

**A. INTRODUCTION**

This chapter assesses the potential impacts of Phase II of the Project on open space resources under the Extended Build-Out Scenario to determine if a completion of the Project in 2035 would result in new or different impacts not disclosed in the 2006 Final Environmental Impact Statement (FEIS). With the Extended Build-Out Scenario, the same amount of development would occur in the Atlantic Yards Project as analyzed in the FEIS. However, completion of Phase II would occur at a later date, and construction of Phase II would occur over a longer duration. As described in Chapter 1, “Project Description,” and Chapter 2, “Analysis Framework,” this SEIS will determine whether the changed background conditions and the Extended Build-Out Scenario would result in any significant adverse impacts not previously disclosed and whether any additional mitigation measures beyond those identified in the 2006 FEIS and the Amended Memorandum of Environmental Commitments (MEC) would be warranted. Potential open space impacts during the period of construction under the Extended Build-Out Scenario are addressed in Chapter 3E, “Construction Open Space,” of this Supplemental Environmental Impact Statement (SEIS).

Open space is defined by the 2012 *City Environmental Quality Review (CEQR) Technical Manual* as publicly accessible, publicly or privately owned land that operates or is available for leisure, play, or sport, or serves to protect or enhance the natural environment. This chapter provides an updated inventory of study area open spaces and conditions, projects new population demands for open space resources, and analyzes the impact of Phase II of the Project on open space conditions in 2035.

**PRINCIPAL CONCLUSIONS**

Consistent with the 2006 FEIS, this analysis finds that Phase II of the Project would not result in significant adverse impacts related to open space upon the Project’s completion (assumed to be 2035 in the Extended Build-Out Scenario). The 2006 FEIS identified a temporary significant adverse open space impact in the non-residential (¼-mile) study area during Phase II construction. This impact would continue until the Phase II open space is phased in, as discussed in more detail in Chapter 3E, “Construction Open Space,” of this SEIS. The magnitude of the impact would be reduced as Phase II buildings and their associated open spaces are brought online as construction proceeds. They would also be partially mitigated by improvements made to the Dean Playground during Phase I of the Project. Since 2006, the New York City Department of Parks and Recreation (DPR) has renovated Dean Playground to include a little league baseball field with artificial turf. In addition, the project sponsors committed to building a comfort station for park patrons, in coordination with DPR, which was completed in 2013.

The 2006 FEIS found that, by the completion of Phase II of the Project, the temporary significant adverse impact would be mitigated by the Project’s eight acres of publicly accessible open space constructed between Phase I and Phase II. No significant adverse open space impacts

due to direct effects from Phase II, or due to the Phase II development, were identified upon Project completion.

This SEIS analysis has been prepared to determine whether Phase II of the Project under the Extended Build-Out scenario and changed background conditions would result in any impacts not previously disclosed, and whether any additional mitigation measures would be warranted. Phase II development would include the incremental creation of eight acres of publicly accessible open space, as each Phase II building is constructed.

Phase II of the Project would not result in any significant adverse open space impacts upon the Project's completion. (As noted above, open space impacts during the construction period are address in Chapter 3E, "Construction Open Space.") Phase II of the Project would not result in direct impacts on open space resources, because there are no existing open space resources on the Phase II site. With respect to indirect impacts, while Phase II would introduce large new residential and non-residential (worker) populations, upon completion it would also provide eight acres of new publicly accessible open space. The ratio of acres of passive open space per 1,000 workers in the ¼-mile study area would continue to exceed the New York City Department of City Planning's (DCP's) planning guidelines. The ratios of acres of total, passive, and active open space per 1,000 residents in the ½-mile study area would continue to be substantially less than the DCP's planning guidelines, but the open space to be provided in Phase II would generally help to alleviate this shortfall, compared with the Future Without Phase II. However, the timing for elimination of the open space impact in the non-residential study area resulting from the Phase I development would be extended under the Extended Build-Out Scenario, as discussed in Chapter 3E, "Construction Open Space."

#### *NON-RESIDENTIAL (¼-MILE) STUDY AREA*

In the Future With Phase II, the passive open space ratio would increase by 181.4 percent as compared with the Future Without Phase II, from 0.237 acres to 0.667 acres per 1,000 workers. Therefore, Phase II of the Project would not result in any significant adverse impacts to open space resources in the non-residential study area upon completion of Phase II. The passive open space ratio would continue to exceed the city's recommended guideline minimum of 0.15 acres of passive open space per 1,000 workers.

#### *RESIDENTIAL (½-MILE) STUDY AREA*

In the Future With Phase II, the total open space ratio would increase by 17.5 percent as compared with the Future Without Phase II, from 0.308 acres to 0.362 acres per 1,000 residents. The active open space ratio would decrease by 5.6 percent as compared with the Future Without Phase II, from 0.144 to 0.136 acres per 1,000 residents. The passive open space ratio would increase by 37.7 percent as compared with the Future Without Phase II, from 0.164 to 0.226 acres per 1,000 residents.

Although the total open space ratio would remain below the city's recommended guideline of 2.5 acres per 1,000 residents, this ratio would increase as a result of Phase II of the Project, due to the eight acres of new publicly accessible open space that would be created. Likewise, although the passive open space ratio would remain below the city's recommended guideline of 0.5 acres per 1,000 residents, Phase II of the Project would have a beneficial impact on this ratio by providing new publicly accessible open space. With regard to active open space, Phase II of the Project would result in a decrease of 5.6 percent, compared with the Future Without Phase II, and the active open space ratio would remain below the City's guideline. As noted in the *CEQR*

*Technical Manual*, the city guidelines are seldom achieved in densely built portions of New York City, and therefore do not constitute impact thresholds. While the total, passive, and active open space ratios would be below city guidelines in the Future With Phase II, the overall effect of Phase II of the Project on the availability of open space resources in the study area would be beneficial. Therefore, Phase II of the Project under the Extended Build-Out Scenario would not result in any significant adverse open space impacts in the ½-mile study area upon completion of Phase II.

In addition, numerous open space resources that have not been included in the quantitative analysis would be expected to provide additional opportunities for active and passive recreation in the Future With Phase II. Such resources include community gardens, school yards that are not consistently open to the public, resources associated with private developments that could offset demand on public open space resources, and Prospect and Fort Greene Parks (totaling over 615 acres of active and passive open space), which are located just outside the open space study area boundary. Prospect Park and Fort Greene Park are flagship resources that draw residents from the study area, despite being located outside of the census tracts study area. Residents and workers would continue to take advantage of the recreational opportunities that these additional resources have to offer, and these amenities would continue to substantially enhance open space conditions.

## **B. SUMMARY OF FINDINGS OF PREVIOUS ENVIRONMENTAL REVIEWS**

The 2006 FEIS identified a temporary significant adverse open space impact in the non-residential (¼-mile) study area during Phase II construction. This impact would continue until the Phase II open space is phased in, but would be partially mitigated by improvements made to the Dean Playground during Phase I of the Project. Since 2006, the New York City Department of Parks and Recreation (DPR) has renovated Dean Playground to include a little league baseball field with artificial turf. In addition, the project sponsors committed to building a comfort station for park patrons, in coordination with DPR, which was completed in 2013.

The 2006 FEIS found that, by the completion of Phase II of the Project, the temporary significant adverse impact of Phase I would be mitigated by the Project's eight acres of publicly accessible open space constructed between Phase I and Phase II. No significant adverse open space impacts due to direct effects, or due to the Phase II development, were identified.

## **C. SCOPE OF SEIS OPEN SPACE ANALYSIS**

The purpose of this analysis is to assess the potential effects of Phase II of the Project under the Extended Build-Out Scenario on open space resources within the study area. Because there would be no change in proposed publicly accessible open space associated with Phase II of the Project, and there would be no displacement of any existing open spaces due to the Project, there would be no new potential for direct effects on open space, upon completion of Phase II.

As noted above, the 2006 FEIS identified a temporary significant adverse open space impact in the non-residential (¼-mile) study area during Phase II construction. This temporary open space impact would continue for a longer duration under the Extended Build-Out Scenario but would be addressed upon completion of the Phase II open space. Moreover, as each of the Phase II buildings is completed, the adjacent open space would be provided in conformance with the 2006 Design Guidelines, thereby gradually reducing and ultimately offsetting this temporary open space impact. Due to this previously identified significant adverse impact, a detailed

analysis of Phase II potential impacts due to indirect effects is warranted, to determine whether changed background conditions under the Extended Build-Out Scenario would result in any new or greater impacts than previously disclosed, and whether any additional mitigation measures would be warranted. The updated baseline conditions established in this chapter are also needed for the analysis of potential impacts during construction of the Phase II development, which is provided in Chapter 3E, “Construction Open Space.”

## D. METHODOLOGY

### ANALYSIS APPROACH

The anticipated Phase II development on the project site forms the basis for this open space impact assessment. As discussed in Chapter 2, “Analysis Framework,” two variations of the project program are under consideration to allow for flexibility in the program of two of the Project’s Phase I buildings. With regard to Phase I, the commercial mixed-use variation would result in 1,498 residential units and 4,568 workers, whereas the residential mixed-use variation would result in up to 1,922 units and 1,694 workers. For SEIS analysis purposes, it is assumed that the Phase I development will be built irrespective of Phase II, and it therefore forms part of the background condition against which the potential impacts of Phase II are assessed (i.e., the Future Without Phase II condition). This chapter accounts for individual development projects in the Future Without Phase II, and analyzes the increment between the Future Without Phase II and the Future With Phase II in order to assess the potential for Phase II to result in significant adverse impacts. A smaller amount of Future Without Phase II development would result in a higher increase in utilization of open space resources in the Future With Phase II that is attributable to Phase II. Therefore, for the purposes of conservative analysis, the commercial mixed-use variation is used in the residential analysis, and the residential mixed-use variation is used in the non-residential analysis.

Phase II would result in up to 4,932 residential units on the Phase II project site by 2035, which would introduce an estimated 10,555 residents compared with the Future Without Phase II. Phase II would also introduce approximately 635 new workers to the project site.

### STUDY AREAS

The *CEQR Technical Manual* recommends establishing a study area or areas as the first step in an open space assessment. The study areas are based on the distance that the respective users—residents and workers—are likely to walk to an open space. According to the *CEQR Technical Manual*, workers are assumed to walk approximately 10 minutes, or ¼ mile from their place of work to an open space, while residents are assumed to walk approximately 20 minutes, or ½ mile to an open space.

Because Phase II would introduce new residential and worker populations to the area, the adequacy of open space resources was assessed for both the ¼-mile (non-residential) and ½-mile (residential) study areas. These two study areas were adjusted to include all census tracts with at least 50 percent of their area within the ¼- or ½-mile boundary. In this way, the study area allows analysis of both the open spaces in the area as well as population data. As shown in **Figure 4C-1**, the ¼-mile non-residential study area is generally bounded by Lafayette Avenue and Greene Avenue to the north; Washington Avenue and Carlton Avenue to the east; Bergen Street and Sterling Place to the south; and Fourth Avenue to the west. The non-residential study area includes Census Tracts 35, 39, 129.01, 129.02, 161, 163, 179, 199, 203, and 205.

The residential study area is generally bounded by DeKalb Avenue and Lafayette Avenue to the north; Classon Avenue and Grand Avenue to the east; St Johns Place and Union Street to the south; and Nevins Street to the west. The residential study area includes all the Census Tracts identified within the non-residential study area as well as Census Tracts 33, 37, 39, 41, 71, 127, 131, 159, 181, 197, 201, 205, 207, and 231.

## **STUDY AREA POPULATIONS**

### *EXISTING CONDITIONS*

The residential population in the study areas was estimated using 2010 Census data. The non-residential worker population was estimated using 2010 employment data from ESRI, Inc., a commercial data provider.

### *FUTURE WITHOUT PHASE II*

As described in detail in Chapter 2, “Analysis Framework,” there are several developments expected to be completed in the ¼- and ½-mile study areas by 2035 in the Future Without Phase II. The residential population in the Future Without Phase II was estimated by applying the average household size (2.14 people)<sup>1</sup> for the study area to the number of dwelling units added by the expected developments in the study areas. The number of workers added in the Future Without Phase II was estimated using standard employment density ratios.

### *FUTURE WITH PHASE II*

The population introduced by Phase II was estimated by applying the average household size for the study area (2.14 people)<sup>1</sup> to the number of dwelling units introduced by Phase II of the Project (4,932). The number of workers introduced by Phase II was estimated using standard employment density ratios.

## **INVENTORY OF OPEN SPACE RESOURCES**

The *CEQR Technical Manual* defines public open space as open space that is publicly or privately owned and is accessible to the public on a regular basis, either constantly or for designated daily periods of time. Open spaces that are only available for limited users or are not available to the public on a regular or constant basis are not considered public open space, but are considered in a qualitative assessment of open space impacts.

All publicly accessible open space resources in the non-residential (¼-mile) and residential (½-mile) study areas were inventoried through field visits conducted in July and August, 2013. Additional data were obtained from DPR, and published environmental review documents for projects in or near the study area.

Information was gathered about the types of facilities, levels of utilization, accessibility, and condition of each of the open space resources. According to CEQR guidelines, open spaces were also described in terms of the amount of active and passive facilities present. Active open space is used for exercise, sports, or active play, and is usually part of a recreational facility. Examples of active open space include playground equipment, athletic fields or courts, pools, and

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<sup>1</sup> Source: U.S. Census (2010)

greenways. Passive open spaces encourage activities such as strolling, reading, sunbathing, people watching, and other forms of relaxation. Examples of passive open space include plazas, paths, gardens, and certain lawns with restricted uses. Open space may be characterized as passive, active, or a mixture of active and passive. Esplanades are an example of open space that may be used for active uses like running or passive dog walking.

In addition to the publicly accessible open spaces that are accounted for in the quantitative analysis, private or restricted-access open space resources are considered qualitatively. These include community gardens, such as the Brooklyn Bears Rockwell Place Community Garden, Brooklyn Bears Pacific Street Community Garden, Brooklyn Bears Carlton Avenue Community Garden, and a GreenThumb community garden on Bergen Street between Third Avenue and Fourth Avenue, among others. Given that access is limited to members, or to the few hours when the gardens are open, these gardens are not included in the quantitative analysis. However, they do serve as important visual and recreational resources to the community.

According to *CEQR Technical Manual* guidelines, Greenstreets are not considered publicly accessible open spaces as they do not provide usable recreational areas and access is restricted. Greenstreets were therefore not included in the quantitative assessment.

In addition to the open spaces located in the study areas, open spaces located just outside of the study areas were considered in the qualitative analysis as they may be used by the worker or resident populations.

New publicly accessible open space that would be created in the Future Without Phase II and Future With Phase II was accounted for in the analysis.

## ADEQUACY OF OPEN SPACE RESOURCES

### *COMPARISON TO CITY GUIDELINES*

The adequacy of open space in the study area was quantitatively and qualitatively assessed for existing conditions, the Future Without Phase II, and the Future With Phase II. According to CEQR guidelines, the quantitative assessment is based on ratios of usable open space acreage to the study area populations (the “open space ratios”). These ratios were then compared with DCP’s open space guidelines for residential and non-residential populations. 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, there is a citywide median open space ratio of 1.5 acres per 1,000 residents, which is used as a guideline. In addition to this median ratio, DCP has set an open space ratio planning goal of 2.5 acres per 1,000 residents. This second ratio includes 0.50 acres of passive space and 2.0 acres of active space, and serves as an ideal benchmark.

Because these ratios may not be attainable for all areas of the city, they are considered benchmarks for comparison rather than policy or thresholds for determining impacts.

### *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*, a project may result in significant adverse impacts to open space if there would be direct displacement or alteration of an open space that would

significantly impact the existing users; or, if the project would reduce open space ratios by more than 5 percent in an area that is currently below the city's median open space ratio. In areas that are extremely lacking in open space, a reduction as small as 1 percent may be considered significant, depending on the area of the city. Furthermore, in areas that are well-served by open space, a greater change in the open space ratio may be tolerated. The Phase II project site and most of the study area are categorized by DPR as being well-served by open space resources<sup>1</sup>; however, as discussed below, the total open space ratio in the study area falls below the citywide community district median.

The *CEQR Technical Manual* recommends that the quantitative open space analysis described above be supplemented by an examination of qualitative factors, as the significance of any changes to open space depends on the context of the Proposed Action, including the location, quality and quantity of open space in the Future With Phase II. These qualitative considerations include the availability of nearby destination resources, the connectivity of open space, the effects of new publicly accessible open space 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, they are benchmarks that indicate how well an area is served by open space.

## E. EXISTING CONDITIONS

### STUDY AREA POPULATION

Based on 2010 employment data obtained from ESRI, Inc., the non-residential study area has a non-residential population of 13,196 workers (See **Table 4C-1**).

Based on 2010 Census data, the residential study area has a population of 65,775 residents (see **Table 4C-2**).

### AGE DISTRIBUTION

The age distribution of a residential population has open space implications in terms of the types of facilities that are in highest demand and how open spaces are used. As described in the *CEQR Technical Manual*, children 4 years or younger typically use traditional playgrounds with play equipment for toddlers and preschool children. Children ages 5 through 9 tend to use traditional playgrounds with play equipment suitable for school-age children, as well as open spaces with grass or hard surfaces for active play. Children ages 10 through 14 also tend to use playground equipment, as well as courts and ball fields. Teenagers and young adults between the ages of 15 and 19 typically use courts and active fields. Adults use facilities for sports and active fields as well as individualized recreation that utilizes paths. Senior citizens tend to utilize facilities for active recreation like handball, tennis, and swimming, as well as passive recreational facilities.

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<sup>1</sup> Source:

[http://www.nyc.gov/html/oec/downloads/pdf/open\\_space\\_maps/brooklyn/2010\\_ceqr\\_tm\\_open\\_space\\_map\\_brooklyn8.pdf](http://www.nyc.gov/html/oec/downloads/pdf/open_space_maps/brooklyn/2010_ceqr_tm_open_space_map_brooklyn8.pdf) and

[http://www.nyc.gov/html/oec/downloads/pdf/open\\_space\\_maps/brooklyn/2010\\_ceqr\\_tm\\_open\\_space\\_map\\_brooklyn2.pdf](http://www.nyc.gov/html/oec/downloads/pdf/open_space_maps/brooklyn/2010_ceqr_tm_open_space_map_brooklyn2.pdf) [accessed December, 2013].

**Table 4C-1**  
**2010 Population in the ¼-Mile Non-Residential Study Area**

| Census Tract | Worker Population |
|--------------|-------------------|
| 35           | 2,567             |
| 39           | 2,303             |
| 129.01       | 1,170             |
| 129.02       | 1,896             |
| 161          | 2,187             |
| 163          | 607               |
| 179          | 574               |
| 199          | 635               |
| 203          | 435               |
| 205          | 822               |
| <b>TOTAL</b> | <b>13,196</b>     |

**Sources:** U.S. Census 2010; ESRI Business Analyst Inc, Business Summary Report.  
**Note:** Employment at the Barclays Center is included in the existing worker population.

**Table 4C-2**  
**2010 Population in the ½-Mile Residential Study Area**

| Census Tract | Residential Population |
|--------------|------------------------|
| 33           | 2,327                  |
| 35           | 1,554                  |
| 37           | 390                    |
| 39           | 2,229                  |
| 41           | 3,598                  |
| 71           | 4,495                  |
| 127          | 3,405                  |
| 129.01       | 2,159                  |
| 129.02       | 1,964                  |
| 131          | 3,828                  |
| 159          | 5,036                  |
| 161          | 3,075                  |
| 163          | 2,991                  |
| 179          | 3,624                  |
| 181          | 3,936                  |
| 197          | 3,313                  |
| 199          | 2,929                  |
| 201          | 3,421                  |
| 203          | 1,697                  |
| 205          | 2,469                  |
| 207          | 4,310                  |
| 231          | 3,025                  |
| <b>TOTAL</b> | <b>65,775</b>          |

**Sources:** U.S. Census 2010; ESRI Business Analyst Inc, Business Summary Report.

**Table 4C-3** summarizes the residential age distributions in the study areas and compares them with the distributions in Brooklyn and New York City.

**Table 4C-3**  
**Residential Population Age Distribution**

| Age Category                      | Residential (½-Mile) Study Area |            | Brooklyn         |            | New York City    |            |
|-----------------------------------|---------------------------------|------------|------------------|------------|------------------|------------|
|                                   | Persons                         | Percent    | Persons          | Percent    | Persons          | Percent    |
| 4 and younger                     | 3,947                           | 6          | 177,198          | 7.1        | 517,724          | 6.3        |
| 5 to 9                            | 2,302                           | 3.5        | 159,391          | 6.4        | 473,159          | 5.8        |
| 10 to 14                          | 1,973                           | 3          | 156,563          | 6.3        | 468,154          | 5.7        |
| 15 to 19                          | 2,105                           | 3.2        | 170,684          | 6.8        | 535,833          | 6.6        |
| 20 to 64                          | 49,397                          | 75.1       | 1,553,231        | 62.1       | 5,187,105        | 63.5       |
| 65 and over                       | 6,051                           | 9.2        | 287,633          | 11.5       | 993,158          | 12.1       |
| <b>Total</b>                      | <b>65,775</b>                   | <b>100</b> | <b>2,504,700</b> | <b>100</b> | <b>8,175,133</b> | <b>100</b> |
| <b>Source:</b> U.S. Census, 2010. |                                 |            |                  |            |                  |            |

As compared with Brooklyn and New York City as a whole, the residential study area has a lower proportion of children (ages 4 and younger, 5 to 9, and 10 to 14), as well as teenagers and young adults (ages 15 to 19). The residential study area also has a lower proportion of senior residents (ages 65 and over) than Brooklyn and New York City. However, compared with Brooklyn and New York City, the residential study area has a higher proportion of working-age population (ages 20 to 64).

## STUDY AREA OPEN SPACES

### *NON-RESIDENTIAL (¼-MILE) STUDY AREA*

There are 15 publicly and privately owned, publicly accessible open spaces in the non-residential ¼-mile study area. These open space resources are inventoried in **Table 4C-4** and their locations are shown in **Figure 4C-2**. Overall, there are approximately 9.77 acres of open space in the non-residential study area, of which 5.69 acres provide facilities for active recreation, and 4.08 acres are passive open space.

Atlantic Terminal Plaza, a privately owned 0.50-acre triangular-shaped plaza, is located directly north of the Barclays Center, in front of the Atlantic Terminal Mall along Atlantic Avenue. This large paved plaza features tables, benches, and plantings. This passive open space is primarily intended for use by mall employees and shoppers, as well as transit users. Although it is not intended as a destination open space, it is accessible to everyone.

Eight city parks under the jurisdiction of DPR are located within the non-residential study area and contain both active and passive uses. The largest of these—Dean Playground, Greene Park, Cuyler Gore Park, and South Oxford Park—are each over 1 acre in size. Dean Playground and Greene Park (1.30 and 1.26 acres, respectively) are mostly paved and are predominantly used for active recreation. Amenities include playgrounds with play equipment and basketball and handball courts. Cuyler Gore Park is used primarily for passive recreation. At 1.16 acres, this open space fills the entire triangle-shaped block on which it is located. It contains trees, landscaped areas, and benches. The play areas feature jungle gyms and play equipment. South Oxford Park is located at South Oxford Street and Atlantic Commons, just north of the project site. The 1.19-acre park contains a mix of active and passive features, including tennis courts, playground equipment, spray showers, a synthetic turf oval, a casual play area, and a community

**Atlantic Yards Arena and Redevelopment Project FSEIS**

**Table 4C-4  
Open Space Resources**

| Map No. <sup>1</sup>  | Name  | Owner     | Amenities  | Total Acres  | Active       | Passive      | Condition    | Use Level |
|---|---|-----------|--|--------------|--------------|--------------|--------------|-----------|
| <b>Non-Residential Study Area (¼-Mile Radius)</b>   |   |           |  |              |              |              |              |           |
| 1   | Atlantic Terminal Plaza                       | Private   | Seating, tables, plantings   | 0.50         | 0.00         | 0.50         | Excellent    | Heavy     |
| 2   | South Oxford Park                             | DPR       | Playground equipment, benches, asphalt tennis courts, spray showers, synthetic turf oval, casual play area, community garden | 1.19         | 0.60         | 0.59         | Excellent    | Moderate  |
| 3   | Atlantic Terminal Houses—Atlantic Ave.        | NYCHA     | Seating, playground, trees   | 0.12         | 0.06         | 0.06         | Average      | Moderate  |
| 4   | Charles B. Wang Field/Brooklyn Technical H.S. | DOE       | Football/soccer field, track, bleachers  | 0.81         | 0.81         | 0.00         | Excellent    | Low       |
| 5   | Dean Playground                               | DPR       | Playground, playing courts, seating, plantings   | 1.30         | 1.04         | 0.26         | Excellent    | Heavy     |
| 6   | P.S. 9 Playground                             | DOE       | Playground, playing courts   | 0.97         | 0.87         | 0.10         | Excellent    | Heavy     |
| 7   | Underhill Playground                          | DPR       | Playground, benches, handball courts, bathrooms  | 0.59         | 0.47         | 0.12         | Excellent    | Heavy     |
| 8   | Lowry Triangle                                | DPR       | Trees, benches   | 0.11         | 0.00         | 0.11         | Average      | Low       |
| 9   | Greene Park                                   | DPR       | Playground, game tables, comfort station, spray shower, playing courts   | 1.26         | 1.01         | 0.25         | Good         | Moderate  |
| 10  | Cuyler Gore Park                              | DPR       | Lawns, seating, playground, plantings  | 1.16         | 0.29         | 0.87         | Average      | Moderate  |
| 11  | Temple Square                                 | NA        | Trees, benches   | 0.07         | 0.00         | 0.07         | Good         | Low       |
| 12  | Sixteen Sycamores Playground                  | DPR       | Playground, playing court, seating, comfort station, spray shower, fitness equipment   | 0.57         | 0.46         | 0.11         | Good         | Moderate  |
| 13  | North Pacific Playground                      | DPR       | Playground, seating, plantings   | 0.15         | 0.08         | 0.07         | Good         | Low       |
| 27  | Daily News Plaza <sup>1</sup>                 | ESD       | Open plaza with seating, plantings, subway station entrance  | 0.6          | 0            | 0.6          | Excellent    | Moderate  |
| 28  | Visual Arts Plaza                             | BAM       | Seating, trees   | 0.37         | 0.00         | 0.37         | Good         | Low       |
| <b>SUBTOTAL</b>   |   |           |  | <b>9.77</b>  | <b>5.69</b>  | <b>4.08</b>  |              |           |
| <b>Residential Study Area (½-Mile Radius)</b>   |   |           |  |              |              |              |              |           |
| 14  | Nicholas Nequan Heyward Jr. Park              | DPR       | Playing courts, playground, sculpture, seating, spray shower, comfort station  | 1.04         | 0.94         | 0.10         | Average      | Moderate  |
| 15  | Gowanus Houses Open Space                     | NYCHA     | Seating, playgrounds, lawns, plantings   | 1.13         | 0.56         | 0.57         | Average      | Moderate  |
| 16  | Wyckoff Gardens Open Space                    | NYCHA     | Seating, playgrounds, playing courts, lawns, plantings   | 0.48         | 0.24         | 0.24         | Average      | Moderate  |
| 17  | Warren Street Houses                          | NYCHA/PAL | Playground, seating, interactive sculpture   | 0.24         | 0.12         | 0.12         | Average      | Moderate  |
| 18  | Park Slope Playground                         | DPR       | Playground, playing courts, seating, plantings   | 0.95         | 0.86         | 0.09         | Good         | Moderate  |
| 19  | Triangle                                      | DPR       | Trees, benches   | 0.05         | 0.00         | 0.05         | Average      | Low       |
| 20  | Grand Army Plaza                              | DPR       | Trees, landscaping, seating, fountain, paths   | 8.00         | 1.60         | 6.40         | Average      | Low       |
| 21  | Underwood Park                                | DPR       | Playgrounds, benches, game tables, comfort station, spray shower, plantings, trees   | 1.19         | 0.60         | 0.59         | Good         | Heavy     |
| 22  | Edmunds Playground                            | DPR       | Playground, playing courts, seating, comfort station, plantings  | 0.92         | 0.64         | 0.28         | Good         | Heavy     |
| 23  | Albee Square                                  | NYC       | Trees, seating tables, plantings, community programs   | 0.11         | 0.00         | 0.11         | Excellent    | Moderate  |
| 24  | 130 Livingston Street                         | MTA       | Seating, plantings   | 0.24         | 0.00         | 0.24         | Construction | Moderate  |
| 25  | Fowler Square                                 | DOT       | Plaza with seating, plantings, monument  | 0.16         | 0.00         | 0.16         | Excellent    | Moderate  |
| 26  | 230 Ashland Place                             | Private   | Plaza with seating and plantings   | 0.11         | 0.00         | 0.11         | Excellent    | Low       |
| <b>TOTAL</b>  |   |           |  | <b>24.39</b> | <b>11.25</b> | <b>13.14</b> |              |           |
| <b>Notes:</b> <sup>1</sup> In the Future Without Phase II, the site of this resource will be developed as part of Phase I of the Project.<br><b>Sources:</b> DPR; AKRF Field Visits, July and August 2013 |   |           |  |              |              |              |              |           |

garden. Other DPR resources in the ¼-mile study area include Underhill Playground (0.59-acres), Sixteen Sycamores Playground (0.57 acres), and North Pacific Playground (0.15 acres). Active play areas for children are the primary features in these three open space resources.

The irregular street grid forms several small medians that have been converted into passive recreational space. Lowry Triangle and Temple Square both have seating and trees.

Another resource is Visual Arts Plaza located in the Brooklyn Academy of Music (BAM) Cultural District. It provides approximately 16,000 square feet (0.37 acres) of passive open space with seating and trees. The plaza allows for a variety of outdoor programming, including dance and theater performances, film presentations, open air markets, craft fairs and other community uses.

Two other resources in the study area are associated with public schools. While these are primarily for the use of students attending these schools, they are open for use by the community outside of school hours. The Charles B. Wang Field at Brooklyn Technical High School was renovated in 2001 as part of a public-private partnership dedicated to rebuilding outdoor athletic facilities at New York City public schools. The 0.81-acre open space is in excellent condition and features a football/soccer field, a four-lane 400-meter track, and bleachers. The 0.97 acre P.S. 9 Playground consists of a paved open area, play equipment, and basketball and handball courts. The playground was renovated and made open to the public outside of school hours as part of the city's Schoolyards to Playgrounds initiative, with support from the project sponsors.

Across the street from the project site to the north is the New York City Housing Authority's (NYCHA) Atlantic Terminal Houses. This development has a tower-in-the-park configuration, which consists of a residential tower surrounded by lawns, trees, walkways, benches, and playgrounds. Although the open space associated with this type of housing development is primarily meant for residents, spaces that are publicly accessible are included in this analysis. The open space in the southern portion of the development facing Atlantic Avenue is open to the public, and includes a playground, seating, and trees. However, the open space facing Carlton Avenue is reserved for residents only, and has not been included in this analysis.

### *RESIDENTIAL (1/2-MILE) STUDY AREA*

Within the residential study area, a total of 28 open spaces serve the study area population (including the open spaces located within the non-residential study area). The residential study area contains a total of approximately 24.39 acres of public open space, of which approximately 11.25 acres are active open space and approximately 13.14 acres are passive open space.

Grand Army Plaza (eight acres) is the largest open space within this study area. The open space is the central feature of an oval-shaped street pattern and consists of an oval-shaped inner plaza surrounded by an additional ring of predominantly passive open space. A multi-lane rotary separates the inner plaza and the outer ring. The plaza also acts as an entranceway to Prospect Park, a 585-acre park located across the street from the residential study area boundary. The most prominent feature of the inner plaza is a massive 80-foot arch. The arch, similar to the Arc de Triomphe in Paris, is a military memorial that is elaborately carved and decorated with bronze sculptures. Another prominent feature of the center plaza is the Bailey Fountain which includes a sculpture of Neptune and is surrounded by a strolling and seating area. Additional fountains and sculptures are also found within the plaza, including a monument to John F. Kennedy. Other amenities include trees, benches, landscaping, flowers, and plants. The outer ring of the plaza consists of a berm (a mound of earth used as a barrier) that was designed to block out the urban setting. The berm also acts as a sound barrier between the traffic rotary and the residences that surround the plaza. Although the berm is fenced off and inaccessible (and therefore not included in the quantitative analysis), it is covered with trees and plants and is a visual resource. Benches and a widened sidewalk around the berm allow for further enjoyment

of Grand Army Plaza. Across the street from the arch, at the entrance to Prospect Park, the plaza hosts a weekend Greenmarket where local vendors sell a variety of products.

Other DPR parks in the ½-mile study area include Nicholas Nequan Heyward Jr. Park (1.04 acres), Park Slope Playground (0.95 acres), Underwood Park (1.19 acres), and Edmunds Playground (0.92 acres). These spaces have a variety of features, including playgrounds, swings, slides, benches, paved play areas, basketball courts, handball courts, and comfort stations.

Gowanus Houses and Wyckoff Gardens open spaces are under the jurisdiction of NYCHA, and are housing developments with tower-in-the-park configurations located on superblocks within the residential study area. While these open spaces are primarily meant for use by residents, they are accessible to the public. Features are consistent with other NYCHA developments and include lawns, benches, walkways, trees, playgrounds, basketball and handball courts, and parking. A Police Athletic League (PAL) playground is located along Baltic Street between 3rd and 4th Avenues within NYCHA's Warren Houses development. This small playground contains jungle gyms with seating located along the perimeter.

There are also a number of small plaza open spaces, which typically contain trees or other plantings, and seating. Albee Square (0.11 acres) is a recently renovated plaza that contains seating and plantings, and also frequently hosts community events such as weekend markets. Fowler Square (0.16 acres) contains trees, a monument, and seating, and was recently expanded by the New York City Department of Transportation (DOT) to the adjacent portion South Elliott Street, as part of their public plazas program. The 0.11-acre plaza at 230 Ashland Place is located at the base of a residential tower, and is privately owned but publicly accessible. There is also a 0.24-acre plaza in front of a Metropolitan Transportation Authority (MTA)-owned office building at 130 Livingston Street. While the desirability of this plaza is currently diminished due to scaffolding, it remains open to the public, and is frequently used by office workers on their breaks.

It should be noted that a substantial portion of Fort Greene Park, a 30-acre, flagship open space resource (see "Qualitative Assessment" below), is located within ½ mile of the project site. However, it is not included in the quantitative analysis because it is located in a census tract that is less than 50 percent within the ½-mile radius.

### ADEQUACY OF OPEN SPACES

#### *QUANTIFIED ASSESSMENT*

##### *Non-residential (¼-Mile) Study Area*

As described above, the analysis of the non-residential (¼-mile) study area focuses on passive open spaces that may be used by workers and students in the area. **Table 4C-5** compares the existing ratio of acres of open space per 1,000 non-residents with the city's guideline ratio of 0.15. The existing passive open space ratio for the non-residential study area is 0.309 acres of passive open space per 1,000 workers, which exceeds the city's guideline of 0.15.

**Table 4C-5  
Existing Conditions: Adequacy of Open Space Resources**

| Total Population                           | Open Space Acreage |        |         | Open Space Ratios (Acres per 1,000 People) |        |         | DCP Open Space Guidelines |        |         |      |
|--|--------------------|--------|---------|--|--------|---------|---------------------------|--------|---------|------|
|  | Total              | Active | Passive | Total                                      | Active | Passive | Total                     | Active | Passive |      |
| <b>Non-residential (¼-Mile) Study Area</b> |                    |        |         |  |        |         |                           |        |         |      |
| Workers                                    | 13,196             | 9.77   | 5.69    | 4.08                                       | N/A    | N/A     | 0.309                     | N/A    | N/A     | 0.15 |
| <b>Residential (½-Mile) Study Area</b>     |                    |        |         |  |        |         |                           |        |         |      |
| Residents                                  | 65,775             | 24.39  | 11.25   | 13.14                                      | 0.371  | 0.171   | 0.200                     | 2.5    | 2.0     | 0.5  |

*Residential (½-Mile) Study Area*

The quantitative assessment of the adequacy of open space resources within the residential (½-mile) study area considers the ratios of active, passive, and total open space acreage per 1,000 residents. The residential study area has a total of approximately 24.39 acres of open space, including 11.25 acres of active space and 13.14 acres of passive space. With an estimated residential population of 65,775, the residential study area has a total existing open space ratio of 0.371 acres per 1,000 residents. This is lower than the city’s planning goal of 2.5 total active and passive acres per 1,000 residents and also lower than the city’s median of 1.5 total acres per 1,000 residents.

The residential study area has a passive open space ratio of 0.200 acres of passive open space per 1,000 residents, which is below the city’s benchmark of 0.5 acres of passive space per 1,000 residents. The area’s active open space ratio is 0.171 acres per 1,000 residents, which is below the city’s planning goal of 2.0 acres per 1,000 residents.

**QUALITATIVE ASSESSMENT**

In addition to the publicly accessible open spaces that are accounted for in the quantitative analysis, the study area contains several private or restricted-access open space resources. These include community gardens, such as the Brooklyn Bears Rockwell Place Community Garden, Brooklyn Bears Pacific Street Community Garden, Brooklyn Bears Carlton Avenue Community Garden, and a GreenThumb community garden on Bergen Street between Third Avenue and Fourth Avenue, among others. Given that access is limited to members, or to the few hours when the gardens are open, these gardens are not included in the quantitative analysis. However, they do serve as important visual and recreational resources to the community.

The study area also contains playgrounds and recreational resources that are part of school grounds that are not generally open to the public. These include playgrounds at P.S. 56 and P.S. 38, and P.S. 133. Some residential developments also include private open space available to their residents, such as fitness centers and outdoor playgrounds.

Within ½ mile of the project site, the largest DPR park is Fort Greene Park (30 acres), which occupies approximately eight city blocks bounded by Myrtle Avenue, Washington Park, DeKalb Avenue, and St. Edwards Street. Fort Greene Park is a destination park devoted to both active and passive uses, and contains walkways, benches, trees, open grassy areas, monuments, basketball and tennis courts, and playgrounds. Since this park is located outside of the census tract study area, even though it is located within ½ mile of the project site, it is not included in the quantitative analysis. However, this resource is used by the area’s population and substantially improves open space conditions in the area.

Prospect Park, Brooklyn's 585-acre preeminent destination park, is located across the street from the residential study area boundary. Prospect Park contains an abundance of features, including rolling hills, a forest, a 60-acre lake, the Prospect Park Zoo, Botanical Gardens, and several facilities for cultural activities, including a band shell for live music. Because of its size, Prospect Park serves as a valuable open space resource for the residents within the study area and the entire borough.

## **F. FUTURE WITHOUT PHASE II**

The assessment of the Future Without Phase II examines conditions that are expected to occur in the study area by the 2035 build year, absent the development of Phase II of the Project. The capacity of open space resources to serve future populations in the study area is examined using quantitative and qualitative factors.

### **STUDY AREA POPULATION**

#### *NON-RESIDENTIAL (1/4-MILE) STUDY AREA*

Absent Phase II of the Project, the non-residential study area will continue to experience residential, commercial, and institutional development. As described in detail in Chapter 2, "Analysis Framework," by 2035, several Future Without Phase II projects will be built within the 1/4-mile study area. These include Phase I of the Project (except for the Barclays Center, which has been completed and is operational under existing conditions). Future Without Phase II projects are listed in Table 2-1.

Assuming that Phase I of the Project is developed consistent with the residential mixed-use variation, the known development projects will result in an estimated total of 2,566 new workers in the non-residential study area.<sup>1</sup> Based on these projects and the existing populations, the non-residential study area would have an estimated 15,762 workers.<sup>2</sup>

#### *RESIDENTIAL (1/2-MILE) STUDY AREA*

In addition to the new development that will occur in the non-residential study area, new development in the 1/2-mile residential study area will introduce a total of 5,701 residential units, assuming that Phase I of the Project is developed consistent with the commercial mixed-use variation. Combined, these developments will introduce 12,200 residents to the residential study

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<sup>1</sup> Employment density ratios were applied to the expected square footage for each use to estimate future employment. The ratios used assume one worker each per: 25 residential units; 400 sf of retail space; 2.67 hotel rooms; 250 sf of office space; 1,000 sf of community facility/cultural space; and 50 parking spaces.

<sup>2</sup> Using the commercial mixed-use variation, development projects in the Future Without Phase II would result in 5,437 new workers, which would increase the non-residential study area worker population to 18,633.

area.<sup>1</sup> Based on these projected developments, the residential population in the residential study area in the Future Without Phase II is estimated to be 77,975.<sup>2</sup>

No substantial changes to the age distribution of the residential population are expected by 2022. The estimated number of residents in each age cohort is shown in **Table 4C-6**, based on the percent share for that age cohort at the time of the 2010 U.S. Census.

**Table 4C-6  
Future Without Phase II: Residential Population Age Distribution**

| Age Category                     | Persons       | Percent    |
|----------------------------------|---------------|------------|
| 4 and younger                    | 4,679         | 6          |
| 5 to 9                           | 2,729         | 3.5        |
| 10 to 14                         | 2,339         | 3          |
| 15 to 19                         | 2,495         | 3.2        |
| 20 to 64                         | 58,559        | 75.1       |
| 65 and over                      | 7,174         | 9.2        |
| <b>Total</b>                     | <b>77,975</b> | <b>100</b> |
| <b>Source:</b> U.S. Census, 2010 |               |            |

**STUDY AREA OPEN SPACES**

*NON-RESIDENTIAL (1/4-MILE) STUDY AREA*

In the Future Without Phase II, one new publicly accessible open space will be redeveloped in the 1/4-mile study area. BAM Park, bounded by St. Felix Street, Fort Greene Place, Fulton Street, and Lafayette Avenue, will provide approximately 0.25 acres of passive open space. The site of the existing Daily News Plaza will be redeveloped, as part of Phase I of the Project, which will include an approximately 10,000 sf publicly accessible interior space in the Urban Room (the Urban Room is not included in the quantitative open space analysis).

*RESIDENTIAL (1/2-MILE) STUDY AREA*

No open space in addition to BAM Park is currently anticipated to be built in the 1/2-mile study area in the Future Without Phase II. While many of the new Future Without Phase II developments could include privately owned public open space such as plazas, the locations and size of such resources are not known at this time; therefore, none have been included in this analysis.

**ADEQUACY OF OPEN SPACES**

*QUANTITATIVE ASSESSMENT*

*Non-residential (1/4-Mile) Study Area*

Absent Phase II of the Project, by 2035, the number of workers in the non-residential study area is expected to increase to 15,762 and the total amount of open space is expected to decrease to

<sup>1</sup> Estimate of new residents based on the study area’s average household size of 2.14 (2010 U.S. Census).

<sup>2</sup> Using the residential mixed-use variation, development projects in the Future Without Phase II would result in 13,108 new residents, which would increase the study area residential population to 78,883.

9.42 acres, including 3.73 acres of passive open space. The passive open space ratio for the non-residential study area would decrease to 0.237 acres per 1,000 non-residents (see **Table 4C-7**). This ratio would remain above the city’s guideline for this ratio of 0.15 acres per 1,000 non-residents.

**Table 4C-7**  
**Future Without Phase II: Adequacy of Open Space Resources**

| Total Population                           |        | Open Space Acreage |        |         | Open Space Ratios (Acres per 1,000 People) |        |         | City Open Space Guidelines |        |         |
|--|--------|--------------------|--------|---------|--|--------|---------|----------------------------|--------|---------|
|  |        | Total              | Active | Passive | Total                                      | Active | Passive | Total                      | Active | Passive |
| <b>Non-residential (¼-Mile) Study Area</b> |        |                    |        |         |  |        |         |                            |        |         |
| Workers                                    | 15,762 | 9.42               | 5.69   | 3.73    | N/A  | N/A    | 0.237   | N/A                        | N/A    | 0.15    |
| <b>Residential (½-Mile) Study Area</b>     |        |                    |        |         |  |        |         |                            |        |         |
| Residents                                  | 77,975 | 24.04              | 11.25  | 12.79   | 0.308                                      | 0.144  | 0.164   | 2.5                        | 2.0    | 0.5     |

*Residential (½-Mile) Study Area*

In the Future Without Phase II, the increase in residents would decrease the active open space ratio to 0.144 acres per 1,000 residents. The added residents would also slightly decrease the ratio for passive open space in the residential study area, to 0.164 acres per 1,000 residents. The total open space ratio would decrease to 0.308 acres of open space per 1,000 residents, and would still fall below the city’s goal of 2.5 total acres per 1,000 residents and the citywide median of 1.5 acres per 1,000 residents. Overall, the passive open space ratio, active open space ratio, and total open space ratio for the residential study area would remain below city guidelines.

*QUALITATIVE ASSESSMENT*

As mentioned above, numerous open space resources have not been included in the quantitative analysis, including community gardens, school yards that are not consistently open to the public, and Prospect and Fort Greene Parks (totaling over 615 acres of active and passive open space), which are located just outside the open space study area boundary. It is anticipated that both residents and workers would continue to take advantage of the recreational resources that these additional resources have to offer and that these amenities would substantially enhance open space conditions.

**G. FUTURE WITH PHASE II**

The assessment of the Future With Phase II examines conditions that are expected to occur as a result of construction of Phase II of the Project under the Extended Build-Out Scenario. The capacity of open space resources to serve future populations in the study area is examined using quantitative and qualitative factors.

**STUDY AREA POPULATION**

*NON-RESIDENTIAL (¼-MILE) STUDY AREA*

Phase II would introduce a net increase of approximately 635 workers to the non-residential study area. With these additional workers, the non-residential study area worker population would increase to 16,397.

*RESIDENTIAL (1/2-MILE) STUDY AREA*

By 2035, Phase II would result in an incremental increase of 4,932 residential units. Assuming an average household size of 2.14 persons (the average household size for the study area as per the 2010 U.S. Census), Phase II would add an estimated 10,555 residents to the project site. This population would increase the residential study area population to 88,530.

The age distribution of the residential population is not expected to substantially change as a result of the Project. **Table 4C-8** shows the estimated number of residents in each age cohort, based on the percent share for that age cohort at the time of the 2010 Census.

**Table 4C-8**  
**Future With Phase II: Residential Population Age Distribution**

| Age Category                       | Persons       | Percent    |
|------------------------------------|---------------|------------|
| 4 and younger                      | 5,312         | 6          |
| 5 to 9                             | 3,099         | 3.5        |
| 10 to 14                           | 2,656         | 3          |
| 15 to 19                           | 2,833         | 3.2        |
| 20 to 64                           | 66,485        | 75.1       |
| 65 and over                        | 8,145         | 9.2        |
| <b>Total</b>                       | <b>88,530</b> | <b>100</b> |
| <b>Sources:</b> U.S. Census, 2010. |               |            |

**STUDY AREA OPEN SPACES**

Phase II of the Project would incrementally introduce eight acres of publicly accessible open space to the project site as Phase II buildings are constructed. Approximately 7.2 acres (90 percent) of the new open space areas would be programmed for passive and flexible use, consisting of paths and lawns for strolling, sitting, people watching, and picnics. The balance of the open space area, approximately 0.8 acres (10 percent), would have active uses and could include a half basketball court, a volleyball court, two bocce courts, and a children’s playground.

The eight acres of new publicly accessible open space would be designed as one resource that spans from the edge of the proposed buildings to the property line of Blocks 1120, 1121, and 1129 (see **Figure 4C-3**). The open space is designed to take advantage of the site’s unique location at the convergence of several street grids and draw together the surrounding neighborhoods. The open space has been designed to allow users to see into and through the open space from points of entry. This design allows users to see access and egress points from any location within the open space, increasing the safe and inviting public character of this space.

The proposed open space would increase street-level activity on the project site by creating at-grade active and passive open space and providing complementary uses (including local retail and community facility uses) on the ground floors of the residential buildings. The open space has also been designed to maximize the amount of tree canopy cover as trees cool the air, buffer sound, and create a more human and comfortable scale for the open space.

The design of the proposed open space considered the shadow effects of the Project’s buildings in its placement of open space and recreational amenities. Major landscape elements would be located where they will maximize their exposure to the midday sun, from 11:00 AM to 2:00 PM, throughout the year. The open space design also takes advantage of smaller pockets of sun that exist in the early mornings and late afternoons, when other areas of the site are in shade. These

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landscape spaces are designed for passive uses and typically include benches, tables, and chairs. For example, even in December when buildings on the project site cast the longest shadows, the proposed open space would receive sunlight during afternoon periods.

It is anticipated that a bicycle path would be included as another open space amenity that would further link the project site to the surrounding area and would create a greater sense of the public accessibility of the open space. The dedicated southbound bicycle path would be part of the City’s Bicycle Network Development Program and part of the larger citywide network of bicycle lanes and paths. There would be a storage area for 400 bicycles on the Arena block anticipated to be located in the base of Building 3. The bicycle station would include space for supporting ancillary uses.

All Project-created open spaces would comply with Americans with Disabilities Act (ADA) guidelines. As required by the Design Guidelines, the open space would be available for public use from 7:00 AM to 10:30 PM from May through September, and from 7:00 AM to the later of 8:00 PM and sunset in other months, seven days a week, 365 days a year. Upon completion of Phase II of the Project, the proposed open space would be owned by a conservancy or other not-for-profit entity established by the project sponsors, which would be responsible for maintenance, operation and security. It is anticipated that the conservancy or other not-for-profit entity will be governed by a board, which will include representatives of the project sponsors, civic group(s) active in park matters, representatives of the surrounding properties on the project site, and, on an *ex officio* basis, DPR and local community boards.

In addition, some of the residential buildings constructed during Phase II may have private rooftop open space.

**ADEQUACY OF OPEN SPACES**

*QUANTATIVE ASSESSMENT*

*Non-Residential (¼-Mile) Study Area*

In the Future With Phase II, the ratio of passive open space acreage per 1,000 workers would increase compared with the Future Without Phase II, to 0.667 (see **Table 4C-9**). This ratio would continue to exceed the recommended city guideline of 0.15 acres per 1,000 non-residents.

**Table 4C-9  
Future With Phase II: Adequacy of Open Space Resources**

| Total Population                           | Open Space Acreage |        |         | Open Space Ratios<br>Acres per 1,000<br>Population |        |         | City Open Space<br>Guidelines |        |         |      |
|--|--------------------|--------|---------|--|--------|---------|-------------------------------|--------|---------|------|
|  | Total              | Active | Passive | Total  | Active | Passive | Total                         | Active | Passive |      |
| <b>Non-residential (¼-Mile) Study Area</b> |                    |        |         |  |        |         |                               |        |         |      |
| Workers                                    | 16,397             | 17.42  | 6.49    | 10.93  | N/A    | N/A     | 0.667                         | N/A    | N/A     | 0.15 |
| <b>Residential (½-Mile) Study Area</b>     |                    |        |         |  |        |         |                               |        |         |      |
| Residents                                  | 88,530             | 32.04  | 12.05   | 19.99  | 0.362  | 0.136   | 0.226                         | 2.5    | 2.0     | 0.5  |

*Residential (½-Mile) Study Area*

In the Future With Phase II, Phase II of the Project would result in a substantial increase in the ratio of acres of total and passive open space per 1,000 residents, but the total, active, and passive open space ratios in the residential study area would remain below city guideline levels.

The total open space ratio would increase to 0.362 acres per 1,000 residents, compared with 0.308 acres in the Future Without Phase II. The active open space ratio would decrease slightly to 0.136 acres per 1,000 residents, compared with 0.144 acres in the Future Without Phase II. This ratio would remain below the city's guideline of 2.0 acres of active open space per 1,000 residents, as in existing conditions and the Future Without Phase II. The ratio of passive open space to residents would increase to 0.226 acres per 1,000 residents, compared with 0.164 acres in the Future With Phase II. This ratio would remain below the city's guideline of 0.5 acres of passive open space per 1,000 residents, as in existing conditions and the Future Without Phase II.

#### *QUALITATIVE ASSESSMENT*

As with the Future Without Phase II, numerous open space resources that have not been included in the quantitative analysis would be expected to provide additional opportunities for active and passive recreation in the Future With Phase II. Such resources include community gardens, school yards that are not consistently open to the public, and Prospect and Fort Greene Parks (totaling over 615 acres of active and passive open space), which are located just outside the open space study area boundary. Prospect Park and Fort Greene Park would continue to be flagship resources that draw residents from the study area, despite being located outside of the census tracts study area. Residents and workers would continue to take advantage of the recreational opportunities that these additional resources have to offer, and these amenities would continue to substantially enhance open space conditions.

#### **IMPACT SIGNIFICANCE**

According to the *CEQR Technical Manual*, a project could result in a significant adverse open space impact if it would reduce the open space ratio by more than 5 percent in areas that are currently below the city's median community district open space ratio of 1.5 acres per 1,000 residents. In areas that are extremely lacking in open space, a reduction as small as 1 percent may be considered significant, depending on the area of the city. The analysis should consider the type of recreation facilities (passive versus active), the city's median community district open space ratio of 1.5 acres per 1,000 residents, and the city's optimal planning goal of 2.5 acres of open space per 1,000 residents to aid in the determination of a significant quantitative impact on existing open space. Projects that may result in significant quantitative impacts on open space resources are typically further assessed in the qualitative assessment approach, which considers factors such as the type of open space (active or passive), its capacity and conditions, and any additional open space provided by the Project.

An analysis of the potential effects on open space resources from the prolonged construction of Phase II is provided in Chapter 3E, "Construction Open Space."

*NON-RESIDENTIAL (1/4-MILE) STUDY AREA*

As shown in **Table 4C-10**, in the Future With Phase II, the passive open space ratio would increase by 181.4 percent as compared with the Future Without Phase II, to 0.667 acres per 1,000 workers.<sup>1</sup> The passive open space ratio would continue to exceed the city’s recommended guideline of 0.15 acres of passive open space per 1,000 workers. Therefore, Phase II of the Project would not result in any significant adverse impacts to open space resources in the non-residential study area. While the 2006 FEIS identified a temporary significant adverse open space impact in the non-residential (1/4-mile) study area during Phase II construction that would continue for a longer duration under the Extended Build-Out Scenario, this impact would be gradually reduced and ultimately offset upon completion of the Phase II open space (see Chapter 3E, “Construction Open Space”).

**Table 4C-10  
Future With Phase II: Open Space Ratios Summary**

| Ratio  | City Guideline | Open Space Ratios (acres per 1,000 people) |                                   |                                | Percent Change Future Without to With Phase II |
|--|----------------|--|-----------------------------------|--------------------------------|--|
|  |                | Existing Conditions                        | Future Without Phase II Condition | Future With Phase II Condition |  |
| <b>Non-Residential (1/4-Mile) Study Area</b> |                |  |                                   |                                |  |
| Passive/Workers                              | 0.15           | 0.309                                      | 237                               | 0.667                          | 181.4%   |
| <b>Residential (1/2-Mile) Study Area</b>     |                |  |                                   |                                |  |
| Total/Residents                              | 2.5            | 0.371                                      | 0.308                             | 0.362                          | 17.5%  |
| Active/Residents                             | 2.0            | 0.171                                      | 0.144                             | 0.136                          | -5.6%  |
| Passive/Residents                            | 0.5            | 0.200                                      | 0.164                             | 0.226                          | 37.7%  |

*RESIDENTIAL (1/2-MILE) STUDY AREA*

As shown in **Table 4C-10**, in the Future With Phase II, the total open space ratio would increase by 17.5 percent as compared with the Future Without Phase II, to 0.371 acres per 1,000 residents. The active open space ratio would decrease by 5.6 percent as compared with the Future Without Phase II, to 0.136 acres per 1,000 residents. The passive open space ratio would increase by 37.7 percent as compared with the Future Without Phase II, to 0.226 acres per 1,000 residents.<sup>2</sup>

Although the total open space ratio would remain below the city’s recommended guideline of 2.5 acres per 1,000 residents, this ratio would increase as a result of Phase II of the Project, due to the eight acres of new publicly accessible open space that would be created. Likewise, although the passive open space ratio would remain below the city’s recommended guideline of 0.5 acres per 1,000 residents, Phase II of the Project would have a beneficial impact on this ratio by providing new publicly accessible open space. With regard to active open space, Phase II of

<sup>1</sup> As noted above, these calculations assume that Phase I will be developed pursuant to the residential mixed-use variation. If Phase I were to be developed pursuant to the commercial mixed-use variation, the passive open space ratio would increase from 0.200 acres per 1,000 workers in the Future Without Phase II to 0.568 in the Future With Phase II, a 184.0 percent increase.

<sup>2</sup> As noted above, these calculations assume that Phase I of the Project would be developed pursuant to the commercial mixed-use variation. If Phase I were developed pursuant to the residential mixed-use variation, the ratio of total open space would increase from 0.305 acres per 1,000 residents in the Future Without Phase II to 0.358 acres in the Future With Phase II (17.4 percent increase), the passive open space ratio would increase from 0.162 to 0.224 (38.3 percent increase), and the active open space ratio would decrease from 0.143 to 0.135 (5.6 percent decrease).

the Project would result in a decrease of 5.6 percent, compared with the Future Without Phase II, and the active open space ratio would remain below the City's guideline. As noted in the *CEQR Technical Manual*, the city guideline is seldom achieved in densely built portions of New York City, and therefore does not constitute an impact threshold. While the total, passive, and active open space ratios would be below city guidelines in the Future With Phase II, the overall effect of Phase II of the Project on the availability of open space resources in the study area would be beneficial. In addition, study area residents would have access to Prospect Park and Fort Greene Park, which would continue to be flagship resources that draw residents from the study area.

Therefore, Phase II of the Project would not result in any significant adverse open space impacts in the ½-mile study area.

#### **COMPARISON OF SEIS FINDINGS AND PREVIOUS FINDINGS**

Consistent with the 2006 FEIS, this analysis finds that Phase II of the Project would not result in significant adverse impacts related to open space upon the Project's completion (assumed to be 2035 in the Extended Build-Out Scenario). However, the 2006 FEIS identified a temporary significant adverse impact on passive open space resources in the non-residential study area between the completion of Phase I and the completion of Phase II. This issue is analyzed in this SEIS in Chapter 3E, "Construction Open Space." \*