Chapter 5: Open Space

A. INTRODUCTION

The 2001 *New York City Environmental Quality Review (CEQR) Technical Manual* guidelines indicate the need for an open space analysis when an action would result in the physical loss of public open space or would introduce 200 or more residents or 500 or more workers to an area. The reasonable worst-case development scenario (RWCDS) analyzed in this Environmental Impact Statement (EIS) for the Hunter's Point South Rezoning and Related Actions would result in an increase in the number of residents and employees in the study area that would exceed the thresholds requiring a detailed analysis. Therefore, an open space analysis was conducted to determine whether the RWCDS would result in any direct or indirect significant adverse open space impacts. This chapter assesses existing conditions and compares conditions in the future with and without the proposed actions to determine potential impacts for the 2017 analysis year.

As identified in Chapter 1, "Project Description," and discussed in further detail in this chapter, a key component of the proposed actions is the provision of 11.0 acres of mapped parkland on Site A and another 2.42 acres of publicly accessible open space on Site B. This new open space would provide passive and active recreational opportunities and pedestrian and bicycle path connections.

PRINCIPAL CONCLUSIONS

The proposed actions would create a total of 13.41 acres of new open spaces on Sites A and B, of which 8.03 acres would be for passive recreation and 5.38 acres of which would be for active recreation. These open spaces would include a large waterfront park along the Site A's entire East River shoreline, waterfront walkways and park spaces along the two sites' entire Newtown Creek shoreline, and smaller park spaces within the site. With the addition of these new open spaces and the residential and worker population expected as a result of the proposed actions, the RWCDS would increase the overall open space condition in the commercial and residential study areas analyzed.

Table 5-1 provides a comparison of open space ratios in the future without and with the proposed actions. As shown in the table, the proposed actions would increase passive open space ratios in the commercial (¼-mile) study area, and the open space ratios in this area would exceed the City's recommended guidelines. The proposed actions would also improve open space ratios in the ½-mile study area, where the total open space ratio would increase slightly (by 1.2 percent) and the active open space ratio would increase by 5.0 percent. The passive open space ratio would decrease slightly (by 1 percent) but would remain well above the City's guideline values.

Table 5-1
2017 Future With the Proposed Actions: Open Space Ratios Summary

Ratio	City Guideline	Open Space Ratios			Percent Change
		Existing Conditions	Future Without the Proposed Actions	Future With the Proposed Actions	Future Without to Future With the Proposed Actions
Commercial (1/4-Mile) Study Area					
Passive/Workers	0.15	0.54	1.13	1.92	70.6%
Passive/Total Population	Weighted 0.25 / 0.37 / 0.41*	0.38	0.41	0.48	15.7%
Residential (1/2-Mile) Study Area					
Total/Residents	2.5	1.60	1.01	1.02	1.2%
Passive/Residents	0.5	1.23	0.634	0.627	-1.0%
Passive/Total Population	Weighted: 0.25 / 0.36 / 0.40*	0.35	0.38	0.45	18.9%
Active/Residents	2.0	0.36	0.37	0.39	5.0%

Notes: Ratios in acres per 1,000 people.

* Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. Because this guideline depends on the proportion of non-residents and residents in the study area's population, it is different for existing, No Build, and Build conditions. Each of these ratios is listed in this table.

Although the total and active open space ratios would continue to be below the levels recommended by the City in the future with the proposed actions, it is recognized that these goals are not feasible for many areas of the City, and they are not considered impact thresholds. Further, by adding a substantial new large-scale park space, the proposed actions would result in a significant improvement to the area's open space condition that is not clearly reflected in the quantitative analysis. Therefore, the proposed actions would not result in a significant adverse impact on open spaces in either the commercial or residential study area.

B. METHODOLOGY

DIRECT EFFECTS ANALYSIS

According to the *CEQR Technical Manual*, a proposed action would have a direct effect on an open space if it causes the physical loss of public open space because of encroachment onto the space or displacement of the space; changes the use of an open space so that it no longer serves the same user population; limits public access to an open space; or causes increased noise or air pollutant emissions, odors, or shadows that would affect its usefulness, whether on a permanent or temporary basis. This chapter uses information from Chapter 6, "Shadows," Chapter 18, "Air Quality," and Chapter 19, "Noise," to determine whether the proposed actions would directly affect any open spaces near the project sites. The direct effects analysis is included in section E, "Probable Impacts of the Proposed Actions," of this chapter.

The potential for the proposed actions to result in direct impacts on open space during the construction period is assessed in Chapter 20, "Construction."

INDIRECT EFFECTS ANALYSIS

Following the methodology of the *CEQR Technical Manual*, indirect impacts occur to an area's open spaces when a proposed action would add enough population, either workers or residents, to noticeably diminish the ability of an area's open space to serve the existing or future population. The *CEQR Technical Manual* recommends an analysis of indirect effects if a proposed action would introduce 200 or more residents or 500 or more workers to an area. The *CEQR Technical Manual* methodology suggests conducting an initial quantitative assessment to determine whether more detailed analyses are appropriate, but also recognizes that for projects that introduce a large population in an area that is underserved by open space, it may be clear that a full, detailed analysis should be conducted. The RWCDS analyzed in this EIS would introduce almost 13,000 new residents to the Hunter's Point neighborhood in Queens. Because of the magnitude of this new population, a full, detailed open space analysis was conducted of the proposed actions' potential indirect effects on the area's open space resources.

Using the methodology of the *CEQR Technical Manual*, the adequacy of open space in the study area is assessed quantitatively using a ratio of usable open space acreage to the study area population—the open space ratio. This quantitative measure is then used to assess the changes in the adequacy of open space resources in the future, both with and without the proposed actions. In addition, qualitative factors are also considered in making an assessment of a proposed action's effects on open space resources.

STUDY AREAS

The *CEQR Technical Manual* recommends establishing study area boundaries as the first step in an open space analysis. Worker and residential populations use different open space study areas. Workers typically use passive open spaces within walking distance of their workplaces; this area is roughly ¼ mile. Therefore, projects that would add substantial worker populations analyze their effects on passive open spaces located within ¼ mile of the project site. 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. Therefore, projects that would add substantial residential populations analyze their effects on active and passive open spaces located within ½ mile of the project site. For the Hunter's Point South Rezoning and Related Actions, the RWCDS would add sizable worker and residential populations. Therefore, as recommended in the *CEQR Technical Manual*, two study areas were used—a commercial (¼-mile) and residential (½-mile) study area.

Commercial (¼-Mile) Study Area

Following the methodology in the *CEQR Technical Manual*, the commercial study area for the proposed actions was developed by indicating on a map a radius of ¼ mile from the boundary of the project sites. The *Manual* recommends using that radius to identify all census tracts with at least 50 percent of their area inside the ¼-mile radius. For this EIS, a smaller census unit—census block groups—was used instead of census tracts. This is because for this area of Queens, the census tracts, including the census tract in which the project site is located, cover a very large area and do not have more than 50 percent of their area within a ¼-mile of the project sites.

The census block groups with at least 50 percent of their area within ¼-mile of the project site are shown on **Figure 5-1**. These two block groups are Block Group 2 in Census Tract 1 and Block Group 4 in Census Tract 7. Although the ¼-mile radius extends into Brooklyn, Brooklyn

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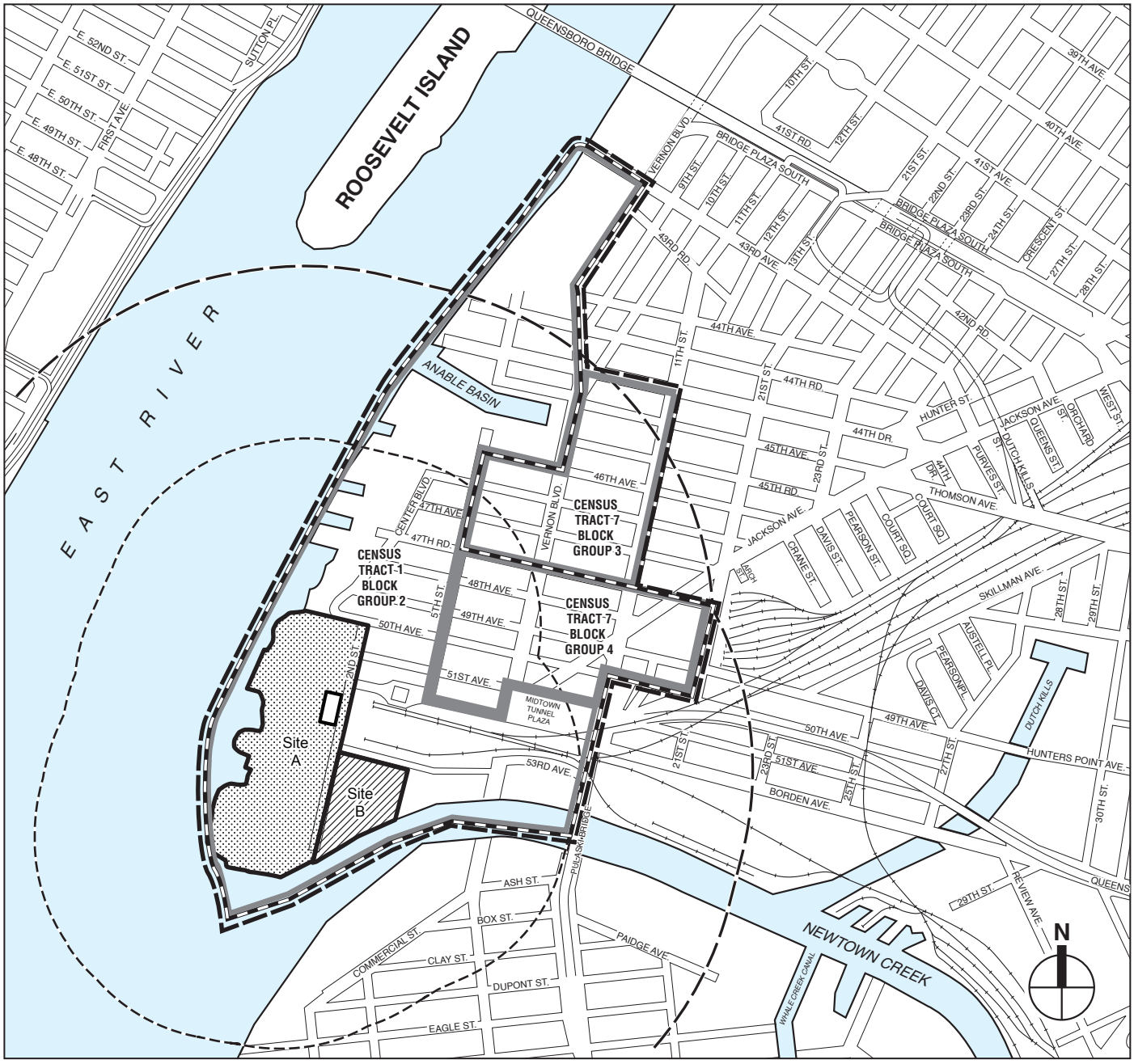


Site A

Site B

1/4-Mile Perimeter

1/2-Mile Perimeter

Commercial Study Area Boundary

Residential Study Area Boundary

Block Group Boundary

Open Space Study Areas

HUNTER'S POINT SOUTH REZONING AND RELATED ACTIONS

Figure 5-1

was not included in the commercial study area, since Newtown Creek separates Queens and Brooklyn, making the area in Brooklyn generally inaccessible for workers at Site A or B.

Residential (½-Mile) Study Area

Similar to the commercial study area, the residential study area for the proposed actions was developed by indicating on a map a radius of ½ mile from the boundary of the project sites. All census block groups that fall at least 50 percent within that radius were included in the residential study area. As shown in **Figure 5-1**, the residential study area consists of a total of three block groups, including the two block groups from the commercial study area: Block Group 2 in Census Tract 1 and Block Groups 3 and 4 in Census Tract 7.

While some area of Brooklyn is located within the ½-mile radius of the project sites, Brooklyn was not included in the residential study area, since that residents accessing these areas in Brooklyn would need to walk farther than ½ mile to cross the Pulaski Bridge over Newtown Creek and reach the Brooklyn portion of the radius.

OPEN SPACE USER POPULATIONS

Existing Conditions

Census data were used to identify potential open space users within the study areas. Open space user groups include area residents and employees. To determine the number of residents currently located within the study areas, data were compiled from the 2000 Census for the block groups in each study area. The age distribution of the residential population was noted, as children and elderly residents are typically more dependent on local open space resources. The 2000 population obtained from the census was then adjusted for the two study areas to reflect any changes that have happened between 2000 and 2006, as follows. Real Property Assessment Data (RPAD) from the New York City Department of Finance were used to identify new residential units constructed between 2000 and 2006. The average household size for the ½-mile study area (1.95 persons per household), as reported in the 2000 Census, was applied to those new units to identify the number of new residents added to the study area since the 2000 Census. The existing population for both the ¼-mile and ½-mile study areas was determined by adding the number of residents reported in the 2000 Census and the residents occupying the new units that were completed since then.

In addition, the number of employees in each of the study areas was also determined based on the 2000 Census data for worker populations.

This analysis conservatively assumes that residents and workers are entirely distinct populations and that no one both lives and works within the study area. While this assumption could double-count the daily user population, it also provides a more conservative analysis.

The Future Without the Proposed Actions

As discussed in Chapter 2, "Land Use, Zoning, and Public Policy," and further detailed in Appendix 2, a number of new developments are expected to be constructed by 2017 in the ¼-mile and ½-mile study areas. To estimate the population expected in the study areas in the future without the proposed actions, the average household size for the ½-mile study area was applied to the number of new housing units expected.

The Future With the Proposed Actions

The population introduced by the reasonable worst-case development scenario was also estimated by multiplying the number of units by the study area's average household size.

INVENTORY OF OPEN SPACE RESOURCES

All publicly accessible open spaces and recreational facilities located within the study areas were inventoried. The inventory of open spaces was compiled based on field visits conducted in October 2007 and information from the New York City Department of Parks and Recreation (NYCDPR), the New York City Department of City Planning (NYCDCP), the New York State Office of Parks, Recreation and Historic Preservation (OPRHP), and the Empire State Development Corporation, the agencies responsible for the open spaces within the study areas. Published environmental impacts statements for projects in or near the study areas were also consulted.

The *CEQR Technical Manual* defines a publicly accessible open space as one "that is accessible to the public on a constant and regular basis or for designated daily periods." Open spaces that are not publicly accessible or available to a limited number of people are not included in the quantitative analysis. An open space that charges a fee for access is an example of such a space.

The size, character, and condition of the publicly accessible open spaces and recreational facilities within the commercial and residential study areas were determined during field visits conducted in October 2007. Active and passive amenities were noted at each open space. Active facilities are intended for vigorous activities, such as jogging, field sports, and children's active play. Such facilities might include basketball and handball courts, jogging paths, ball fields, and playground equipment. Passive facilities encourage such activities as strolling, reading, sunbathing, and people watching. Passive open spaces are characterized by picnic areas, walking paths, beaches or gardens. Certain areas, such as lawns or public esplanades, can serve as both active and passive open spaces.

In addition to the open spaces located within the commercial and residential study areas, open spaces falling outside the study areas were considered qualitatively, because these spaces provide additional resources to the residential and worker populations.

Open spaces that will be added to the study area as part of the projects expected to be complete by 2017 (e.g., open space development planned as part of the continued build out of Queens West) are included in the open space inventory for the future without the proposed actions.

Open spaces proposed as part of the proposed actions are included in the open space inventory for the future Build condition.

ADEQUACY OF OPEN SPACE RESOURCES

Comparison to City Guidelines

The adequacy of open space in the study area was quantitatively assessed. In the quantitative approach, the ratio of useable open space acreage to the study area population—referred to as the open space ratio—is compared with to guidelines established by NYCDCP. The following guidelines are used in this type of analysis:

- For non-residential populations, 0.15 acres of passive open space per 1,000 non-residents is typically considered adequate.

- For residential populations, two sets of guidelines are used. The first guideline is a Citywide median open space ratio of 1.5 acres per 1,000 residents. Throughout New York City, local open space ratios vary widely, and the median ratio at the Community District level is 1.5 acres of open space per 1,000 residents. The second guideline is an optimal planning goal established by NYCDCP of 2.5 acres per 1,000 residents—2.0 acres of active and 0.5 acres of passive open space per 1,000 residents—for large-scale plans and proposals. However, these goals are often not feasible for many areas of the City, and they do not constitute an impact threshold. Rather, they act as a benchmark to represent how well an area is served by its open space.
- The needs of the residents and non-residents are considered together because it is assumed that these populations will use the same passive open spaces. Therefore, a weighted average of the amount of open space necessary to meet the NYCDCP 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. This guideline ratio changes depending on the proportion of residents and non-residents in each study area.

Impact Assessment

Impacts are based on how a project would change the open space ratios in the study area. According to the *CEQR Technical Manual*, if a proposed project would result in a decrease in open space ratios from those in the future without the project, that decrease is generally considered to be a substantial change, warranting a detailed analysis, if it would approach or exceed 5 percent. In addition, if a study area exhibits a low open space ratio (e.g., below 1.5 acres per 1,000 residents or 0.15 acres of passive space per 1,000 non-residential users), indicating a shortfall of open space, smaller decreases in that ratio as a result of the action may constitute significant adverse impacts.

In addition to the quantitative factors cited above, the *CEQR Technical Manual* also recommends consideration of more qualitative factors in assessing the potential for open space impacts. These include the availability of nearby destination resources, the beneficial effects of new open space resources provided by the project, and the comparison of projected open space ratios with established City guidelines. It is recognized that the open space ratios of the City guidelines described above are not feasible for many areas of the City, and they are not considered impact thresholds on their own. Rather, these are benchmarks that indicate how well an area is served by open space.

C. EXISTING CONDITIONS

STUDY AREA POPULATION

COMMERCIAL (¼-MILE) STUDY AREA

Based on 2000 Census data and information from RPAD on changes that have occurred between 2000 and 2006, the commercial study area has a population of 3,091 residents and 7,290 workers for a total residential and worker population of 10,381 (see **Table 5-2**).

RESIDENTIAL (½- MILE) STUDY AREA

Based on the 2000 Census and updated information from RPAD, the residential study area has a population of 3,852 residents and 9,855 workers for a total residential and worker population of 13,707 (see **Table 5-2**).

Table 5-2
Existing Population in Commercial and Residential Study Areas

Block Group	Worker Population	Residential Population*	Total Population
Commercial (1/4-Mile) Study Area			
Block Group 2 , Census Tract 1	3,705	1,599	5,304
Block Group 4 , Census Tract 7	3,585	1,491	5,076
Total Population	**7,290**	**3,091**	**10,381**
Residential (1/2-Mile) Study Area**			
Block Group 3 , Census Tract 7	2,565	761	3,326
Total Population	**9,855**	**3,852**	**13,707**

Notes:
* The residential population figure is determined by using 2000 U.S. Census data and the new units constructed between 2000 and 2006 according to Real Property Assessment Data (RPAD) from the New York City Department of Finance. For the update, the number of residential units from RPAD was multiplied by the residential study area's average household size (1.95) to determine the residential population.

** Residential study area totals also include the block groups within the commercial study area.

Sources: U.S. Census Bureau, 2000; Central Transportation Planning Package (CTPP) 2000 — Part 2; New York City Department of Finance Real Property Assessment Data (RPAD), 2006.

Based on 2000 Census data, adults between 20 and 64 years old constitute approximately 80 percent of the residential population (see **Table 5-3**). Adults tend to use a variety of active and passive open space facilities. Children and teenagers account for approximately 12 percent of the residential study area's residents. This population segment tends to use active amenities, such as play equipment and basketball courts, more often than passive facilities. Senior citizens 65 years old or older make up 8 percent of the population and tend to use more passive recreational amenities.

Table 5-3
Age Distribution of 2000 Population in Residential Study Area

Age	Percentage of Total Population
Under 5	4.3
5 to 9	2.6
10 to 14	2.8
15 to 19	2.5
20 to 64	79.7
65 and over	8.2

Source: U.S. Census of Population and Housing, 2000.

STUDY AREA OPEN SPACE INVENTORY

COMMERCIAL (¼-MILE) STUDY AREA

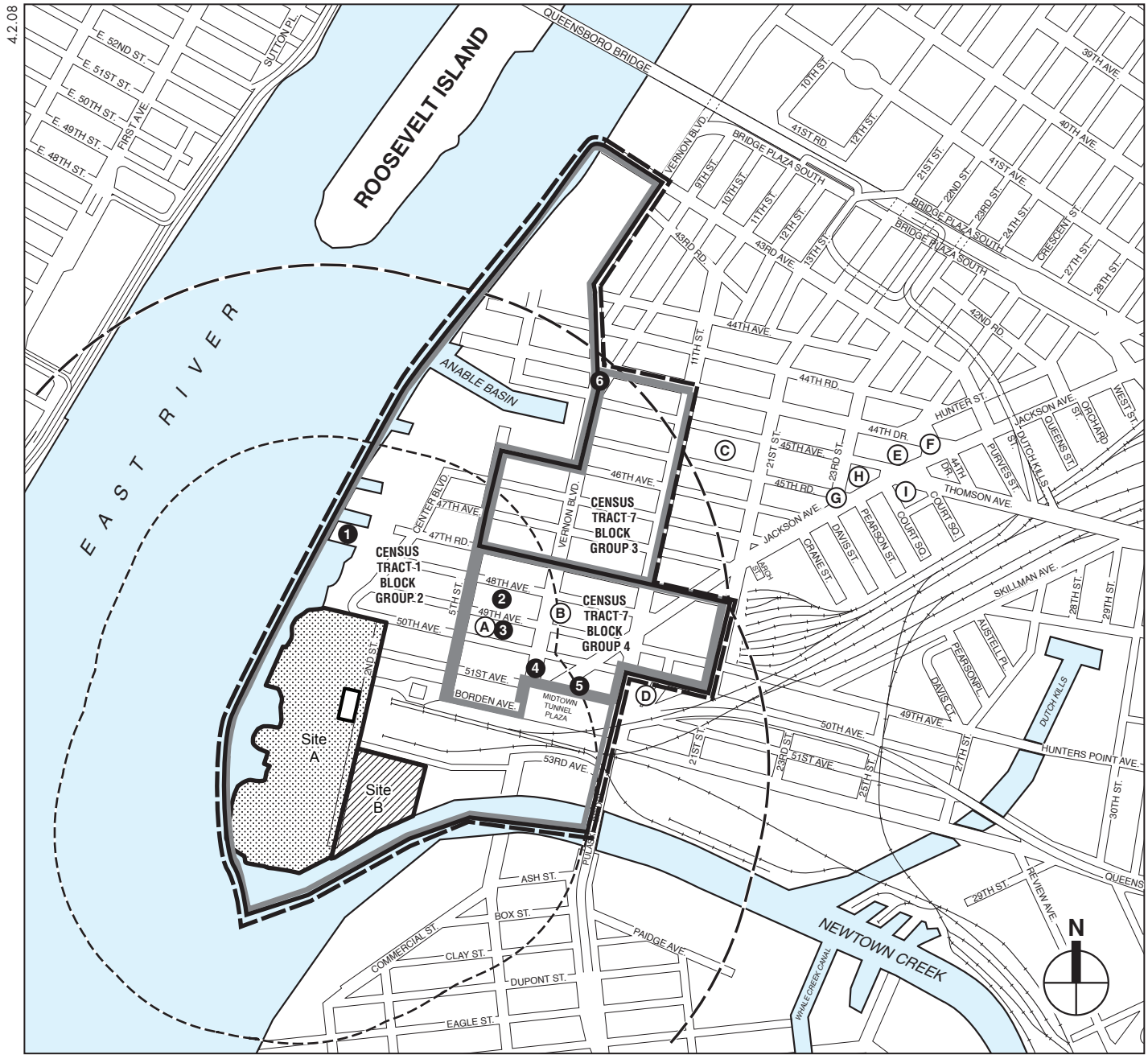
The commercial study area contains a total of 5.35 acres of open space, of which 3.96 acres are passive open space and 1.39 acres are active open space (see **Table 5-4** and **Figure 5-2**).

Table 5-4
Open Space Inventory

Map No.	Name	Owner	Features	Size (Acres)			Condition/ Utilization
				Total Space	Passive Space	Active Space	
Commercial Study Area							
1	Gantry Plaza State Plaza / Peninsula Park	QWDC	Public piers, sitting areas, fishing station, tot lot	3.08	2.58	0.50	Excellent/High
2	Hunters Point Community Park	QWDC	Playground, basketball, handball, sitting area	1.38	0.69	0.69	Excellent/Moderate
3	Andrews Grove	NYCDPR	Playground, sitting area, ball court	0.52	0.32	0.20	Excellent/Moderate
4	Vernon Mall	NYCDPR/ NYCDOT	Sitting area	0.14	0.14	0.00	Fair/Moderate
5	Old Hickory Park	NYCDPR	Sitting area, chess	0.23	0.23	0.00	Good/Light
			Commercial Study Area Total	**5.35**	**3.96**	**1.39**	
Residential Study Area							
6	Gordan Triangle (Private Edward F. Gordan Square)	DPR	Sitting area	0.80	0.80	0.00	Excellent/Moderate
			Residential Study Area Total	**6.15**	**4.76**	**1.39**	
Additional Open Spaces Not Included in Quantitative Analysis							
A	LIC Community Garden	Greenthumb	Sitting area, plantings	0.06	0.06	0.00	Excellent/Light
B	Dog Run	LIRR	Dog run	0.17	0.00	0.17	Fair/Light
C	John F. Murray Playground	DPR	Playground, multi-sport paved courts, sitting area, community garden	2.52	0.84	1.68	Good/ Moderate
D	Bridge and Tunnel Park	DPR	Handball and basketball courts	0.318	0.00	0.318	Good/Light
E	Citibank Plaza	Citigroup	Landscaped area with seating	0.53	0.53	0.00	Excellent/High
F	Rafferty Triangle	DPR	Landscaped triangle with seating	0.10	0.10	0.00	Good/Moderate
G	Short Triangle	DPR	Landscaped triangle with seating	0.01	0.01	0.00	Fair/Moderate
H	McKenna Triangle	DPR	Landscaped triangle	0.01	0.00	0.00	Good/Light
I	Court Square Park	DPR	Landscaped area with seating and fountain	0.27	0.27	0.00	Good/ Light
			Total, Additional Spaces Not Included	**3.99**	**1.82**	**2.17**	

Notes: * See **Figure 5-2** for location of open spaces.
OPRHP = New York State Office of Parks, Recreation & Historic Preservation
QWDC = Queens West Development Corporation
NYCDPR = New York City Department of Parks and Recreation
NYCDOT = New York City Department of Transportation
LIRR = Metropolitan Transportation Authority Long Island Rail Road

Sources: New York City Department of Parks and Recreation open space database; AKRF, Inc. field surveys, October 2007; *Long Island City Zoning Changes and Related Actions FEIS*, May 2001; *Hunters Point Subdistrict Rezoning FEIS*, February 2004; information provided by Empire State Development Corporation, January 2008.



Site A

Site B

1/4-Mile Perimeter

1/2-Mile Perimeter

Commercial Study Area Boundary

Residential Study Area Boundary

Block Group Boundary

1 *Open Space Included in Quantitative Analysis*

(A) *Open Space Not Included in Quantitative Analysis*

NOTE: *See Table 5-4 for reference*

Open Space Inventory

HUNTER'S POINT SOUTH REZONING AND RELATED ACTIONS

Figure 5-2

The largest open spaces within the commercial study area are Gantry Plaza State Park, Peninsula Park, and Hunters Point Community Park, which were developed by the Queens West Development Corporation as part of the development of the Queens West site (see Chapter 1, "Project Description," for a more detailed description of the Queens West project). Gantry Plaza State Park and Peninsula Park together constitute a 3.08-acre waterfront park along the East River waterfront with public piers, including a pier for fishing, sitting areas, a lawn area, a tot lot, and walking paths. The Hunters Point Community Park consists of sitting areas, basketball and handball courts, and a tot lot.

Additional parks located in the commercial study area include Andrews Grove, Vernon Mall, and Old Hickory Park (see **Figure 5-2** and **Table 5-5**).

RESIDENTIAL (½-MILE) STUDY AREA

In addition to the open spaces described above, the residential study area contains one additional public open space, bringing the total residential study area open space acreage to 6.15 acres. Of this total, 4.76 acres are passive space and 1.39 acres are active space. The additional open space located in the residential study area is Gordan Triangle, which is located in the northern part of the study area at the intersection of Vernon Boulevard, 44th Drive, and 10th Street. Gordan Triangle comprises 0.80 acres of passive open space with bench seating.

ADDITIONAL OPEN SPACES

Site A currently contains several private recreational uses. As described in more depth in Chapter 2, "Land Use, Zoning, and Public Policy," these consist of the Water Taxi Beach and Tennisport. Water Taxi Beach is a man-made "beach" at the Water Taxi landing that is open during the summer and is associated with a restaurant and bar. Entry during the daytime is free and at night is for a fee. The beach area is covered with sand and includes picnic tables and volleyball facilities. Tennisport is a private, fee-charging tennis club with multiple indoor and outdoor tennis courts. Neither of these recreational resources meets the *CEQR Technical Manual*'s definition of public open space and therefore neither was counted as open space in this analysis. In addition, a portion of the Tennisport property, at the corner of 2nd Street and 50th Avenue, is currently used as a dog run. This is also not considered public open space because of its suitability only for a particular interest group (i.e., dog owners).

Several public parks and open spaces are located a short distance from the study area boundaries and, as a result, are not included in the quantitative analyses; however, these public parks and open spaces also serve as a resource to the area's worker and residential population (see **Table 5-4** and **Figure 5-2**). Public parks include the 2.52-acre John F. Murray Playground, on the full block between 11th and 21st Streets, 45th Avenue, and 45th Road. The playground contains both active and passive resources with basketball and handball courts, a baseball field, climbing structures, swings, shuffleboard layouts, game tables, seesaws, sitting areas and a separate play area for children. The 0.32-acre Bridge and Tunnel Park, with handball and basketball courts, is located within ½ mile of the project sites but is not included within the block groups that constitute the study area for this analysis.

Additional public parks and open spaces outside the study area are concentrated near Court Square and include Court Square Park, Citibank Plaza, and three triangular, landscaped traffic islands with seating (see **Table 5-4** and **Figure 5-2**).

Two additional resources are located in the study area but were not included in the quantitative analysis: the Long Island City Community Garden and a dog run (see **Figure 5-2**). These were not included because they serve a particular interest group rather than the general public.

In addition to these public open spaces, the study area contains a number of private open spaces within the Queens West development. These private open spaces are required by the General Project Plan (GPP) for the Queens West development (see Chapter 1, "Project Description," for a discussion of the GPP) and are for use by the residents of the buildings constructed as part of Queens West.

ADEQUACY OF OPEN SPACES

COMMERCIAL (¼-MILE) STUDY AREA

Quantitative Analysis

As described above, the analysis of the commercial study area focuses on passive open spaces that may be used by workers in the area. To assess the adequacy of the area's open spaces, the ratio of workers to acres of open space is compared to the City's planning guideline of 0.15 acres of passive space per 1,000 workers. In addition, the passive open space ratio for both workers and residents in the area is compared with the guideline weighted average ratio (0.25).

Table 5-5 outlines the amount of open space needed in the commercial study area to meet the City guidelines and presents the guideline weighted average ratio of passive open space acres per 1,000 combined residents and non-residents in the existing conditions, based on the study area's populations. As shown in the table, with approximately 4 acres of passive open space, the commercial study area has more than enough passive space to meet the needs of its residents and non-residents. Based on the *CEQR Technical Manual* methodology, the commercial study area has a passive open space ratio of 0.54 acres of passive open space per 1,000 workers, which is above the City's guidelines of 0.15 acres of passive open space. The combined passive open space ratio is 0.38, also well above the recommended weighted average ratio of 0.25 acres of open space per 1,000 residents and workers.

Table 5-5
Existing Conditions:
Commercial Study Area Open Space Guidelines and Ratios for Combined Residential and Worker Populations

Population	People	Guideline Ratios (Acres / 1,000)	Passive Acres needed to Meet Guidelines	Passive Acres Present	Actual Ratios
Non-residential population	7,290	0.15	1.09[2]	3.96	0.54
Residential population	3,091	0.50	1.55[3]	3.96	1.28
Total population	10,381	0.25[1]	2.64	3.96	0.38

Notes:
[1] Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents.
[2] Based on the number of non-residents in the study area and the guideline ratio of 0.15 acres per 1,000 non-residents.
[3] Based on the number of residents in the study area and the guideline ratio of 0.50 acres per 1,000 residents.

Qualitative Analysis

As shown in **Table 5-4**, the commercial study area open spaces are mostly in good or excellent condition, and use levels are moderate at the majority of these facilities. Overall, the area is well-served by passive open space resources.

RESIDENTIAL (½-MILE) STUDY AREA

Quantitative Analysis

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 residents and workers. These open space ratios are shown in **Table 5-6**.

Table 5-6
Existing Conditions:
Residential Study Area
Adequacy of Open Space Resources

Population*		Open Space Acreage			Open Space Ratios per 1,000 People			DCP Open Space Guidelines		
		Total	Passive	Active	Total	Passive	Active	Total	Passive	Active
Residents	3,852	6.15	4.76	1.39	1.60	1.23	0.36	2.50	0.50	2.0
Combined residents and workers	13,707				N/A	0.35	N/A	N/A	0.25*	NA

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

The residential study area has a total open space ratio of 1.60 acres per 1,000 residents, considerably lower than the City's planning guideline of 2.5 acres of combined active and passive open space per 1,000 residents but higher than the citywide median of 1.5 acres per 1,000 residents. The active open space ratio is 0.36 acres per 1,000 residents, which is far below the City's guideline of 2.0 acres per 1,000 residents. However, the residential study area's passive open space ratio, at 1.23 per 1,000 residents, is well above the City's planning goal of 0.5 acres per 1,000 residents. When considering residents and non-residents together, the residential study area still has ample passive open space to meet the needs of its population, with a passive open space ratio of 0.35 acres per 1,000 workers and residents, higher than the City's weighted average guideline ratio of 0.25 acres per 1,000 residents and workers (0.25 acres is the weighted average allowing 0.15 acres per 1,000 non-residents and 0.5 acres per 1,000 residents).

Qualitative Analysis

In addition to the open spaces in the study area, several other open spaces immediately outside the study area boundaries may help to meet the need for active open spaces in the study area. The two active open spaces just outside the ½-mile study area, the 2.52-acre Murray Playground and the 0.32-acre Bridge and Tunnel Playground, also serve the study area's residents. In addition, the private open spaces provided as part of the Queens West development are expected to offset some of the area's demand for open space resources.

D. THE FUTURE WITHOUT THE PROPOSED ACTIONS

STUDY AREA POPULATION

As discussed in Chapter 1, "Project Description," absent the proposed actions, it is anticipated for analysis purposes that Sites A and B will remain in their current condition. Several new residential and commercial developments are currently under construction or planned and will be completed within the study area by 2017. These developments will increase both the residential and commercial populations within the study areas. As noted earlier, the population information in this chapter provides 2006 data for population; therefore, for purposes of this analysis, all developments completed after 2006 are considered as part of this future condition.

COMMERCIAL (¼-MILE) STUDY AREA

A number of new developments will be completed in the commercial study area by 2017. These projects include the continued build out of the Queens West site, which will add a substantial number of apartments to the study area (the Queens West development will also introduce new open spaces, as described below under "Study Area Open Spaces"). Altogether, new development in the commercial study area will introduce a total of 5,511 residential units, 144,075 square feet of retail space, 125,000 square feet of community facility space, and 1,725 new parking spaces. Assuming a household size of 1.95 for these new units (the existing average household size for the study area), it is anticipated that the population of the commercial study area will increase by 10,746 residents for a total study area population of 13,837. The new retail and community facility uses will increase the worker population by 740 workers, bringing the commercial study area's total worker population to 8,030.[1]

RESIDENTIAL (½-MILE) STUDY AREA

In addition to the new development that will occur in the commercial study area, an additional 256 residential units and 200 dormitory rooms are expected to be constructed in the residential study area. In total, 11,675 new residents and 793 new workers will be added to the residential study area, bringing the study area's residential population to 15,527, its commercial population to 10,648, and its combined residential and worker population to 26,175.

STUDY AREA OPEN SPACES

COMMERCIAL (¼-MILE) STUDY AREA

The continued build out of the Queens West site will add 8.50 acres of new open space to the study area by 2017, of which 4.09 acres will be passive space and 4.42 acres will be active space. In addition, the anticipated development at River East, to be located on Vernon Boulevard in the northern portion of the study area, will add 1 acre of open space, which is assumed to be passive space in this analysis. In total, an additional 9.50 acres of open space will be added, of which 5.09 acres will be for passive use and 4.42 acres will be for active use. Therefore, the total

[1] Worker population for new projects was estimated using the following assumptions: 1 employee per 400 square feet of retail space; 1 employee per 1,000 square feet of community facility space; 1 employee per 50 parking spaces, and 1 employee per 25 residential units.

amount of open space in the commercial study area will increase to 14.85 acres, of which 9.04 acres will be passive open space and 5.81 acres will be active open space.

RESIDENTIAL (½-MILE) STUDY AREA

As in the commercial study area, the development of open space at Queens West and River East will increase the acreage of open space within the residential study area. In total, the residential study area will contain 15.65 acres, of which 9.84 acres will be for passive use and 5.81 acres will be for active use.

ADEQUACY OF OPEN SPACES

COMMERCIAL (¼-MILE) STUDY AREA

Quantitative Analysis

In the future without the proposed actions, the commercial study area will remain well-served by passive open spaces to meet the needs of the non-residential and residential populations. The ratio of passive open space per 1,000 non-residents will be 1.13, well above the City's guideline ratio of 0.15 (see **Table 5-7**). The ratio for the combined population of residents and non-residents will be 0.41, again well above the City's guideline ratio of 0.37 (calculated by assuming 0.15 acres per 1,000 for the worker population and 0.5 acres per 1,000 for the residential population.)

Table 5-7
2017 Future Without the Proposed Actions:
Commercial Study Area Open Space Guidelines and Ratios for Combined Residential and Worker Populations

Population	People	Guideline Ratios (Acres / 1,000)	Passive Acres Needed to Meet Guidelines	Passive Acres Present	Actual Ratios
Non-residential population	8,030	0.15	1.20[2]	9.04	1.13
Residential population	13,837	0.50	6.92[3]	9.04	0.65
Total population	21,867	0.37[1]	8.12	9.04	0.41

Notes:
[1] Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents.
[2] Based on the number of non-residents in the study area and the guideline ratio of 0.15 acres per 1,000 non-residents.
[3] Based on the number of residents in the study area and the guideline ratio of 0.50 acres per 1,000 residents.

Qualitative Analysis

The commercial open space study area will be adequately served by passive open space resources, particularly with the addition of the new open space resources at Queens West and River East.

RESIDENTIAL (½-MILE) STUDY AREA

Quantitative Analysis

In 2017, the additional population introduced to the study area by expected developments will increase the demand on the area's open spaces. With that new population and the additional open space expected to be added at Queens West, the residential study area will remain underserved by open spaces in comparison to the City's guidelines. The overall open space ratio will be 1.01 acres per 1,000 residents, considerably lower than the City's planning guideline of 2.5 acres of total open space per 1,000 residents and the Citywide median of 1.5 acres per 1,000 residents (see **Table 5-8**). As in existing conditions, the open spaces in the study area will provide ample passive space for the residents and combined residential and nonresidential populations, with a passive space ratio of 0.63 acres per 1,000 residents and a combined ratio of 0.38 acres per 1,000, but the active space will be far short of the City's guidelines. The active open space ratio will be 0.37 acres per 1,000 residents, in comparison to the City's planning guideline of 2.0 acres per 1,000 residents.

Table 5-8
2017 Future Without the Proposed Actions:
Residential Study Area
Adequacy of Open Space Resources

Population		Open Space Acreage			Open Space Ratios per 1,000 People			DCP Open Space Guidelines		
		Total	Passive	Active	Total	Passive	Active	Total	Passive	Active
Residents	15,527	15.65	9.84	5.81	1.01	0.63	0.37	2.50	0.50	2.00
Combined residents and workers	26,175				N/A	0.38	0.37	N/A	0.36*	NA

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

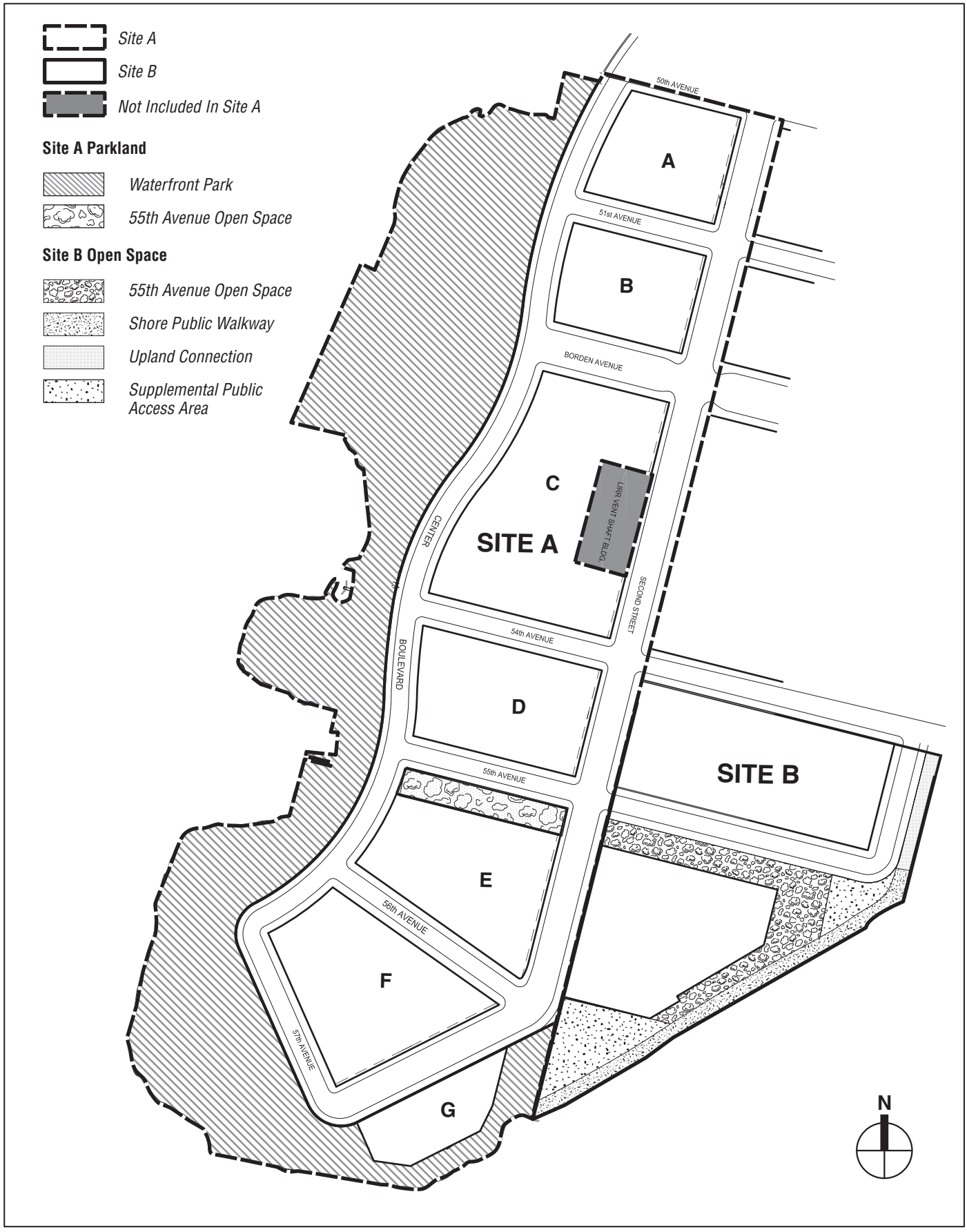
Qualitative Analysis

Similar to the existing condition, in the future without the proposed actions, the study area's demand for active open spaces may also be met by the two open spaces just outside the study area boundary, John F. Murray Playground and Bridge and Tunnel Park. In addition, the private open spaces at Queens West will help to meet the demand from the new population at Queens West.

E. PROBABLE IMPACTS OF THE PROPOSED ACTIONS

With the proposed actions, the existing uses on Sites A and B would be replaced by a new neighborhood of residential buildings with commercial and community facility space and a school. The private recreational uses on Site A, the Water Taxi Beach and Tennisport uses, would be removed, as would the dog run on the Tennisport property. New public open spaces would be created on Site A and Site B to serve the new residents, workers, and visitors to the site. These open spaces would be mapped parkland. As described below, a total of 13.41 acres of new open space would be created, of which 8.03 acres would be for passive recreation and 5.38 acres would be for active recreation. The new public open spaces to be created on Site A and Site B are shown in **Figure 5-3**.

4.2.08



Proposed Open Spaces

NEW OPEN SPACE ON SITE A

WATERFRONT PARK

A signature public waterfront park of approximately 10.65 acres would be constructed on Site A. As shown in the illustrations included in Chapter 1, "Project Description," of this EIS, the waterfront park would extend along the site's entire East River and Newtown Creek waterfronts and would occupy the entire area west of the newly created Center Boulevard south of 50th Avenue. The waterfront park is intended to be linked to the existing and future waterfront parks at Queens West just to the north, creating one continuous park that extends from Anable Basin to and along Newtown Creek, with a variety of paved and planted surfaces, varied topography, and wide vistas of the water, Manhattan skyline, Brooklyn, and East River Bridges.

The northern portion of the waterfront park, generally between approximately Borden Avenue and approximately 51st Avenue, is the area where active open space could be most easily accommodated, because it is large enough and flat enough to accommodate playing fields (for example, a junior soccer field and overlapping baseball diamond) without major modifications to the topography. Therefore, this area would most likely be the location of large active recreational uses.

The middle of the park—generally between Borden Avenue and the planned new location of 56th Avenue—would be narrower and would follow the site's curving shoreline. This area would most likely be developed with space suitable for passive recreation, and could also include a lawn.

The southern portion of the park, south of the new location of 56th Avenue, has rolling topography today that would be maintained in the new park. This portion of the site is a promontory that juts into the East River at the mouth of Newtown Creek. With dramatic views and sloping topography, this area would most likely be developed as a lawn area with vegetated slopes along the water's edge.

As discussed below, the waterfront park would also include a portion of the Hunter's Point South project's Class 1 bikeway.

Based on these initial concepts, it is estimated that slightly more than half of the park (5.65 acres) would be for active recreation and slightly less than half (5.01 acres) for passive recreation.

55TH AVENUE OPEN SPACE

In addition to the waterfront park, Site A would also have a new, 0.35-acre mapped park along the south side of the new 55th Avenue between 2nd Street and Center Boulevard. This park would most likely consist of landscaping, seating, and passive uses, but it is assumed that a small tot lot (0.1 acres) would also be included.

CLASS 1 BIKEWAY

In addition to the park spaces, the Hunter's Point South project would also include a Class 1 bikeway integrated into its street network. This new, 10- to 12-foot-wide, two-lane bikeway would extend along Center Boulevard, 57th Avenue, and 2nd Street and would be separated from the traffic lanes and sidewalks by planted areas. Along 2nd Street, the bikeway would be part of the area that is mapped street and therefore was not counted as open space in the

quantitative analysis in this chapter. Along 57th Avenue and Center Boulevard, the bikeway would be part of the mapped park area and therefore has been included in the open space tally.

NEW OPEN SPACE ON SITE B

Under the reasonable worst-case development scenario, the new development anticipated on Site B as a result of the proposed actions would also include publicly accessible open space. The open space would include the following elements;

- *Shore Public Walkway and Access Area*: Under the new zoning, any new development on Site B would be required to provide a 40-foot-wide public walkway along the Newtown Creek waterfront, to comply with waterfront zoning requirements of the *New York City Zoning Resolution*. In total, this shore public walkway would be 0.90 acres. This analysis assumes that half of that space would be used for active recreation (e.g., running, walking) and the other half would be used for passive recreation. Site B would also be required to provide an upland connection from 54th Avenue to the shore public walkway, resulting in an additional 0.17 acres of public open space.
- *Supplemental Open Space Required by Zoning*: The site's new zoning would also require an additional 0.86 acres of supplemental public access area adjacent to the shore public walkway. This space was assumed to be for passive recreation.
- *55th Avenue Open Space*. As described in Chapter 1, "Project Description," if the developer of Site B takes advantage of the floor area bonus to be allowed by the new Special Zoning District on the site, a new privately owned but publicly accessible open space would be created through Site B, on the south side of a new privately owned street (55th Avenue) also to be created for the floor area bonus. Together, this new private street and open space on the south side of the street would extend the 55th Avenue open space from Site A through Site B, in effect creating a wide boulevard lined by a park. The new 55th Avenue open space on Site B would be a total of 0.66 acres. It is assumed for this analysis that the park would be entirely passive space.

In total, therefore, development of Site B under the reasonable worst-case development scenario would create 2.42 acres of new public open space, of which 0.36 acres would be active space and 2.05 acres would be passive space (see **Figure 5-3)**.

OTHER PROPOSED ACTIONS RELATED TO OPEN SPACE

In addition to the proposed mapping of new park spaces on Site A, the proposed actions also include two other actions related to mapped parks:

- Elimination of all the currently mapped but unbuilt parkland located between 50th Avenue and Newtown Creek, including a small northerly extension on the eastern side of 2nd Street. These parks were mapped as part of the previously approved project for Site A, which is no longer contemplated.
- Elimination of an approximately 1-foot-deep strip of mapped but unbuilt parkland located on the south side of 48th Avenue between Vernon Boulevard and 11th Street.

The City mapped as park the area located between 50th Avenue and Newtown Creek, including the small northerly extension on the eastern side of 2nd Street, in 1990 as part of the approval of the Queens West project. Although mapped by the City as park in contemplation of acquisition,

the area was not subsequently deeded over to either the New York City Department of Parks and Recreation or the New York State Office of Parks, Recreation and Historic Preservation. The currently proposed acquisition by the City of Site A for the Hunter's Point South project includes a new park configuration. The revised parkland boundaries will be established upon the completion of a new City Map Amendment and filing of the map. The proposed actions associated with the Hunter's Point South project would result in a net increase of mapped parkland as compared to the parkland configuration set forth in the 1990 approvals.

The area to be demapped as park that is located on the south side of 48th Avenue between Vernon Boulevard and 11th Street is one foot wide by one block long. It was never usable as park or open space, and its demapping also would not result in the loss of any usable open space.

Consequently, these actions to demap mapped park would not result in any adverse impacts to open space and would not contribute to any shortfall in open space ratios.

DIRECT EFFECTS

As described earlier in the discussion of methodology, direct adverse effects on an open space occur when a proposed action would cause the physical loss of public open space; change the use of an open space so that it no longer serves the same user population; limit public access to an open space; or cause increased noise or air pollutant emissions, odors, or shadows that would affect its usefulness, whether on a permanent or temporary basis.

As described in Chapter 6, "Shadows," of this EIS, the RWCDS analyzed in this EIS would not result in any such direct effects on surrounding open spaces. No public open spaces would be displaced as a result of the proposed actions. The recreational facilities on Site A—Tennisport, the Water Taxi Beach, and a dog run—are not considered public open spaces. Tennisport is a private, fee-charging facility; the Water Taxi Beach is also private and open only at limited times of the year; and the dog run serves only a particular interest group.

The new development anticipated would result in incremental shadow on two open spaces in the study area, the waterfront park at Queens West (Gantry Plaza State Park and Peninsula Park) and Hunters Point Community Park, but these new shadows would not result in any significant adverse shadow impacts. Incremental shadow would fall on portions of the Queens West waterfront park for over five hours during the fall, winter, and early spring months. While the long duration of incremental shadows could reduce the attractiveness of the park during these seasons for users of its passive recreation facilities, the overall usability of the park would not be significantly reduced. In the late spring and summer months this park receives ample sunlight, and the proposed actions would not cause a significant adverse impact to the health and viability of its vegetation. Incremental shadows would also fall onto a portion of Hunters Point Community Park for a very short period (14 minutes) at the end of the day in the spring and fall (as represented by the March/September analysis day in the shadows analysis); this brief duration of new shadow would not cause a significant adverse impact.

The new waterfront park at Hunter's Point South would receive substantial incremental shadow in the mornings throughout the year but would be sunlit during afternoons. The new shoreline walkway along Newtown Creek would be sunlit during mornings and early afternoons throughout the year but would experience incremental shadow in the late afternoons. The new open space along 55th Avenue on Site A (between Center Boulevard and 2nd Street) would be in shadow for much of the day throughout the year, while the 55th Avenue open space on Site B would receive sunlight during the mornings throughout the year. None of the new proposed open

spaces would experience a significant adverse impact from project-generated shadow, since they would not exist without the proposed actions.

The RWCDS would not result in significant adverse noise or air quality impacts on any of the open spaces in the study area. As described in Chapter 19 of this EIS, "Noise," the noise levels predicted for the new waterfront park on Site A and other open spaces created as part of the proposed actions would be above the 55 dBA $L_{10(1)}$ noise level that is recommended in the *CEQR Technical Manual* noise exposure guidelines for outdoor areas requiring serenity and quiet. Noise levels in the parks would be comparable to noise levels in many open spaces and parks in New York City, including Hudson River Park, Riverside Park, Bryant Park, Fort Greene Park, and other urban open space areas, and would not result in a significant noise impact.

INDIRECT EFFECTS

STUDY AREA POPULATION

The reasonable worst-case development scenario would introduce an estimated 12,968 residents and 859 workers to Sites A and B. (Of these, 9,750 residents and 691 workers would be at Site A and 3,218 residents and 168 workers would be at Site B.)

Commercial (¼-Mile) Study Area

With the addition of the new residents and workers at Sites A and B, in the future with the proposed actions, the commercial study area's residential population would total 26,805, and the worker population would total 8,889, for a combined residential and worker population of 35,694.

Residential (½-Mile) Study Area

The proposed actions would increase the residential study area's total (residential and worker) population to 40,001. The residential population would be 28,494 and the worker population would be 11,507.

STUDY AREA OPEN SPACES

The proposed actions under the reasonable worst-case development scenario would add 13.41 acres of publicly accessible open space and parkland to the study area. As discussed earlier, while the open spaces have not yet been designed, the conceptual plans for the open space indicate 8.03 acres of space for passive recreation and 5.38 acres of space for active recreation.

Commercial (¼-Mile) Study Area

With the addition of the open space on Sites A and B, the total amount of open space in the commercial study area would be 28.26 acres, of which 17.07 would be for passive recreation and 11.19 would be for active recreation.

Residential (½-Mile) Study Area

With the proposed actions, the total amount of open space in the residential study area would be 29.06 acres, of which 17.87 would be for passive recreation and 11.19 would be for active recreation.

ADEQUACY OF OPEN SPACES

Commercial (¼-Mile) Study Area

Quantitative Analysis

In the future with the proposed actions, the commercial study area would remain well-served by passive open spaces to meet the needs of the non-residential and residential populations. The ratio of passive open space per 1,000 workers would increase from 1.13 in the No Action condition to 1.92 with the proposed actions, an increase of 70.6 percent, and would remain well above the City's guideline ratios (see **Table 5-9**). The ratio of passive open space for the total population (workers and residents) in the commercial study area would also increase (by 15.7 percent) from a ratio of 0.41 in the future without the actions to a ratio of 0.48 with the proposed actions. This ratio would also exceed the City's guideline ratio of 0.15 acres per 1,000 workers and 0.50 acres per 1,000 residents, for a combined guideline ratio of 0.41.

Table 5-9
2017 Future With the Proposed Actions:
Commercial Study Area Open Space Guidelines and Ratios for Combined Residential and Worker Populations

Population	People	Guideline Ratios (Acres / 1,000)	Passive Acres Needed to Meet Guidelines	Passive Acres Present	Actual Ratios
Non-residential population	8,889	0.15	1.33[2]	17.07	1.92
Residential population	26,805	0.50	13.40[3]	17.07	0.64
Total population	35,694	0.40[1]	14.74	17.07	0.48

Notes:
[1] Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents.
[2] Based on the number of non-residents in the study area and the guideline ratio of 0.15 acres per 1,000 non-residents.
[3] Based on the number of residents in the study area and the guideline ratio of 0.50 acres per 1,000 residents.

Qualitative Analysis

The commercial open space study area would be very well served by passive open space resources in the future with the proposed actions.

Residential (½-Mile) Study Area

Quantitative Analysis

In the reasonable worst-case development scenario, total open space ratios in the residential (½-mile) study area would improve slightly (by 1.2 percent), from 1.01 in the future without the proposed actions to 1.02 with the proposed actions (see **Table 5-10** for a summary of the ratios in the future with the proposed actions). The passive open space ratios per 1,000 residents would drop slightly (by 1 percent), from 0.634 in the future No Action condition to 0.627 in the RWCDS, but would remain well above the City's guideline ratio of 0.50. The passive open space ratios for combined worker and residential population would increase by 18.9 percent, from 0.38 to 0.45, and would also be well above the guidance ratio for this population of 0.40.

For active open space ratios, the RWCDS would increase the active open space ratio in the residential study area by 5 percent, from 0.37 acres per 1,000 residents in the No Action

condition to 0.39 acres per 1,000 residents with the RWCDS. While this ratio would remain well below the City's guidance ratio of 2.0 acres per 1,000 residents, the addition of active open space as a result of the RWCDS would improve this condition in the study area.

Qualitative Analysis.

As noted earlier, two additional open spaces also serve the study area and provide active open space, Murray Playground and Bridge and Tunnel Park. In addition, private open spaces being created at Queens West will help to meet the open space needs of that new population. Similarly, on Site A, private open spaces (such as rooftop terraces) may be developed to help meet the needs of the Hunter's Point South residences for open spaces.

Further, by adding a substantial new large-scale park space, the proposed actions would result in a significant improvement to the area's open space condition that is not clearly reflected in the quantitative analysis.

Table 5-10
2017 Future With the Proposed Actions:
Residential Study Area
Adequacy of Open Space Resources

Population		Open Space Acreage			Open Space Ratios per 1,000 People			DCP Open Space Guidelines		
		Total	Passive	Active	Total	Passive	Active	Total	Passive	Active
Residents	28,494	29.06	17.87	11.19	1.02	0.627	0.39	2.50	0.50	2.00
Combined residents and workers	40,001				N/A	0.45	N/A	N/A	0.40*	NA

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

F. CONCLUSIONS

The proposed actions would create a total of 13.41 acres of new open spaces on Sites A and B, of which 8.03 acres would be for passive recreation and 5.38 acres would be for active recreation. These open spaces would include a large waterfront park along the Site A's entire East River shoreline, waterfront walkways and park spaces along the two sites' entire Newtown Creek shoreline, and smaller park spaces within the site. With the addition of these new open spaces and the residential and worker population expected as a result of the proposed actions, the RWCDS would increase the overall open space condition in the commercial and residential study areas analyzed.

Table 5-11 provides a comparison of open space ratios in the future without and with the proposed actions. As shown in the table, the proposed actions would increase passive open space ratios in the commercial (¼-mile) study area, and the open space ratios in this area would exceed the City's recommended guidelines. The proposed actions would also improve open space ratios in the ½-mile study area, where the total open space ratio would increase slightly (by 1.2 percent) and the active open space ratio would increase by 5 percent. The passive open space ratio would decrease slightly but would remain well above the City's guideline values.

Although the total and active open space ratios would continue to be below the levels recommended by the City in the future with the proposed actions, it is recognized that these goals are not feasible for many areas of the City, and they are not considered impact thresholds.

Table 5-11
2017 Future With the Proposed Actions: Open Space Ratios Summary

Ratio	City Guideline	Open Space Ratios			Percent Change
		Existing Conditions	Future Without the Proposed Actions	Future With the Proposed Actions	Future Without to Future With the Proposed Actions
Commercial (1/4-Mile) Study Area					
Passive/Workers	0.15	0.54	1.13	1.92	70.6%
Passive/Total Population	Weighted 0.25 / 0.37 / 0.41*	0.38	0.41	0.48	15.7%
Residential (1/2-Mile) Study Area					
Total/Residents	2.5	1.60	1.01	1.02	1.2%
Passive/Residents	0.5	1.23	0.634	0.627	-1.0%
Passive/Total Population	Weighted: 0.25 / 0.36 / 0.40*	0.35	0.38	0.45	18.9%
Active/Residents	2.0	0.36	0.37	0.39	5.0%

Notes: Ratios in acres per 1,000 people.

* Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. Because this guideline depends on the proportion of non-residents and residents in the study area's population, it is different for existing, No Build, and Build conditions. Each of these ratios is listed in this table.

Further, by adding a substantial new large-scale park space, the proposed actions would result in a significant improvement to the area's open space condition that is not clearly reflected in the quantitative analysis. Therefore, the proposed actions would not result in a significant adverse impact on open spaces in either the commercial or residential study area.

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