the increase in the non-residential population, resulting in an increase of passive open space available for non-residents. In 2010, the ratio of passive open space per 1,000 non-residents would be 0.088 (Table 7-8). For the combined residential and non-residential population, passive open space ratio would be 0.068 acres per 1,000 people. Both of these ratios would remain below DCP guidelines.

With the High Line open space included, the open space added to the study area would further offset the additional residents and non-residents, resulting in an increase to all open space ratios (Table 7-9). Within the non-residential study area, the ratio of passive open space per 1,000 combined residents and non-residents would be 0.088. The ratio of passive open space per 1,000 non-residents would be 0.115. Both of these ratios would remain below DCP guidelines.

TABLE 7-8
2010 FUTURE WITHOUT THE PROPOSED ACTION: ADEQUACY OF OPEN SPACE RESOURCES WITHOUT HIGH LINE

	Total Population	Open Space Acreage			Open Space Ratios Per 1,000 People			DCP Open Space Guidelines		
		Total	Passive	Active	Total	Active	Passive	Total	Active	Passive
Non-Residential Study Area										
Non-Residents	208,265	34.33	18.28	16.05	N/A	N/A	0.088	N/A	N/A	0.15
Combined Residents and Non-Residents	269,857				N/A	N/A	0.068	N/A	N/A	0.230*
Residential Study Area										
Residents	89,589	53.18	35.47	17.71	0.594	0.198	0.396	2.50	2.00	0.50
Combined Residents and Non-Residents	486,195				N/A	N/A	0.073	N/A	N/A	0.214*

Source: AKRF, Inc. 2003

Notes:

* Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents.

Non-Residents typically use only passive spaces, so for the non-residential study area, only passive open space ratios are calculated. For the residential study area active, passive, and total park space ratios are calculated.

TABLE 7-9
2010 FUTURE WITHOUT THE PROPOSED ACTION: ADEQUACY OF OPEN SPACE RESOURCES WITH HIGH LINE

	Total Population	Open Space Acreage			Open Space Ratios Per 1,000 People			DCP Open Space Guidelines		
		Total	Passive	Active	Total	Active	Passive	Total	Active	Passive
Non-Residential Study Area										
Non-Residents	208,265	40.03	23.98	16.05	N/A	N/A	0.115	N/A	N/A	0.15
Combined Residents and Non-Residents	272,027				N/A	N/A	0.088	N/A	N/A	0.232*
Residential Study Area										
Residents	91,759	58.87	41.16	17.71	0.642	0.193	0.449	2.50	2.00	0.50
Combined Residents and Non-Residents	488,365				N/A	N/A	0.084	N/A	N/A	0.216*

Sources: AKRF, Inc. 2003

* Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents.
Non-Residents typically use only passive spaces, so for the non-residential study area, only passive open space ratios are calculated. For the residential study area active, passive, and total park space ratios are calculated.

b) Residential Study Area

Without the High Line, the residential passive open space ratio would be 0.396 acres per 1,000 residents. The combined residential and non-residential passive open space ratio within the residential study area would be 0.073 acres per 1,000 residents and non-residents. The active residential open space ratio would be 0.198 acres per 1,000 residents. The total residential open space ratio would be 0.594 acres per 1,000 residents. Overall, the amount of open space in this area would be below the DCP's open space guidelines.

All populations would remain underserved by the available active and passive open space resources in the 2010 Future Without the Proposed Action. While nearby open spaces outside the study area, such as Hudson River Park and Central Park, would help to alleviate the problem, an open space deficiency would persist.

If the High Line were to be created as a new open space, all of the open space ratios would increase. The ratio of passive open space per 1,000 combined residents and non-residents would be 0.084. The ratios of passive, active, and total open space per 1,000 residents would be 0.449, 0.193, and 0.642, respectively. With the High Line open space, the ratio of passive open space to 1,000 residents would still be below DCP guidelines.

E. 2010 FUTURE WITH THE PROPOSED ACTION

The Proposed Action, as fully described in Chapter 2, "Description of the Proposed Action," would include the adoption of Zoning Amendments to permit development of the Project Area as a mixed-use community, the construction and operation of an extension of the No. 7 Subway line, expansion and modernization of the Convention Center, the construction of a new Multi-Use Facility, and accommodations for other facilities, new or replacement transportation facilities for pedestrian movement, vehicle storage, and other public purposes. Included in the Proposed Action are design elements that would introduce a significant amount of additional open space to the study area.

As in the Future Without the Proposed Action, the following analysis is presented with and without the High Line. Analyses are conducted for average daily attendance and employment at the Multi-Use Facility. An average attendance day for the Convention Center is also included in this analysis.

1. Study Area Population

The Proposed Action would introduce significant new residential, worker, and visiting populations to the study area by the year 2010. However, if the Proposed Action were to be realized, several planned developments would not be built or would be developed differently (as described in Chapter 3, "Analytical Framework"). The populations expected to be introduced in the Future With the Proposed Action reflect these changes.

a) Non-Residential Study Area

Non-Residential Population

A net increase of 41,611 workers and visitors would be introduced to the study area as a direct result of the Proposed Action. The new square footage resulting from projected office, retail, and hotel space, the Convention Center Expansion, and Multi-Use Facility would result in a net increase of 12,499 new workers. An average of 20,487 new visitors would attend events at the Convention Center each day, and 8,625 daily visitors would be expected at the new Multi-Use Facility. The total number of daily workers and visitors in the non-residential study area would reach 249,876.

Residential Population

Using an estimated household size of 1.63 for market-rate development and an estimated household size of 2.5 for low- to moderate-income residential development, it is expected that the Proposed Action would yield a net increase of 1,543 residents to the study area by the year 2010.

The number of residents within the study area would increase to approximately 63,135 without the High Line and 65,305 with the High Line. This figure is based on the 2000 U.S. Census population figures, omitting the residents expected to occupy developments that would not be constructed in the Future With the Proposed Action, and including the additional residents that would be introduced to the study area as a direct result of the Proposed Action.

Total User Population

Including both the residential and non-residential populations, it is expected that the total daily user population would reach 313,011 without the High Line and 315,181 with the High Line by the year 2010.

b) Residential Study Area

Non-Residential Population

In the 2010 Future With the Proposed Action, the number of non-residents in the residential study area would increase to an estimated 438,216. This figure includes all workers and visitors in the Multi-Use Facility, expanded Convention Center, and new office buildings.

Residential Population

The number of residents within the study area would increase to an estimated 91,132 without the High Line and 93,302 with the High Line. This figure includes the additional residents that would be introduced to the study area as a direct result of the Proposed Action, but omits the residents of the development that would not be constructed if the Convention Center is expanded as part of the Proposed Action.

Total User Population

The total user population within the residential study area is expected to reach 529,348 without the High Line and 531,518 with the High Line by the year 2010.

2. Study Area Open Spaces

With the Proposed Action, by 2010, a net increase of approximately 16.79 acres of open space would be introduced to the Project Area as listed in Table 7-10, and shown on Figure 7-2. A total of 17.55 acres of open space would be added as a direct result of the Proposed Action, and the 0.76-acre open space Javits Plaza would be removed. As previously described, the analysis conservatively considers that the Convention Center Expansion would not be complete in 2010 and only two acres of the rooftop passive publicly accessible open space would be provided in 2010. If the Convention Center Expansion would be completed in 2010, 5 acres of rooftop open space would be completed, for a net increase of 19.79 acres introduced to the Project Area. The new open spaces would provide a major network of parks and plazas in the open space study area, providing much-needed open space and recreational facilities to workers and residents. The proposed open spaces are listed below.

TABLE 7-10
2010 PROPOSED ACTION OPEN SPACE RESOURCES

Map Key	Name	Location	Acres	Acres	
			Total Acres	Passive	Active
5	Midblock Park and Boulevard System	W. 33rd to W. 34th Streets, Tenth to Eleventh Avenues	0.85	0.85	0.00
6	Eastern Caemmerer Yard	W. 30th to W. 33rd Streets, Tenth to Eleventh Avenues	7.50	7.50	0.00
7	Full-Block Open Space	W. 33rd to W. 34th Streets, Eleventh to Twelfth Avenues	3.60	3.60	0.00
8	Block 675	W. 29th to W. 30th Streets, Eleventh to Twelfth Avenues	3.60	0.00	3.60
9	Convention Center Roof	W. 34th to W. 39th Street, Eleventh to Twelfth Avenues	2.00	2.00	0.00
		Total	17.55	13.95	3.60

Note: All numbers are rounded to the nearest hundredth of an acre.

The Proposed Action would include a new Midblock Park and Boulevard System between Tenth and Eleventh Avenues, from West 42nd Street to West 33rd Street (see No. 5 on Figure 7-2). The open space corridor is located immediately to the east of the Large Scale Plan (see Figures 7-3 and 7-4). By the year 2010, it is expected that the portion of this open space corridor between West 33rd and 34th Streets would be completed, providing 0.85 acres of passive open space. This portion of the Midblock Park and Boulevard System would be lined by office buildings and would include benches, plantings, and walkways.

At the southern foot of the open space corridor would be a large public square, located over the eastern portion of Caemmerer Yard. This 7.5-acre open space would span a superblock from West 30th to West 33rd Streets, between Tenth and Eleventh Avenues and serve as the heart of the new Hudson Yards community (No. 6 on Figure 7-2). This public square would potentially provide 7.5 acres of passive open space (see Figure 7-3). At this time, the design and specific program for the new open space have not been planned; therefore, some of the 7.5 acres could potentially be provided as active open space. The analysis conservatively assumes all the new open spaces, except for Block 675, would be passive open space. Ground floor retail uses of buildings surrounding the open space would further encourage activity in the public square.

West of the square would be two additional open spaces. The first, a full-block open space between West 33rd and West 34th Streets and Eleventh and Twelfth Avenues (No. 7 on Figure 7-2), would have pathways which terrace up toward the Multi-Use Facility and provide views of the Hudson River. This open space would provide 3.6 acres of passive open space (see Figure 7-3).

The second open space to the west would be a full-block park (Block 675) from West 29th to West 30th Streets between Eleventh and Twelfth Avenues, on the roof of the DSNY/NYPD facility (No. 8

on Figure 7-2). Located approximately two stories high, this park would offer spectacular views of the Hudson River (see Figures 7-3 and 7-5). It would also provide 3.6 acres of active open space. If the DSNY/NYPD facility is not relocated to Block 675, then this park would be built at grade.

Plans for the first phase of the expanded Convention Center, located between West 33rd and West 40th Streets between Eleventh and Twelfth Avenues, would provide approximately 2 acres of publicly accessible open space on its roof (No. 9 on Figure 7-1 and Figure 7-6) by 2010. This open space would be a promenade around the roof, with a widened sitting area in the middle. This promenade would surround gardens and landscaped areas, which, though not open to the public (and therefore excluded from the quantitative inventory of open spaces), would provide visual relief, waterfront views, potential wildlife and stormwater benefits, and a pleasant surrounding for visitors to the Convention Center.

3. Adequacy of Open Spaces

The Proposed Action would introduce significant new populations into the study areas. However, the increase in open space resources associated with the Proposed Action would provide sufficient open space for the introduced populations, and also help ameliorate the severe open space deficit within the study areas. In the Future With the Proposed Action, all open space ratios within the study areas would increase compared to the Future Without the Proposed Action, as shown in Table 7-11, reducing the area's open space deficit.

As discussed previously, if the High Line were developed as new open space, an additional 5.7 acres of passive open space would be added to the area's open space resources, and all of the open space ratios would be higher.

TABLE 7-11
SUMMARY TABLE, 2010

Study Area	Ratio	DCP Guideline	Existing Ratio	Future Without the Proposed Action Ratio	Future With the Proposed Action Ratio
Without High Line, 2010					
Non-Residential Study Area	Passive/Non-Residents	0.15	0.073	0.088	0.126
	Passive/Total Population	0.22*	0.057	0.068	0.101
Residential Study Area	Total/Residents	2.5	0.558	0.594	0.768
	Passive/Residents	0.5	0.398	0.396	0.534
	Active/Residents	2.0	0.160	0.198	0.234
	Passive Total Population	0.21*	0.068	0.073	0.092
With High Line, 2010					
Non-Residential Study Area	Passive/Non-Residents	0.15	0.073	0.115	0.149
	Passive/Total Population	0.22*	0.057	0.088	0.118
Residential Study Area	Total/Residents	2.5	0.558	0.642	0.811
	Passive/Residents	0.5	0.398	0.449	0.583
	Active/Residents	2.0	0.160	0.193	0.228
	Passive Total Population	0.21*	0.068	0.084	0.102

Notes:
* Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents.
Non-Residents typically use only passive spaces, so for the non-residential study area, only passive open space ratios are calculated. For the residential study area active, passive, and total park space ratios are calculated.

a) Non-Residential Study Area

Without High Line

With the Proposed Action, the total open space in 2010 within the non-residential study area would increase by 16.79 acres to a total of 51.12 acres over the 2010 Future Without the Proposed Action.

The passive open space ratio would increase by 43.18 percent to 0.126 acres per 1,000 non-residents, compared to the Future Without the Proposed Action. In comparison, if the Convention Center Expansion would be completed by 2010, the ratio would increase by 56.82 percent to 0.138 acres per 1,000 non-residents. The combined residential and non-residential passive open space ratio within the non-residential study area would increase by 48.53 percent to 0.101 acres per 1,000 residents and non-residents in 2010 in the Future With the Proposed Action, as shown in Table 7-13. In comparison, the combined ratio would increase by 61.76 percent to 0.110 acres per 1,000 residents if the Convention Center Expansion would be complete by 2010. Although these ratios are still well below DCP guidelines, the increase in open space would alleviate the open space deficit.

With High Line

With the High Line the ratio of passive open space per 1,000 non-residents would increase by 29.57 percent to 0.149. This would increase by 40.00 percent to 0.161 if the Convention Center Expansion would be complete by 2010. The combined residential and non-residential passive open space ratio within the non-residential study area would increase by 34.09 percent to 0.118 acres per 1,000 residents and non-residents in the Future With the Proposed Action. In comparison, if the Convention Center Expansion would be completed by 2010, the passive open space combined ratio would increase by 44.32 percent to 0.127 acres. Although these ratios are still well below the DCP guidelines (as shown in Table 7-13), the increase in both ratios would provide additional open space for the populations within the non-residential study area.

b) Residential Study Area

Without High Line

With the Proposed Action, the total open space within the residential study area would increase by 16.79 acres to a total of 69.96 acres (Table 7-12). In comparison, if the Convention Center Expansion would be completed by 2010, the total open space within the residential study area would increase by 19.79 acres to a total of 72.96 acres.

TABLE 7-12
2010 FUTURE WITH THE PROPOSED ACTION: ADEQUACY OF OPEN SPACE RESOURCES
WITHOUT HIGH LINE, WITHOUT MSG RELOCATION

	Total Population	Open Space Acreage			Open Space Ratios Per 1,000 People			DCP Open Space Guidelines		
		Total	Passive	Active	Total	Active	Passive	Total	Active	Passive
Non-Residential Study Area										
Non-residents	249,876	51.12	31.47	19.65	N/A	N/A	0.126	N/A	N/A	0.15
Combined Residents and Non-residents	313,011				N/A	N/A	0.101	N/A	N/A	0.221*
Residential Study Area										
Residents	91,132	69.96	48.65	21.31	0.768	0.234	0.534	2.50	2.00	0.50
Combined Residents and Non-Residents	529,348				N/A	N/A	0.092	N/A	N/A	0. 210*

Sources: AKRF, Inc. 2003

* Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. For the residential study area active, passive, and total open space ratios are calculated.

In the Future With the Proposed Action, all open space ratios would increase from those of the Future Without the Proposed Action. The ratio of total open space per 1,000 residents would increase by 29.29 percent to 0.768 (by 34.85 percent to 0.801 acres if the Convention Center Expansion would be complete by 2010). The passive and active open space per 1,000 residents would increase by 34.85 and 18.18 percent to 0.534 and 0.234, respectively (by 43.54 and 18.18 percent to 0.567 and 0.234,

respectively, if the Convention Center Expansion would be completed by 2010). The ratio of passive open space per 1,000 residents and non-residents would increase by 26.03 percent to 0.092 (34.25 percent to 0.098, respectively, if the Convention Center Expansion would be complete by 2010).

With High Line

With the High Line the ratio of total open space per 1,000 residents would increase by 26.32 percent to 0.811 (Table 7-13). This increase would be a 31.31 percent to 0.843 if the Convention Center Expansion would be complete by 2010. The ratio of passive and active space per 1,000 residents would increase by 29.84 percent and 18.13 percent to 0.583 and 0.228, respectively. This increase would be 36.97 percent and 18.13 percent to 0.615 and 0.228, respectively, if the Convention Center Expansion would be complete by 2010. The ratio of passive open space per 1,000 total open space users (both residents and non-residents) would increase by 21.43 percent to 0.102. In comparison, this increase would be 28.57 percent to 0.108 if the Convention Center Expansion would be complete by 2010. The open space ratios in the 2010 Future With the Proposed Action would still not meet the City's open space guidelines, but would be closer than in the Future Without the Proposed Action.

TABLE 7-13
2010 FUTURE WITH THE PROPOSED ACTION: ADEQUACY OF OPEN SPACE RESOURCES WITH HIGH LINE, WITHOUT MSG RELOCATION

	Total Population	Open Space Acreage			Open Space Ratios Per 1,000 People			DCP Open Space Guidelines		
		Total	Passive	Active	Total	Active	Passive	Total	Active	Passive
Non-Residential Study Area										
Non-residents	249,876	56.81	37.16	19.65	N/A	N/A	0.149	N/A	N/A	0.15
Combined Residents and Non-residents	315,181				N/A	N/A	0.118	N/A	N/A	0. 223*
Residential Study Area										
Residents	93,302	75.66	54.35	21.31	0.811	0. 228	0.583	2.50	2.00	0.50
Combined Residents and Non-Residents	531,518				N/A	N/A	0.102	N/A	N/A	0.211*

Source: AKRF, Inc. 2003

* Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. For the residential use study area active, passive, and total open space ratios are calculated.

In 2010 in the Future With the Proposed Action the City's open space ratio planning guidelines would not be met, even with the High Line included as new passive open space. Nearby open spaces outside the study area, such as Hudson River Park and Central Park, would serve as additional resources for resident and non-resident populations.

Nevertheless, the Proposed Action would have no significant adverse impacts on open space in the study area in 2010. Although the Proposed Action would introduce significant new populations into both the non-residential and residential study areas, the ample amount of new open space included as a component of the Proposed Action would more than make up for the additional populations. In fact, the Proposed Action would introduce enough open space to alleviate some of the existing deficit of open space in the non-residential and residential study areas.

Additionally, there are a large number of significant open space resources, such as Hudson River Park and Central Park, located just beyond the residential study area, which would be available to both the existing and the introduced populations.

4. Impact Significance

a) Quantitative Impacts

As described previously, although the Proposed Action would introduce significant new residential and non-residential populations into the Project Area, the additional open spaces proposed as a part of the Proposed Action would ensure that there would be no decrease in any open space ratio and that the majority of open space ratios in both the residential and non-residential study areas would in fact increase. Therefore, the Proposed Action would not have a significant adverse impact on open space ratios in 2010.

b) Qualitative Impacts

As a result of the Proposed Action, an expanded network of unified open spaces would be created. In addition to providing nearly 20 acres of open space, these parks and plazas would create an active hub in the center of the Hudson Yards commercial district. The large open space over the eastern portion of Caemmerer Yard would connect to existing and proposed open spaces, including the potential High Line open space and Hudson River Park. This increased connectivity of open space would greatly improve the open space stock in the study area.

Additionally, new residential development along Ninth Avenue and in the midblocks between Ninth and Tenth Avenues would be subject to the Quality Housing Program. Established in 1987 as a zoning text amendment, the Quality Housing Program promotes new residential development that provides private recreation space, which may be indoors or unenclosed. This private recreation space is required to meet standards for usability.

Further, this analysis excludes the potential network of small neighborhood open spaces over the Lincoln Tunnel infrastructure stretching from West 34th and West 39th Streets between Ninth and Tenth Avenues, proposed to be established pursuant to authorization by the City Planning Commission. A conceptual analysis for these open spaces is contained in Appendix A.3.

F. 2025 FUTURE WITHOUT THE PROPOSED ACTION

1. Study Area Population

a) Non-Residential Study Area

Specific development projects that would affect population in the non-residential study area between 2010 and 2025 are described in Chapter 3, "Analytical Framework." It is expected that other residential and commercial development would continue in the area, resulting in some additional population growth. Based on *CEQR Technical Manual* guidelines, a 0.5 percent annual growth rate was applied to both worker and residential populations expected to be in the area in 2010. Adjusting the 2010 populations to provide for a background growth rate of 0.5 percent per year, in addition to the populations generated by the no-action projects, the residential population in this area would be an estimated 65,476 if the High Line is not created (Special West Chelsea Base FAR Scenario) and 68,403 if the High Line is created by 2025, while the non-residential population would grow to an estimated 216,320. The 2025 combined residential and non-residential population in the non-residential study area is projected to be 281,796 without the High Line and 284,723 with the High Line.

b) Residential Study Area

There are no known residential, commercial, or other projects that have been identified for completion within the residential study area and outside of the non-residential study area. In addition to the specific development projects mentioned above and described in Chapter 3, "Analytical Framework," population increases were projected to allow for a background growth rate between

2010 and 2025. The projected 2025 residential population with a 0.5 percent per year growth rate would be an estimated 94,865 without the High Line and 97,793 with the High Line, and the projected non-residential population would be an estimated 407,475. The combined residential and non-residential populations are projected to be 502,340 with the High Line and 505,268 without the High Line.

2. Study Area Open Spaces

No additional changes to open space acreage in the study area have been identified between 2010 and 2025 in the Future Without the Proposed Action.

3. Adequacy of Open Spaces

By the year 2025 in the Future Without the Proposed Action, significant new residential and non-residential populations are expected to be introduced into the study areas, while the amount of open space would remain as in 2010. Therefore, a greater deficit of open space resources would occur for all user populations.

a) Non-Residential Study Area

In 2025, the combined residential and non-residential passive open space ratio would increase from 0.057 in existing conditions to 0.065, while the non-residential passive open space ratio would increase from 0.073 to 0.085. In the 2025 Future Without the Proposed Action, the passive open space ratio for non-residents alone and the combined residential and non-residential open space ratio would continue to fall short of DCP guidelines.

With the High Line included as new passive open space, the ratio of passive open space per 1,000 non-residents in 2025 would increase from 0.073 to 0.111. The ratio of passive open space per 1,000 combined residents and non-residents would increase from 0.057 to 0.084.

b) Residential Study Area

In 2025, the amount of available open space is expected to remain at the 2010 level. By 2025, the total open space ratio would increase from 0.558 to 0.561 acres per 1,000 residents. The combined residential and non-residential passive open space ratio would increase from 0.068 to 0.071, as shown in Table 7-14. The residential active open space ratio would increase from 0.160 to 0.186 acres per 1,000 residents, and the residential passive open space ratio would decrease from 0.398 to 0.374 acres per 1,000 residents. In the Future Without the Proposed Action in 2025, the active and passive open space ratios for the residential study area would be below the City's planning guidelines.

TABLE 7-14
2025 FUTURE WITHOUT THE PROPOSED ACTION: ADEQUACY OF OPEN SPACE RESOURCES WITHOUT HIGH LINE

	Total Population	Open Space Acreage			Open Space Ratios Per 1,000 People			DCP Open Space Guidelines		
		Total	Passive	Active	Total	Active	Passive	Total	Active	Passive
Non-Residential Study Area										
Non-Residents	216,320	34.33	18.28	16.05	N/A	N/A	0.085	N/A	N/A	0.15
Combined Residents and Non-Residents	281,796				N/A	N/A	0.065	N/A	N/A	0. 231*
Residential Study Area										
Residents	94,865	53.18	35.47	17.71	0.561	0.187	0.374	2.50	2.00	0.50
Combined Residents and Non-Residents	502,340				N/A	N/A	0.071	N/A	N/A	0. 216*

Source: AKRF, Inc. 2003

* Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents.
Non-Residents typically use only passive spaces, so for the non-residential study area, only passive open space ratios are calculated. For the residential study area active, passive, and total park space ratios are calculated.

In 2025, with the High Line included as new passive open space, the total residential open space ratio would increase from 0.558 to 0.602 acres per 1,000 residents (Table 7-15). The residential active open space ratio would increase from 0.160 to 0.181 acres per 1,000 residents, and the residential passive open space ratio would increase from 0.398 to 0.421 acres per 1,000 residents. The combined residential and non-residential passive open space ratio would increase from 0.068 to 0.081 acres. With the High Line included, the open space ratios for the residential study area would continue to not meet the City's planning guidelines in the 2025 Future Without the Proposed Action, as shown in Table 7-15.

TABLE 7-15
2025 FUTURE WITHOUT THE PROPOSED ACTION: ADEQUACY OF OPEN SPACE RESOURCES WITH HIGH LINE

	Total Population	Open Space Acreage			Open Space Ratios Per 1,000 People			DCP Open Space Guidelines		
		Total	Passive	Active	Total	Active	Passive	Total	Active	Passive
Non-Residential Study Area										
Non-Residents	216,320	40.03	23.98	16.05	N/A	N/A	0.111	N/A	N/A	0.15
Combined Residents and Non-Residents	284,723				N/A	N/A	0.084	N/A	N/A	0. 234*
Residential Study Area										
Residents	97,793	58.87	41.16	17.71	0.602	0.181	0.421	2.50	2.00	0.50
Combined Residents and Non-Residents	505,268				N/A	N/A	0.081	N/A	N/A	0.218*

Source: AKRF, Inc. 2003

* Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents.
Non-Residents typically use only passive spaces, so for the non-residential study area, only passive open space ratios are calculated. For the residential study area active, passive, and total park space ratios are calculated.

G. 2025 FUTURE WITH THE PROPOSED ACTION

As a result of the Proposed Action, additional large new residential and non-residential populations would be introduced to the study area by the year 2025. However, there would also be a substantial increase in new open spaces included with the Proposed Action.

1. Study Area Population

The Proposed Action would introduce new residential, worker, and visiting populations to the study area by 2025, including those populations added before the year 2010. The introduced working population would serve the additional commercial, retail, community facility, utility, and hotel uses that would be expected as a direct result of the Proposed Action.

It is assumed that all proposed projects included in the Future Without the Proposed Action that are expected to be completed between 2010 and 2025 would be realized in the Future With the Proposed Action.

a) Non-Residential Study Area

Non-Residential Population

A net increase of 152,151 new workers and visitors would be introduced to the study area in 2025 as a result of the Proposed Action. This total includes those workers introduced prior to 2010, and the approximately 8,625 daily visitors at the Multi-Use Facility. These new workers and visitors would bring the total non-residential population to 382,461.

Residential Population

The Proposed Action would introduce a net increase of 17,493 new residents to the study area. In total, these would be an estimated 86,890 without the High Line and 89,818 with the High Line residents in 2025.

Total User Population

The 2025 combined residential and non-residential population in the non-residential study area is projected to be 469,351 without the High Line and 472,279 with the High Line.

b) Residential Study Area

Non-Residential Population

In the Future With the Proposed Action, the non-residential population in the residential study area would increase to 588,128 (with a net increase 152,151 workers and visitors).

Residential Population

It is projected that by the year 2025 with a net increase of 17,493 residents, the residential population within the residential study area would have reached 118,270 without the High Line and 121,198 with the High Line.

Total User Population

In 2025, the combined residential and non-residential population in the residential study area would be an estimated 706,398 without the High Line and 709,326 with the High Line.

2. Study Area Open Spaces

Between the years 2010 and 2025, the proposed Midblock Park and Boulevard System and other open spaces would be completed (see Chapter 2, "Description of Proposed Action"). This would include a Midblock Park and Boulevard System between West 34th and West 39th Streets, additional park land on Lot 20 between West 41st and West 42nd Streets, a pedestrian bridge over the Lincoln Tunnel approaches connecting the West 42nd Street park to the West 39th Street park and the remainder of the Convention Center roof. The pedestrian bridge would complete a major north-south corridor of linear open space spanning from West 42nd Street to West 34th Street. The newly constructed portion of the Midblock Park and Boulevard System would provide an additional 3.46 acres of open space to the study area and the Convention Center roof would add an additional 3 acres. As

previously described, the design and specific program for the Midblock Park and Boulevard System has not been planned at this time. Therefore, some of the 3.46 acres could potentially be provided as active open space, but the analysis conservatively assumes all of the Midblock Park and Boulevard System would be passive open space. This open space would include amenities such as seating areas, lawns, and plantings. New buildings framing the park and boulevard would be required to have entrances and ground floor retail on the boulevard, so that it would be well used by residents and workers alike.

Additionally, there could be new open space established pursuant to authorization by the City Planning Commission. A network of small neighborhood open spaces would be allowed over the Lincoln Tunnel approaches, running from West 34th Street to West 39th Street between Ninth and Tenth Avenues (see conceptual analysis in Appendix A.3). These potential open spaces are discussed in the following qualitative analysis, but are conservatively excluded from the quantitative study.

3. Adequacy of Open Spaces

In the 2025 Future With the Proposed Action, the amount of open space added by the Proposed Action would increase most of the open space ratios in the study area. The study area, historically underserved in terms of open space, would see a net increase of 23.24 acres of new open space as compared to the Future Without the Proposed Action. The new open space resources would be both active and passive, and would be distributed throughout the Project Area in such a way that they would provide a connected system of linked parks and open spaces. As shown in Table 7-17, all open space ratios would increase with the Proposed Action, with the exception of the active open space ratio per 1,000 residents.

a) Non-Residential Study Area

Without High Line Park

Unlike in the 2025 Future Without the Proposed Action, all open space ratios would increase with the Proposed Action in 2025. The total open space within the non-residential study area would increase to 57.57 acres. The non-residential passive open space ratio would increase from 0.085 to 0.009 acres per 1,000 non-residents. The combined residential and non-residential passive open space ratio would increase from 0.065 to 0.081 acres per 1,000 total users, as seen in Table 7-16. While open space resources would improve compared to the Future Without the Proposed Action, overall, the amount of open space in this area would still fail to meet the City's open space guidelines.

TABLE 7-16
2025 PROPOSED ACTION OPEN SPACE RESOURCES

Map Key	Name	Location	Acres	Acres	
			Total Acres	Passive	Active
2010					
5	Midblock Park and Boulevard System	W. 33rd to W. 34th Streets, Tenth to Eleventh Avenues	0.85	0.85	0.00
6	Eastern Caemmerer Yard	W. 30th to W. 33rd Streets, Tenth to Eleventh Avenues	7.50	7.50	0.00
7	Full-Block Open Space	W. 33rd to W. 34th Streets, Eleventh to Twelfth Avenues	3.60	3.60	0.00
8	Block 675	W. 29th to W. 30th Streets, Eleventh to Twelfth Avenues	3.60	0.00	3.60
9	Convention Center Roof	W. 34th to W. 39th Streets, Eleventh to Twelfth Avenues	2.00	2.00	0.00
		Total	17.55	13.95	3.60
2025					
10	Midblock Park and Boulevard System Completion	W. 34th to W. 42nd Streets, Tenth to Eleventh Avenues	3.46	3.46	0.00
11	Convention Center Roof Completion	W. 39th to W. 41st Streets, Eleventh to Twelfth Avenues	3.00	3.00	0.00
		Total	24.01	20.41	3.60

Note: All numbers are rounded to the nearest hundredth of an acre.

TABLE 7-17
SUMMARY TABLE, 2025

Study Area	Ratio	DCP Guideline	Existing Ratio	Future Without the Proposed Action Ratio	Future With the Proposed Action Ratio
Without High Line, 2025					
Non-Residential Study Area	Passive/Non-Residents	0.15	0.073	0.085	0.099
	Passive/Total Population	0.215*	0.057	0.065	0.081
Residential Study Area	Total/Residents	2.50	0.558	0.561	0.646
	Passive/Residents	2.00	0.398	0.374	0.466
	Active/Residents	0.50	0.160	0.187	0.180
	Passive Total Population	0.208*	0.068	0.071	0.078
With High Line, 2025					
Non-Residential Study Area	Passive/Non-Residents	0.15	0.073	0.111	0.114
	Passive/Total Population	0.215*	0.057	0.084	0.092
Residential Study Area	Total/Residents	2.50	0.558	0.602	0.678
	Passive/Residents	2.00	0.398	0.421	0.502
	Active/Residents	0.50	0.160	0.181	0.176
	Passive Total Population	0.208*	0.068	0.081	0.086

* Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents.
Non-Residents typically use only passive spaces, so for the non-residential study area, only passive open space ratios are calculated. For the residential study area active, passive, and total park space ratios are calculated.

With High Line

With the Proposed Action, the total open space within the non-residential study area would increase by 23.24 acres to a total of 63.27 acres. The ratio of passive open space per 1,000 non-residents would increase by 2.70 percent to 0.114. The combined residential and non-residential passive open space ratio within the non-residential study area would increase by 9.52 percent to 0.092 acres per 1,000 residents and non-residents. Although these ratios are still well below the DCP guidelines, the increase in the amount of open space would help alleviate the deficit.

b) Residential Study Area

Without High Line

With the Proposed Action, the total open space within the residential study area would increase to a total of 76.42 acres, and all passive open space ratios would increase.

Compared to the 2025 Future Without the Proposed Action, the ratio of total open space per 1,000 residents would increase from 0.561 to 0.646, an increase of 15.15 percent. The ratio of passive open space per 1,000 residents would increase from 0.374 to 0.466; however, the ratio of active open space per 1,000 residents would decrease by 3.74 percent from 0.187 to 0.180. The ratio of passive open space per 1,000 residents and non-residents combined would increase from 0.071 to 0.078, as shown in Table 7-18.

TABLE 7-18
2025 FUTURE WITH THE PROPOSED ACTION: ADEQUACY OF OPEN SPACE RESOURCES WITHOUT HIGH LINE, WITHOUT MSG RELOCATION

	Total Population	Open Space Acreage			Open Space Ratios Per 1,000 People			DCP Open Space Guidelines		
		Total	Passive	Active	Total	Active	Passive	Total	Active	Passive
Non-Residential Study Area										
Non-Residents	382,461	57.57	37.92	19.65	N/A	N/A	0.099	N/A	N/A	0.15
Combined Residents and Non-Residents	469,351				N/A	N/A	0.081	N/A	N/A	0.215*
Residential Study Area										
Residents	118,270	76.42	55.11	21.31	0.646	0.180	0.466	2.50	2.00	0.50
Combined Residents and Non-Residents	706,398				N/A	N/A	0.078	N/A	N/A	0.209*

Source: AKRF, Inc. 2003

* Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. For the residential study area active, passive, and total park space ratios are calculated.

In the 2025 Future Without the Proposed Action, the City's open space ratio guidelines would not be met. Nearby open spaces outside the study area, such as Hudson River Park and Central Park, would help to alleviate the deficit.

The Proposed Action would not have any significant adverse impacts on open space in the study area. Although the Proposed Action would introduce significant new populations into both the non-residential and residential study areas, the ample amount of new open space proposed as a component of the Proposed Action would well compensate for the additional populations. In fact, the Proposed Action would introduce enough open space to alleviate some of the existing deficit of open space in the non-residential and residential study areas.

Additionally, as described above, there are a large number of significant open space resources located just beyond the residential study area that would be available to both the existing and the introduced populations.

In the 2025 Future With the Proposed Action with the High Line included as open space, all ratios would be slightly higher than without the High Line counted as open space, as shown in Table 7-16.

With High Line

In the 2025 Future With the Proposed Action, the total open space within the residential study area would increase by 23.24 acres to a total of 82.11 acres, as presented in Table 7-19.

The ratio of total open space per 1,000 residents would increase by 12.62 percent to 0.678. The ratio of passive open space per 1,000 residents would increase by 19.24 percent to 0.502. The ratio of active open space would decrease by 2.76 percent to 0.176 acres per 1,000 residents. The ratio of passive open space per 1,000 total open space users (both residents and non-residents) would increase by 6.17 percent to 0.086. Overall, with the exception of passive open space for residents, the amount of open space in this area would still be below the City's open space guidelines, but by far less than in the Future Without the Proposed Action.

In the 2025 Future With the Proposed Action, even with the High Line included as new passive open space, the City's open space ratio guidelines would not be met. Nearby open spaces outside the study area, such as Hudson River Park and Central Park, would help to alleviate the problem.

4. Impact Significance

a) Quantitative

As described in the Quantitative Assessment, although the Proposed Action would introduce significant new residential and non-residential populations into the Project Area, the additional open space proposed as a part of the Proposed Action would increase passive open space ratios in both the residential and non-residential study areas. This net gain of open space would include the displacement of the existing Javits Plaza, which would be redeveloped as part of the Proposed Action.

The active open space ratio in the Future With the Proposed Action would increase less than in the Future Without the Proposed Action. The analysis conservatively assumes all the new open space, with the exception of Block 675, to be passive open space, since these spaces have not been designed or programmed at this time. Much of the 20.41 acres of new passive open space could be programmed for active open space. Overall, no significant adverse impacts on open spaces are expected to occur in 2025 as a result of the Proposed Action.

b) Qualitative

The Proposed Action would introduce to Hudson Yards a highly connected system of open space that would serve residents, workers, and visitors alike. Currently, the Project Area has very little publicly accessible open space. Aside from Hudson River Park, which serves a mostly residential population and provides both active and passive open space resources, no connected system of open space currently exists in the study area. Creating a new extensive open space network to provide green spaces is one of the planning objectives for the rezoning and redevelopment of the Project Area.

As demonstrated in the quantitative analysis (see Table 7-1), the creation of the new open space would meet the passive open space needs for future populations anticipated to live and work in Hudson Yards. Future programming would ensure that each portion of the open spaces would be appropriate for the population it would serve.

TABLE 7-19
2025 FUTURE WITH THE PROPOSED ACTION: ADEQUACY OF OPEN SPACE RESOURCES WITH HIGH LINE, WITHOUT MSG RELOCATION

	Total Population	Open Space Acreage			Open Space Ratios Per 1,000 People			DCP Open Space Guidelines		
		Total	Passive	Active	Total	Active	Passive	Total	Active	Passive
Non-Residential Study Area										
Non-residents	382,461	63.27	43.62	19.65	N/A	N/A	0.114	N/A	N/A	0.15
Combined Residents and Non-residents	472,279				N/A	N/A	0.092	N/A	N/A	0.217*
Residential Study Area										
Residents	121,279	82.11	60.80	21.31	0.678	0.176	0.502	2.5	2.00	0.50
Combined Residents and Non-Residents	709,326				N/A	N/A	0.086	N/A	N/A	0.210*

Source: AKRF, Inc. 2003

Notes:

* Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. For the residential study area active, passive, and total open space ratios are calculated.

The new open space would also create an extensive north-south network that would provide connectivity and improve accessibility to Hudson River Park to the west, Clinton to the north, and Chelsea to the South (see Figure 7-2). The approximately 7.5-acre open space over the eastern portion of Caemmerer Yard would connect to the potential High Line, to the Midblock Park and Boulevard System, and to two new full-block open spaces, as discussed previously. The new active public park on Block 675 would provide the opportunities for a physical connection to the High Line. In addition to the new open space network providing physical continuity, it would also provide an integrated system of both active and passive recreation opportunities and facilities.

Further, this analysis excludes the potential network of small neighborhood open spaces over the Lincoln Tunnel infrastructure stretching from West 34th to West 39th Streets between Ninth and Tenth Avenues. These open spaces would be established pursuant to authorization by the City Planning Commission, and are analyzed and described in Appendix A.3.

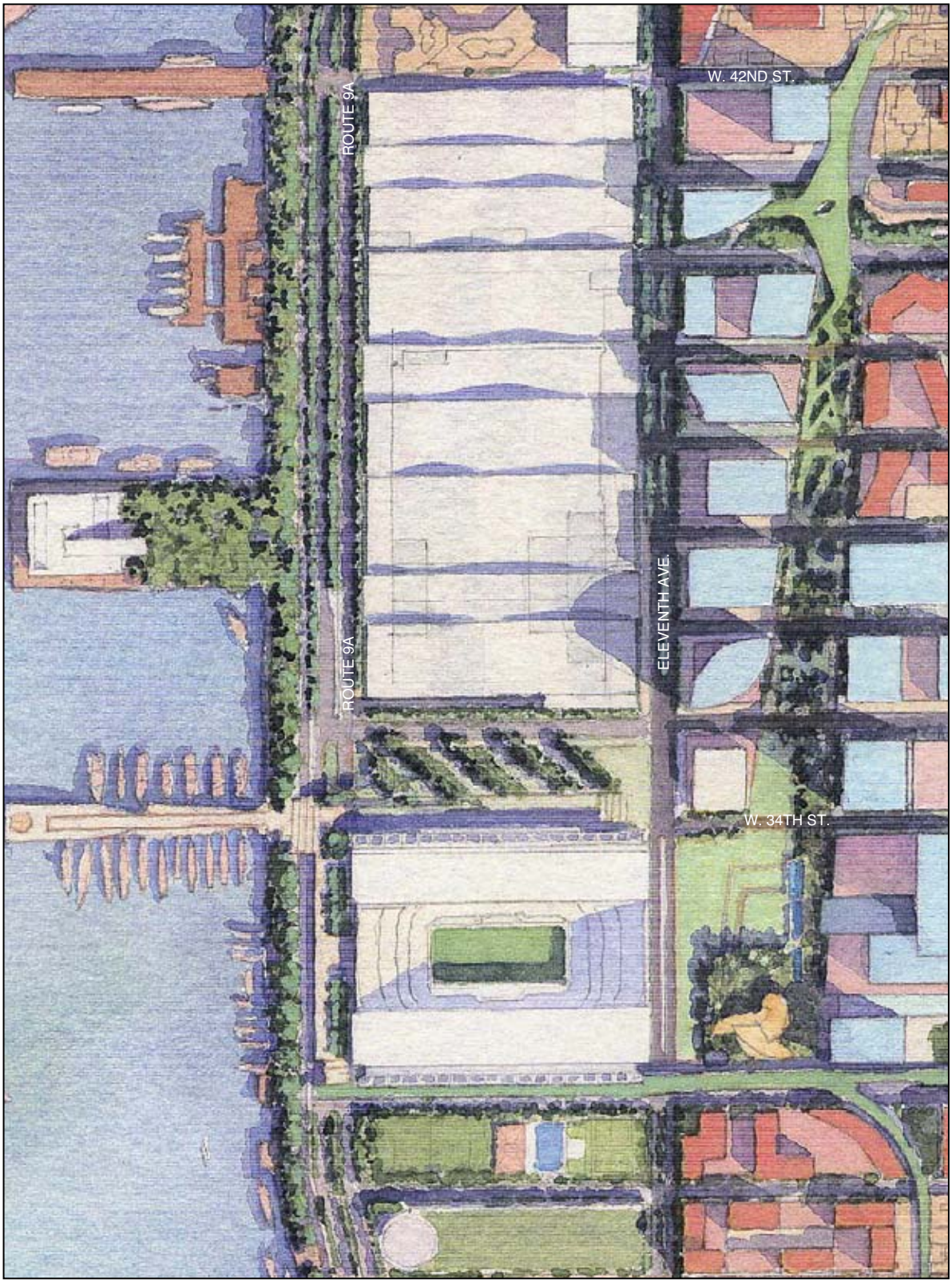
Overall, the Proposed Action would create over 23 acres of active and passive open space in the Proposed Action's open space study area, providing a substantial amount of high-quality open space resources and recreational opportunities for both residents and non-residents. Therefore, the Proposed Action is not anticipated to result in significant adverse open space impacts. ❖

Exisiting Conditions: Open Space Resources

Figure 7-1

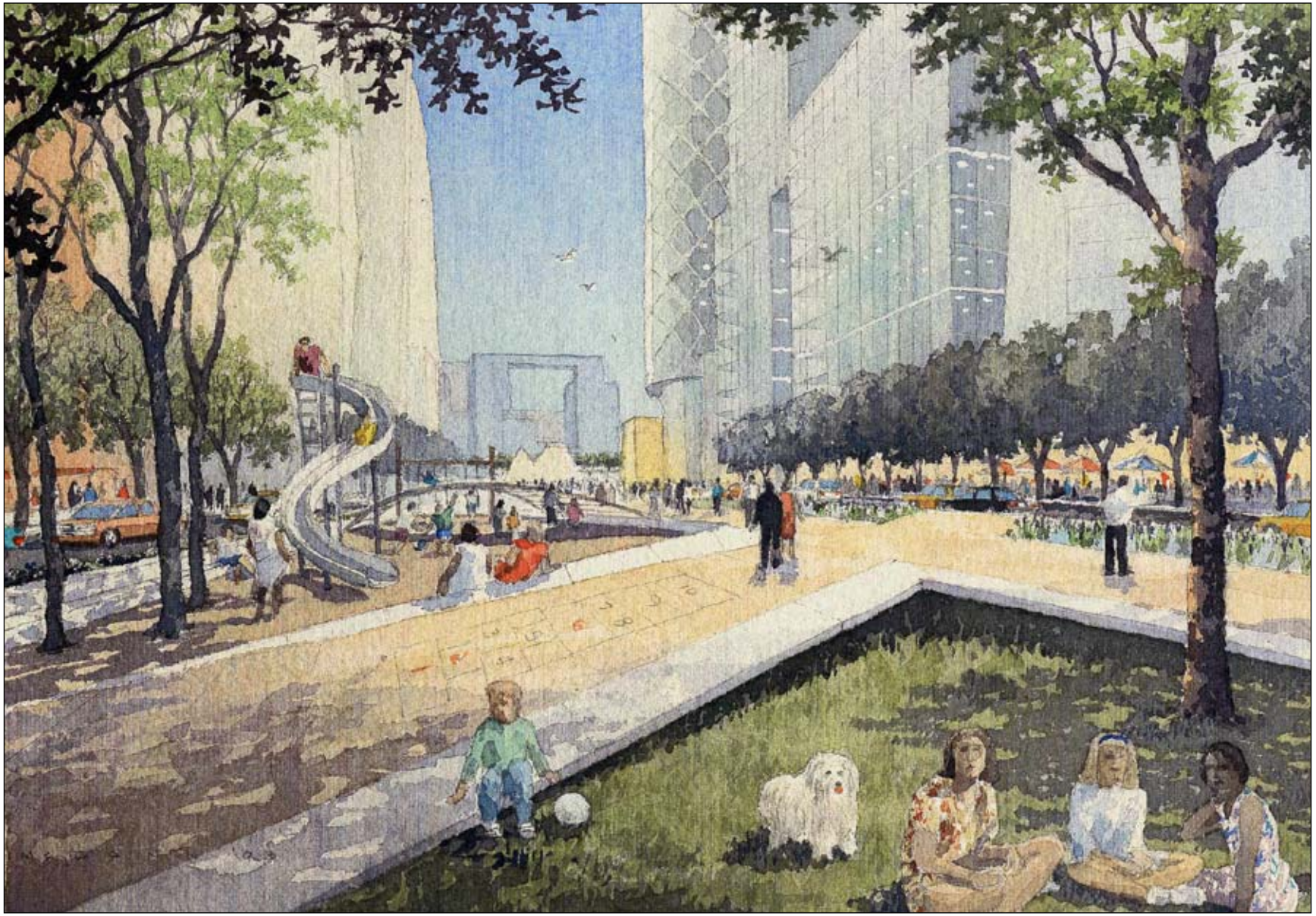
Future With the Proposed Action: Open Space Resources

Figure 7-2

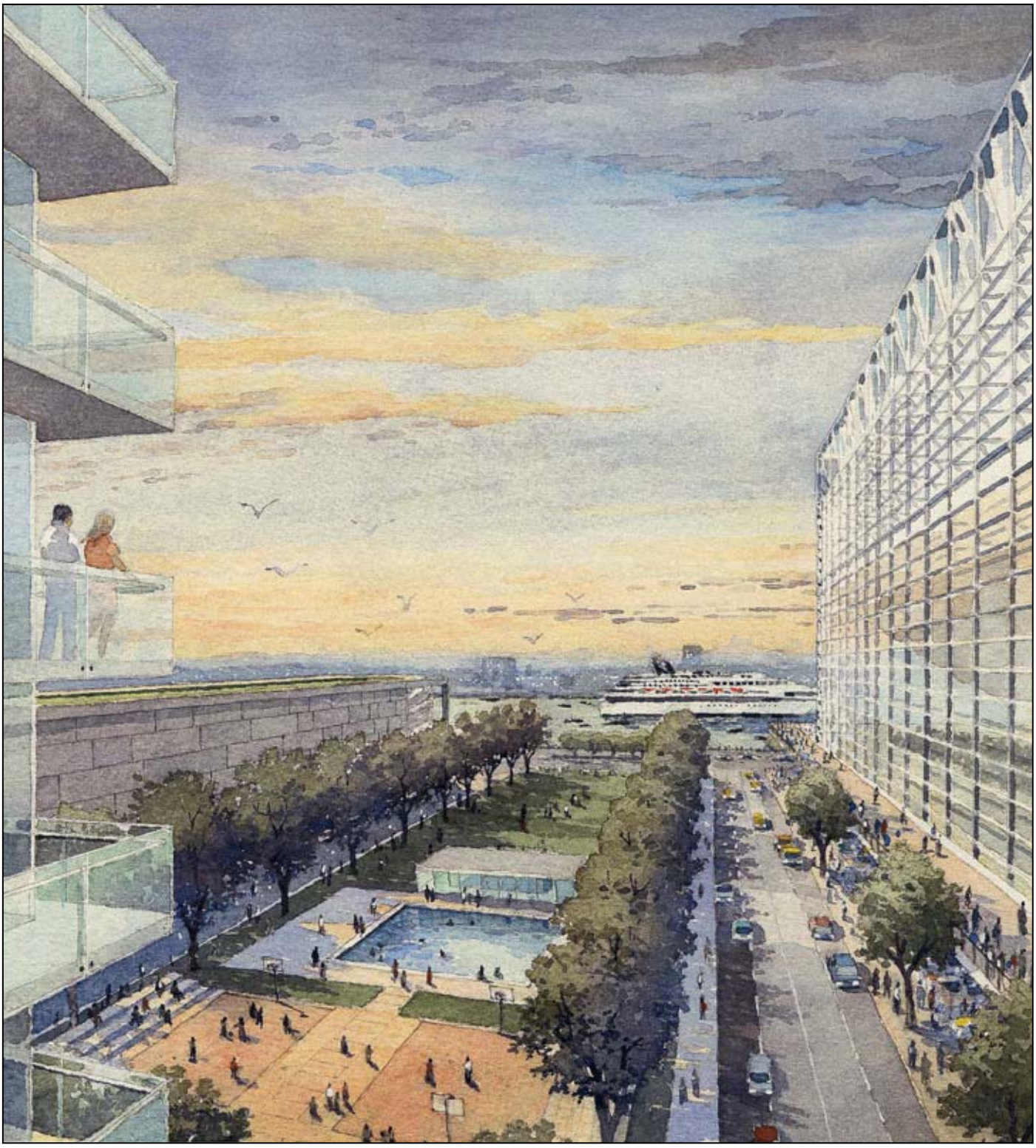


Ilustrative View: Proposed Open Space Network

Figure 7-3

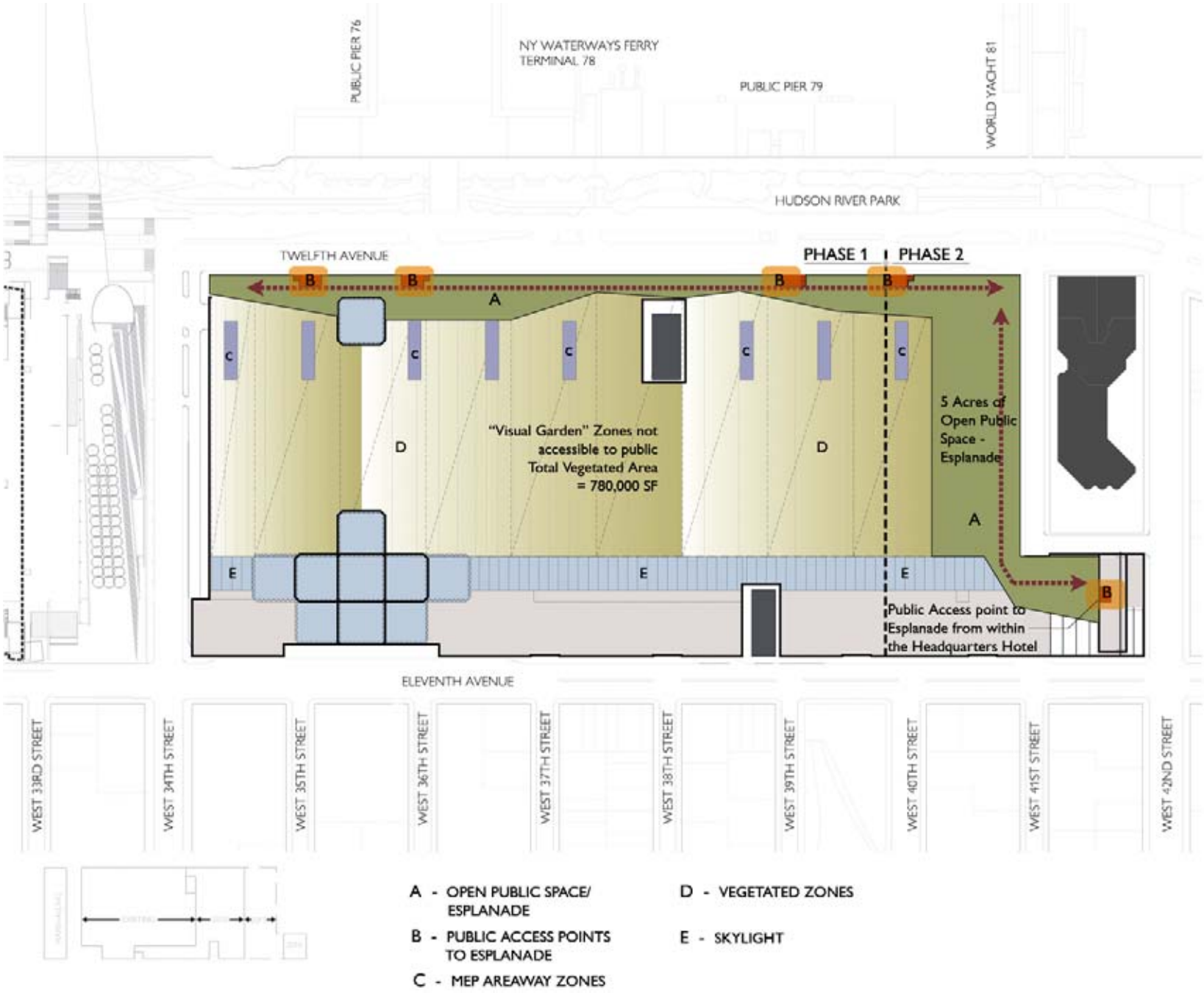


Illustrative View: Proposed Midblock Boulevard
36th Street Looking South
Figure 7-4



Illustrative View: Proposed 30th Street Park (Block 675)

Figure 7-5



Convention Center: Rooftop Open Space

Figure 7-6