

A. INTRODUCTION

This chapter assesses the potential impacts of the Proposed Actions on open space resources. Open space is defined in the 2021 *City Environmental Quality Review (CEQR) Technical Manual* as publicly accessible, publicly or privately owned land that is available for leisure, play, or sport or serves to protect and enhance the natural environment. An open space assessment should be conducted if a project would have a direct effect on open space, such as eliminating or altering a publicly accessible open space, or an indirect effect, such as when an increase in population could overtax the capacity of an area's existing open spaces to serve the future population. Direct effects could also include a proposed action's effects on open spaces due to increased noise, air pollutant emissions, odor, or shadows.

As described in detail in Chapter 1, "Project Description," the Proposed Actions would facilitate the development of the Western Rail Yard (Block 676, Lots 1 and 5) in the Hudson Yards neighborhood of Manhattan (the "WRY Site" or the "Development Site") with approximately 6.2 million gross square feet of new mixed-use development including residential, commercial, and community facility space, a hotel resort with gaming and new publicly accessible open space (the "Proposed Project"). The Proposed Project occupies the entire area bounded by West 30th and West 33rd Streets and Eleventh and Twelfth Avenues and comprises the western portion of the John D. Caemmerer West Side Yard, an active rail yard where the Long Island Rail Road (LIRR) stores commuter trains. There is an ongoing state process underway to designate locations for downstate gaming licenses; therefore, the Applicant is also presenting for environmental analysis purposes an Alternative Scenario that reflects a similar density and the same open space configuration as the Proposed Project but includes residential and commercial buildings in place of the hotel resort with gaming. The scenario that would result in the more conservative analysis is analyzed for each technical area. The Proposed Project and the Alternative Scenario would introduce different residential and non-residential populations to the study area. Therefore, both the Proposed Project and the Alternative Scenario are analyzed in this chapter.

The Proposed Project would result in a substantial new worker and visitor population—an incremental increase of 6,560 people as compared to future conditions absent the Proposed Actions. The Alternative Scenario would result in a new worker and visitor population of 9,128 as compared to future conditions absent the Proposed Actions. Both With Action scenarios would also introduce a new residential population to the study area; however, it would be less than what would be introduced in the No Action condition (2,562 residents and 3,087 residents in the Proposed Project and Alternative Scenario, respectively, compared to 5,872 residents in the No Action condition). The projected population in both scenarios would result in additional demand for passive open space in the area. Therefore, in accordance with *CEQR Technical Manual* guidance, an open space

assessment was conducted to determine whether the Proposed Project would result in a significant adverse open space impact.

PRINCIPAL CONCLUSIONS

The Proposed Actions would not result in a significant adverse indirect impact to open space under operational conditions. According to the *CEQR Technical Manual*, a proposed action may result in a significant adverse impact on open space resources if (a) there would be direct displacement/alteration of existing publicly accessible open space within the study area that would have a significant adverse effect on existing users; or (b) it would reduce the open space ratio and consequently result in the overburdening of existing facilities or further exacerbation of a deficiency in open space.

DIRECT EFFECTS

With respect to direct effects, neither the Proposed Project nor the Alternative Scenario would directly displace or alter any existing publicly accessible open space within the study area. Rather, both the Proposed Project and the Alternative Scenario would result in approximately 5.63 acres of publicly accessible open space on the Development Site, including approximately 4.58 acres of new open space and the 1.05 acres of existing open space on-site that is part of the High Line. The new public open space would introduce 0.4 acres of active space (anticipated to potentially include a playground and sport courts) and 4.18 acres of passive space (including landscaping, seating, lawns, and walkways). The new open space would provide a substantial open space amenity for workers, visitors, and residents of the Development Site and surrounding area, including both active and passive recreational opportunities. The new open space also would provide attractive pedestrian and visual connections between the Development Site, the High Line, Hudson Yards Public Square and Gardens to the east and Hudson River Park to the west, and surrounding neighborhoods. The proposed new elevator access at West 33rd Street near Twelfth Avenue would improve the accessibility of the High Line and would enhance accessible connections between the High Line and Hudson River Park. The proposed open space also would be proximate to other open spaces such as Hudson Yards Public Square and Gardens, Bella Abzug Park, and Hudson River Park.

As described in Chapter 6, “Shadows,” the Proposed Actions would result in significant adverse shadow-related impacts to two open space resources: the High Line and the Hudson Yards Public Square and Gardens open space. While the increase in shadows on these open spaces is considered a significant adverse impact to the vegetation in the open spaces, it would not constitute a significant adverse open space impact because the additional shadow would not significantly affect the use of the open spaces and there would be no displacement or alteration of the open spaces. The Proposed Actions would result in project-generated shadows on several other public open spaces with sunlight-sensitive features; however, in those cases the shadows would be limited in extent and duration and would not result in a significant adverse impact.

The shadows on the High Line are consistent with those anticipated from the new towers on the Development Site in the 2009 FEIS; however, the 2009 FEIS accounted for project-generated shadows from the Site 5 development (current Site A), while the current No Action condition assumes that Site A would not be developed before 2031, resulting in a larger increment of project-generated shadow from Site A. In both With

Action scenarios, Site C development would be set back farther from the High Line compared with the No Action scenario, resulting in less shadow at times on that portion of the High Line (west and north of Site C) in the With Action scenarios. Given the High Line's urban context, adjacencies to pre-existing buildings and the dense development constructed in close proximity to the resource after its opening, the extent and duration of incremental shadow experienced as a result of the With Action scenarios described above is likely not a unique condition along the park's 1.45-mile-long extent. Portions of the High Line below West 30th Street, which are substantially improved with plantings and vegetation, are shaded for much of the day and still highly utilized by the public.

Furthermore, the final design for the portion of the High Line that extends through the Development Site is still in development. As discussed in more detail in Chapter 6, "Shadows" and Chapter 22, "Mitigation," as the owner of this resource, NYC Parks will determine the specific program and design in consideration of the shadow effects noted above and the context of the resource within an area with multiple tall, large-scale buildings. The Applicant would coordinate with NYC Parks and Friends of the High Line to ensure that appropriate mitigation for the shadow impact is implemented in connection with the future design, construction, and operation of the High Line on the Development Site.

The Hudson Yards Public Square and Gardens is under the control of the Applicant, and the Applicant could monitor and evaluate plant health to determine if and how project-generated shadow affects existing plantings and vegetation. Should changes to the existing plantings and vegetation be warranted, shade-tolerant plant species that thrive in low-light conditions could be introduced, along with a diverse mix of trees, shrubs, and groundcovers with varying tolerances to create visual interest and ecological resilience. While the increase in shadows on the vegetation of these open spaces is considered a significant adverse shadow impact to the vegetation in the open spaces, it would not constitute a significant adverse open space impact because the additional shadow would not significantly affect the use of the open spaces and there would be no displacement or alteration of the open space.

Based on the analyses provided in other chapters for air quality, noise, and construction, study area open spaces would not experience significant adverse impacts associated with direct effects related to operational air quality, operational noise, or construction air quality. Chapter 20, "Construction," provides an analysis of the potential for construction associated with the Proposed Actions to result in temporary significant adverse air quality or noise impacts on open spaces.

A Construction Protection Plan (CPP) would be developed and implemented to protect the High Line during adjacent project construction. There would also be construction-period coordination between the Applicant, NYC Parks, and Friends of the High Line to ensure that construction on the Development Site protects users and minimizes disruption to the use and enjoyment of the High Line as much as possible.

INDIRECT EFFECTS

In the With Action condition, the Proposed Project is projected to result in a net increase in the non-residential population in the study area compared to the No Action condition. This reflects the new workers and visitors to the hotel resort with gaming facility and other commercial spaces. The Alternative Scenario would have an even greater non-residential

population increase compared to the No Action condition, due primarily to its office space component. However, both the Proposed Project and the Alternative Scenario would introduce a net increase of 1.15 acres of passive open space to the Development Site as compared to the No Action condition. Since both the Proposed Project and Alternative Scenario would introduce additional workers and visitors to the area, which would place demands on passive open space resources, the indirect effects analysis focuses on passive open space resources.

In the With Action condition, the Proposed Project would change the passive open space ratio from 0.50 to 0.46 acres per 1,000 non-residents compared to the No Action condition. The passive open space ratio of 0.46 would remain well above (more than triple) the city's goal of 0.15. For combined non-residential and residential users, the passive open space ratio would decrease slightly from 0.394 to 0.391. This percent change would be minor, and the overall combined non-residential and residential passive open space ratio would remain well above the City's goal (0.20 in this scenario, based on the weighted average of non-residential and residential population).

The Alternative Scenario would change the passive open space ratio from 0.50 to 0.44 acres per 1,000 non-residents compared to the No Action condition. The passive open space ratio of 0.44 would remain well above the City's goal of 0.15. For combined non-residential and residential users, the passive open space ratio would decrease slightly from 0.394 to 0.373 and would remain well above the overall City's goal (0.20 in this scenario) for a combined non-residential and residential passive open space ratio.

In addition, under both the Proposed Project and Alternative Scenario, passive open space users in the study area would have access to additional nearby open space resources just beyond the study area. Therefore, the Proposed Actions would not result in a significant adverse impact to open space ratios.

B. METHODOLOGY

DIRECT EFFECTS

According to the *CEQR Technical Manual*, a project would directly affect open space conditions if it causes the loss of publicly accessible open 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 results in increased noise or air pollutant emissions, odor, or shadows that would temporarily or permanently affect the usefulness of publicly accessible open space. This chapter uses information from Chapters 6, "Shadows;" 15, "Air Quality;" 17, "Noise;" and 20, "Construction" to determine whether the Proposed Actions would have the potential to directly affect any open spaces on or near the Development Site. A project can also directly affect an open space by enhancing its design or increasing its accessibility to the public.

INDIRECT EFFECTS

Following the methodology of the *CEQR Technical Manual*, indirect open space effects may occur when a project would add enough of a population, either residents or workers, to noticeably diminish the ability of an area's open space to serve the future population.

Typically, an assessment of indirect effects is conducted when a project would introduce 200 or more residents or 500 or more non-residents to an area. The Proposed Project would introduce an incremental increase of approximately 6,560 workers or visitors (hotel guests and gaming patrons) to the area during daytime hours by the 2031 analysis year. The Alternative Scenario would introduce an increase of approximately daily 9,128 workers and visitors (hotel guests) by the 2031 analysis year. As described above, the Proposed Actions would not introduce incremental new residential population to the area relative to the No Action condition; however, both the Proposed Project and the Alternative Scenario would generate residential populations, the open space study area contains a sizeable residential population, and residents in the study area may utilize passive open spaces near their homes. Therefore, a combined residential and non-residential assessment is provided to account for this residential population. For smaller projects, a preliminary assessment is typically provided as an initial assessment of conditions within the study area and to clarify the degree to which an action would affect open space and the need for further analysis. If the assessment indicates the need for further analysis, a detailed analysis of open space should be performed. Due to the size of the With Action condition, a detailed assessment has been provided.

The following sections describe the methodology for the analysis of indirect effects on open space, including establishing the study area, identifying open space user populations, creating an inventory of open space resources, and assessing the adequacy of open space resources.

WALK-TO-A-PARK SERVICE AREA

As part of *OneNYC 2050—Building a Strong and Fair City*, the City has put forth a goal that calls for 85 percent of New York City residents to live within walking distance of a park by 2030. To help the City reach this goal, the New York City Department of Parks and Recreation (NYC Parks) has a Walk to a Park initiative that focuses on increasing access to parks and open space in areas of the City where residents live beyond walking distance to a park. The Walk-to-a-Park service area is shown on **Figure 5-1**. Portions of the map that are not covered by a Walk-to-a-Park service area are considered “walk gaps;” i.e., areas of the City that are not within a walking distance to a park.

According to the *CEQR Technical Manual*, as part of the preliminary assessment for open space, a project should be reviewed to determine if it is located within a Walk-to-a-Park service area. Project sites that are located outside of a Walk-to-a-Park service area (i.e., located in a known walk gap area) suggest that there is a need for a detailed analysis to be performed to determine if the project may further exacerbate a condition of residents living in areas of the City with inadequate park access, potentially leading to a significant impact. The Development Site is not located within a known walk gap area; therefore, further analysis with regard to this initiative is not warranted.

STUDY AREA

The *CEQR Technical Manual* recommends establishing study area boundaries as the first step in an open space analysis. In accordance with the guidance contained in the *CEQR Technical Manual*, the open space study area is generally defined by a reasonable walking distance that users would travel to reach local open space and recreational resources, which differs by user. Workers and other non-residential populations (such as



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students) typically use passive open spaces within a short walking distance of their workplaces. Residents are more likely to travel farther to reach parks and recreational facilities, and they use both passive and active neighborhood open spaces. Workers and visitors are assumed to travel up to ¼-mile to use open space and recreation areas. Therefore, as recommended in the *CEQR Technical Manual*, a ¼-mile study area is used to analyze the Proposed Action's potential indirect effects on open space.

Consistent with *CEQR* guidance, the study area was adjusted to include all census tracts with at least 50 percent of their area within a ¼-mile of the Development Site. **Figure 5-2** shows the open space study area and the census tracts that comprise the study area.

OPEN SPACE USER POPULATIONS

Existing Conditions

Data on the existing worker population within the study area was compiled from the 2021 US Census Bureau Longitudinal Employer-Household Dynamics (LEHD) data for the census tracts that comprise the study area. Data on the existing residential population within the study area was compiled from the 2020 Census for the census tracts that comprise the study area.

No Action Condition

The worker population in the study area in the No Action condition was projected by adding to the number of workers anticipated to result from developments expected to be completed in the study area by 2031 to the existing worker population. The residential population was projected by adding to the number of existing residents the number of new housing units in the study area in the No Action condition, multiplied by an average household size of 1.7 persons per household for Manhattan Community District 4. The projected residential population was then combined with the worker population for the combined worker and residential population.

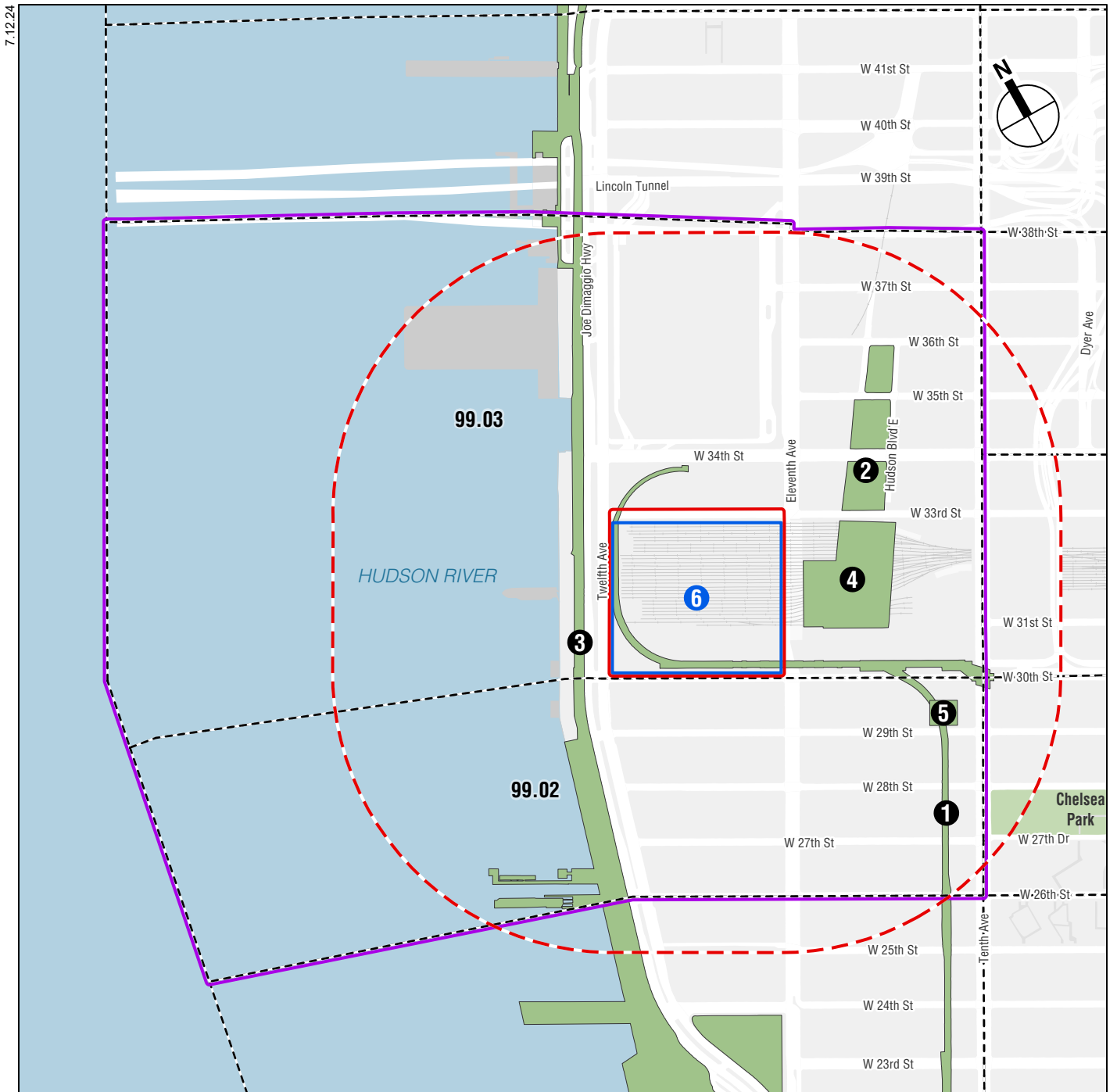
With Action Condition

The future non-residential population for the Proposed Project and for the Alternative Scenario was determined by adding the number of non-residents anticipated from the Proposed Project/Alternative Scenario to the non-residential population in the No Action condition while excluding the non-residential population of the Development Site in the No Action condition. The combined non-residential and residential population for the With Action condition was estimated by adding the projected future non-residential and residential population to the No Action condition combined non-residential and residential population.

INVENTORY OF OPEN SPACE RESOURCES

Publicly accessible open spaces and recreational facilities located within the study area were inventoried using information from the NYC Parks.

The *CEQR Technical Manual* defines publicly accessible open space as open space that is regularly open to the public during designated daily periods. Open spaces that do not fit this definition because they are not available to the public on a regular basis or are



- Development Site
- Affected Area
- 1/4-mile Perimeter
- Non-residential Study Area
- 102.01 Census Tracts
- 1 Open Space Resource
- 6 Future Open Space Resource

0 1,000 FEET

Open Space Resources
Figure 5-2

available only to a limited set of users are considered private open space and are not included in the quantitative open space analysis.

The character, condition, and use of the publicly accessible open spaces and recreational facilities within the study area were determined based on site visits conducted in March 2024 and satellite imagery. 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, seating area, or gardens. Certain areas, such as lawns or public esplanades, can serve as both active and passive open spaces.

The analysis also accounts for open space within the study area that will be created in the No Action condition and With Action condition.

ADEQUACY OF OPEN SPACE RESOURCES

The adequacy of open space in the study area is quantitatively assessed using a ratio of usable open space acreage to the study area population; this is referred to as the open space ratio. To assess the adequacy of open space resources, open space ratios are compared with planning goals set by the City as described in the *CEQR Technical Manual*. Although these open space ratios do not themselves determine whether a project might have a significant adverse impact on open space resources, they are helpful guidelines in understanding the extent to which user populations are served by open space resources. For non-residential populations, 0.15 acres of passive open space per 1,000 non-residents is typically considered adequate. If an assessment shows that a study area's open space ratio falls below the City guidelines of 0.15 acres of passive open space per 1,000 people and a proposed action would result in a substantial decrease in the open space, it could be considered a substantial change warranting a more detailed analysis. However, in areas that are extremely lacking in open space, any change in the ratio may be considered significant. For the combined non-residential and residential populations, the guideline ratio is determined by creating a weighted average 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. This weighted average ratio changes depending on the proportion of non-residents and residents in the study area.

In addition to the quantitative factors cited above, the *CEQR Technical Manual* also recommends consideration of qualitative factors in assessing the potential for open space impacts, when warranted. These include the capacity and utilization of open space resources, the connectivity of open space, the distance to regional parks or other parks just outside the study area, and the beneficial effects of new open space provided by a proposed project.

C. EXISTING CONDITIONS

STUDY AREA POPULATION

Based on 2021 LEHD data, the study area has a population of approximately 11,023 workers (see **Table 5-1**). The worker population consists primarily of office workers.

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Typically, these “non-residential” open space users seek leisure in passive open spaces during the lunch hour and midday period. (It should be noted that the worker population in the study area is likely higher in 2024 than indicated by the 2021 data given the recent opening of several high-rise commercial towers, including 50 Hudson Yards (approximately 2.9 million gsf of office space), 66 Hudson Boulevard (aka the Spiral, approximately 2.85 million gsf of office space), and Two Manhattan West (approximately 1.9 million gsf of office space), as well as the upcoming expansion of Wells Fargo at 20 Hudson Yards. Based on 2020 Census data, the study area has a residential population of approximately 6,228 (see **Table 5-1**). The combined worker and residential population in the study area is 17,251.

Table 5-1
Existing Study Area Population

Census Tract	Worker Population	Residential Population
99.02	6,424	2,380
99.03	4,599	3,848
Total	11,023	6,228
Combined Residential and Worker Population		17,251
Source: U.S. Census Bureau LEHD Data, 2021 (worker population) U.S. Census Bureau 2020 Census (residential population)		

OPEN SPACE INVENTORY

There are five publicly accessible open spaces located within the study area providing a total of 22.5 acres of publicly accessible open space, including 20 acres of open space providing passive recreation and 2.5 acres providing active recreation (see **Figure 5-2** and **Table 5-2**).

Table 5-2
Study Area Open Space Inventory

Map No. ¹	Name	Location	Owner	Total Acres	Active	Passive	Amenities	Condition/Utilization ⁴
1	The High Line ²	Section of the High Line west of Tenth Ave and north of West 26th Street	NYC Parks	2.93	0	2.93	Seating, bikeway/walkway, playground, dog run, pier, esplanade	Excellent/High
2	Bella Abzug Park	Midblock of Tenth and Eleventh Avenues, from West 33rd to West 37th Street	NYC Parks	2.63	0.26	2.37	Playground, dog run, benches, sculptures	Excellent/High
3	Hudson River Park and Greenway ³	Hudson River between West 38th Street and West 26th Street	Hudson River Park Trust/ NYSDOT	11.87	2.54	9.33	Plaza, seating, landscaping, bicycle and pedestrian paths	Excellent/High
4	Hudson Yards Public Square and Gardens	Hudson Yards	Hudson Yards	4.83	0	4.83	benches, sculpture/artwork, comfort station	Excellent/High
5	Abington House Plaza	500 West 30th Street	Abington House	0.35	0	0.35	Plaza, seating	Good/Moderate-to-Low
Study Area Total				22.61	2.80	19.81		

Notes:

¹ See **Figure 5-2** for open space resources.

² A portion of the High Line west of Eleventh Avenue is temporarily closed. Its acreage is included in the calculations.

³ This is an estimate for the area of Hudson River Park within the study area.

⁴ A field survey was conducted in March 2024.

NYSDOT = New York State Department of Transportation

Sources: NYC Parks; Hudson River Park website; Municipal Art Society POPS database; ArcGIS World Imagery

The High Line

The High Line is a linear park spanning approximately 1.45 miles along the west side of Manhattan that was formed by a repurposed railroad viaduct. The park operates as an elevated greenway and is a popular destination for both tourists and local users due to its scenic route and connection to many attractions on Manhattan's west side including Hudson Yards, Chelsea Market, and Little Island. Approximately half (0.75 miles or 2.93 acres) of the High Line is in the study area, with one segment extending east from Tenth Avenue along West 30th Street and then curving north around the western portion of the Development Site to its terminus at West 34th Street. Another segment runs midblock between Tenth and Eleventh Avenues from West 26th to West 30th Streets and extends south beyond the study area. This segment offers many seating areas, plant beds, viewing areas, Wi-Fi hot spots, and public restrooms. The High Line is in generally excellent condition and experiences high usage on weekdays and weekends. The portion of the High Line that extends along the western portion of the Development Site to its terminus at West 34th Street has not yet been renovated consistent with the rest of the resource and is currently open as an "interim walkway" through October 2024 ahead of restoration work. The portion of the High Line that falls within the Development Site comprises approximately 1.05 acres.

Hudson Yards Public Square and Gardens

The publicly accessible open space at Hudson Yards is an approximately 4-acre plaza in the center of the Eastern Rail Yard, directly east of the Development Site. The plaza contains green spaces and seating, and at its center is a 150-foot-tall sculpture known as the "Vessel," which is an interactive artwork that includes public staircases. The Vessel is open to the public and draws visitors from within and outside the neighborhood, including tourists. The plaza is bounded by buildings on its eastern and southern sides and opens to West 33rd Street to the north and Eleventh Avenue to the west. There are several food trucks in the plaza, as well as restaurants and cafes that border it. In addition to the large central plaza, there is a 0.7-acre plaza with seating and vegetation that wraps around 10 Hudson Yards at the southeast corner of the Eastern Rail Yard superblock. The Hudson Yards Public Square and Gardens are in excellent condition and are heavily utilized on weekdays and weekends.

Bella Abzug Park

Bella Abzug Park is a 2.63-acre, primarily passive open space located approximately two blocks east of the Development Site. It is located midblock between Tenth and Eleventh Avenues and spanning the six blocks from West 33rd Street to West 37th Street within the Hudson Yards neighborhood. Framed by trees and landscaping, the park has abundant seating, with tables, chairs, and circular fountains. The park's primary active space is a playground located on West 35th Street, which also includes a rope climbing feature and a restroom facility. Bella Abzug Park is in excellent condition and experiences high usage on weekdays and weekends.

Hudson River Park

Hudson River Park is a collection of esplanade and park-covered piers spanning Manhattan's western waterfront along the Hudson River from Tribeca to the Upper West Side. The park also contains a portion of the Hudson Greenway, a multi-use trail that

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serves as a popular bicycle route along the Hudson River and is part of the larger Empire State Trail system. An approximately 0.6-mile section of Hudson River Park (between West 26th Street and West 38th Street) is located in the study area. This stretch of the park includes a multi-user path, an esplanade with seating, a garden, Pier 66, and Pier 76. Pier 66 is a wooden walkway with benches and houses Hudson River Community Sailing. Pier 76 is located to the west of the Javits Center and contains an interim open space that is open to the public as part of Hudson River Park. Within the study area, Hudson River Park is in excellent condition and has high usage on weekdays and weekends. Like the High Line, the park is a popular destination for both tourists and local users due to its scenic route along the Hudson River and connection to many attractions on Manhattan's west side.

Abington House Plaza

Abington House Plaza is a publicly accessible open space on the western portion of the lot containing the Abington House residential building at 500 West 30th Street, which is adjacent to and overlooks the High Line. The plaza is located mostly beneath the High Line and has a pedestrian path with seating between West 29th Street and West 30th Street, as well as a small dog park that is publicly accessible. The park is in good condition and has moderate-to-low usage.

ASSESSMENT OF OPEN SPACE ADEQUACY

QUANTITATIVE ASSESSMENT

The study area has a total of 19.81 acres of passive open space. Non-residential populations typically use passive open space during the workday/school day, so the passive open space ratio is the relevant ratio for consideration. With an estimated worker population of 11,023, the study area has a passive open space ratio of 1.80 acres per 1,000 workers (see **Table 5-3**). This is well above the City's goal of 0.15 acres of passive space per 1,000 workers. The combined passive open space ratio of 1.15 acres per 1,000 workers and residents is also above the weighted open space goal of 0.28 acres of passive space per 1,000 workers and residents¹.

¹ The passive open space goal for the combined open space ratio is established by using a weighted average of the amount of open space necessary to meet the CEQR Benchmark of 0.5 acres of passive open space per 1,000 residents and 0.15 acres of passive open space per 1,000 non-residents. For each scenario, the percentage of non-residents in the combined total is multiplied by 0.15 and the percentage of residents in the combined total is multiplied by 0.50. The resulting numbers are added to establish the combined open space goal.

Table 5-3

Existing Conditions: Adequacy of Open Space Resources

	Total Population	Passive Open Space Acreage	Passive Open Space Ratio per 1,000 People	Passive Open Space Goal
Worker	11,023	19.81	1.80	0.15
Combined Workers and Residents	17,251		1.15	0.28

Notes: Ratios in acres per 1,000 persons.
The City's open space ratio goals for total and active open spaces are not applicable to the Proposed Actions under *CEQR Technical Manual* methodology, as the project would only be introducing a worker population to the study area (when compared against the population that would be introduced to the study area in the No Action condition).

Sources: NYC Parks: MapPLUTO.

QUALITATIVE ASSESSMENT

As noted above, the *CEQR Technical Manual* also recommends consideration of qualitative factors in assessing the potential for open space impacts, when warranted. These include the capacity and utilization of open space resources, the connectivity of open space, the distance to regional parks or other parks just outside the study area, and the beneficial effects of new open space provided by the Proposed Actions.

Both Hudson River Park and the High Line provide connections to many open spaces located outside the study area. South of the Development Site, the linear multi-use paths within Hudson River Park lead to a series of parks between West 22nd and West 24th Streets including Piers 62-64 and Chelsea Waterside Park. These resources are just outside of the study area and contain many active spaces (including a skate park and a playground) and passive spaces (including lawns, seating areas, and walking paths). Chelsea Waterside Park is located across Twelfth Avenue from this section of Hudson River Park and also contains a playground, sports courts, a dog park, and seating areas.

The High Line extends south from West 34th Street through the Development Site and terminates at West 14th Street near the Hudson River Park. It connects to three open spaces along the way:

- Chelsea Park – A block-sized park bounded by West 27th and West 28th Streets and Ninth and Tenth Avenues. The park is mostly composed of active space with a soccer field, playground, and dog run, but also has some passive areas for sitting and walking.
- Clement Clarke Moore Park – A small park at the corner of West 22nd Street and Tenth Avenue. It has a tree-shaded plaza with benches, and a playground.
- 14th Street Park – A small park at the intersection of Tenth and Eleventh Avenues. The park has a grassy oval and seating. It serves as a connection between the High Line and Hudson River Park.

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Other portions of Hudson River Park located outside the study area include:

- Little Island – a popular park with lots of passive space that sits on a new pier in the Hudson River.
- Piers 45, 46, and 51 – three piers along the Hudson River between Horatio Street and West 10th Street that have been repurposed with public active and passive space.
- Pier 84 – A large pier north of the Development Site at West 84th Street. It includes green spaces, an esplanade, a kayak dock, and other active uses.

As shown above, the High Line and Hudson River Park provide access to many open spaces beyond the study area that are not considered in the quantitative analysis. In terms of size and proximity, Chelsea Park, and the parks between West 22nd and West 24th Streets are most notable as they provide large amounts of additional open space just beyond the study area boundary.

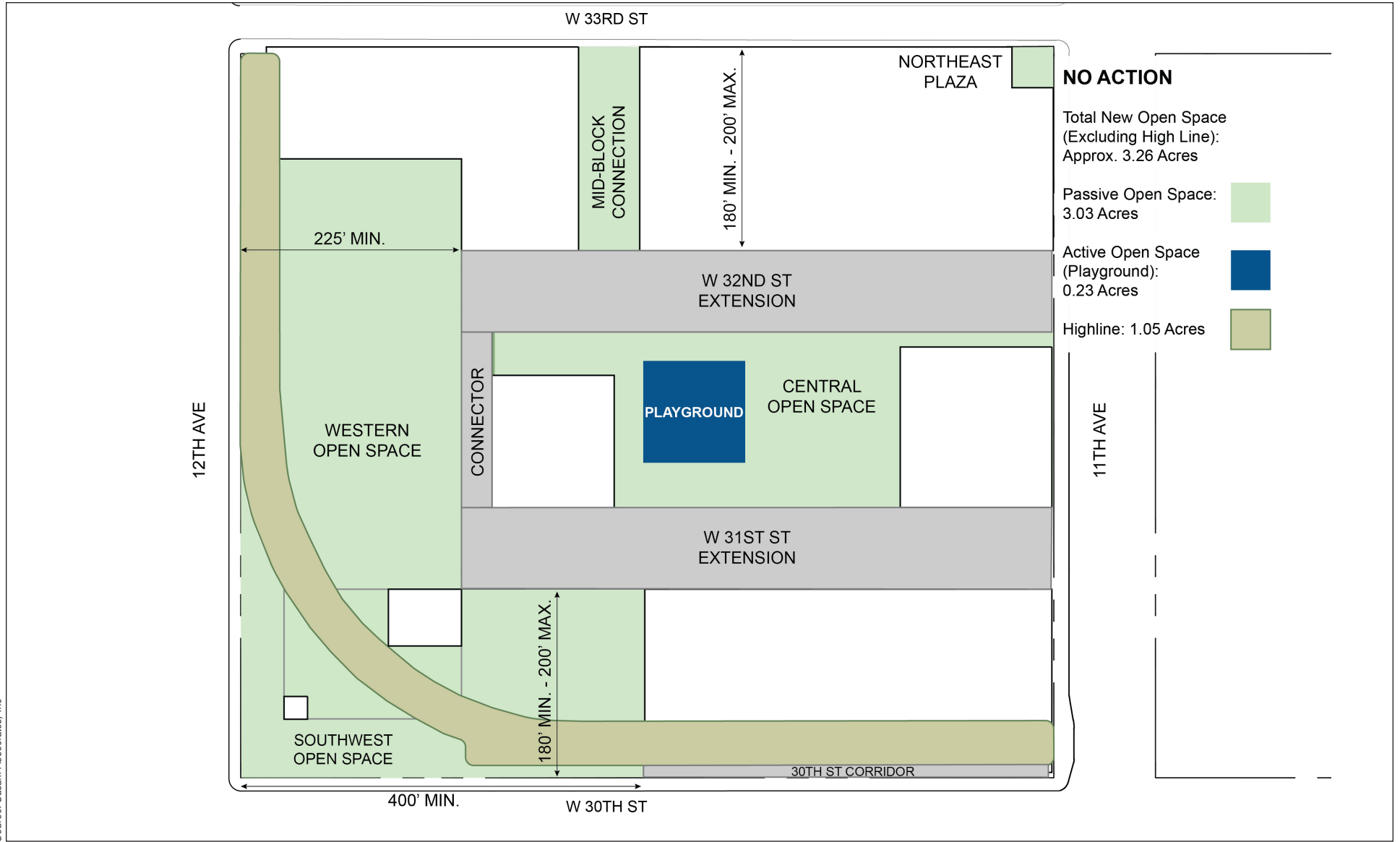
As discussed above, residents are more likely to travel farther to reach parks and recreational facilities—up to a ½ mile. Therefore, in addition to the study area resources identified above, residents would be expected to utilize the portions of the High Line and Hudson River Park that fall outside the ¼ mile study area, as well as other open spaces within this larger area.

D. THE FUTURE WITHOUT THE PROPOSED ACTIONS

DIRECT EFFECTS

In the future absent the Proposed Actions (the No Action condition), the Development Site will be developed with mixed-use buildings and would contain approximately 4.31 acres of publicly accessible open space including approximately 3.26 acres of new open space and 1.05 acres of existing open space (on-site portion the High Line). As shown in **Table 5-4**, the new publicly accessible open space will contain approximately 3.03 acres of passive space. As shown in **Figure 5-3**, the publicly accessible open space will be located primarily at the center of the Development Site, spanning the width of the site from Eleventh Avenue to Twelfth Avenue. There will also be open space in the southwestern corner of the site and a narrow strip leading to West 33rd Street. It is currently contemplated that the open space will contain a playground, walking paths, landscaping, and seating and lawn areas.

It is anticipated that there may be times during construction of the No Action development when construction activities could temporarily limit access to the portion of the High Line that traverses the Development Site. There will be construction-period coordination between the Applicant, NYC Parks, and Friends of the High Line to ensure that construction activities on the Development Site protects users and minimizes disruption to the use and enjoyment of the High Line as much as possible. The Applicant will also coordinate with NYC Parks and Friends of the High Line to maintain pedestrian access to the High Line during construction. Measures to minimize construction-period disruption of the High Line are discussed in more detail in Chapter 20, “Construction.” It is anticipated that the “interim walkway” portion of the High Line extending through the Development Site will be redesigned and enhanced in the future without or with the Proposed Actions, and that a connection from the new publicly accessible open space



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on the Development Site to the High Line will be created as part of the No Action development.

INDIRECT EFFECTS

STUDY AREA POPULATION

In the No Action condition, development will generate approximately 9,470 workers, 216 daily visitors, and 5,872 residents. In addition, there are 12 known development projects within the study area that are expected to be completed by the 2031 analysis year (see **Appendix A**). These projects will add an estimated 26,000 new workers to the study area. Therefore, the study area non-residential population is expected to increase by approximately 36,000, for a total of 46,640 in the No Action condition. The residential population is expected to increase by 6,659 to 12,887 residents as a result of the known development projects in the study area. The combined worker, visitor, and residential population is therefore anticipated to increase to 59,527 under the No Action condition.

STUDY AREA OPEN SPACES

In the No Action condition, changes to the open space resources within the study area are anticipated by the analysis year. In addition to the new publicly accessible open space on the Development Site, Bella Abzug Park is planned to be extended north by two blocks, from West 37th Street to West 39th Street. The expansion will create approximately 1.41 acres of new publicly accessible open space (with approximately 0.59 acres of passive space), which will include landscaping, multiple playscapes, a water feature, and seating. The expansion will have the same architectural aesthetic as the existing park sections. Overall, as shown in **Table 5-4**, the total amount of passive open space in the study area will increase by approximately 3.62 acres, which will result in a total of 23.43 acres of passive open space in the No Action condition.

Improvements are being proposed for an approximately 17-block section of Hudson River Park including the portion that traverses the study area; however, the project is currently in the planning stages and the timing of these improvements is unknown. Therefore, no changes were assumed for this open space for future No Action and With Action conditions.

Table 5-4
No Action Condition: Publicly Accessible Open Space Changes

Map No. ¹	Name	Location	Owner	Change in Passive Open Space (Acres)	Amenities
2	Bella Abzug Park Extension	Midblock between Tenth and Eleventh Avenues, from West 37th to West 39th Streets	NYC Parks	+0.59	Playground, water feature, landscaping, seating
6	Western Rail Yards Open Space	Development Site	WRY Tenant LLC	+3.03	Playground, paths, landscaping
TOTAL:				+3.62	
Sources: <i>Western Rail Yard Final Environmental Impact Statement</i> (2009), Sasaki Design, Michael Van Valkenburgh Associates					

ASSESSMENT OF OPEN SPACE ADEQUACY

As shown in **Table 5-5**, with a total non-residential population of 46,640 and 23.43 acres of passive open space, the passive open space ratio will decrease to 0.50 acres per 1,000 non-residents in the No Action condition. The open space ratio will remain well above the City's goal of 0.15 acres per 1,000 non-residents. The study area will have a residential population of 12,887, which will result in a combined non-residential and residential population of 59,527. With a population of 59,527, the combined passive open space ratio of 0.394 acres per 1,000 non-residents and residents will also remain well above the goal of 0.23 acres of passive space per 1,000 non-residents and residents.

Table 5-5
No Action Condition: Adequacy of Open Space Resources

	Total Population	Passive Open Space Acreage	Passive Open Space Ratio per 1,000 People	Passive Open Space Goal
Non-Residential	46,640	23.43	0.50	0.15
Combined Non-Residential and Residents	59,527		0.394	0.23
Note: Ratios in acres per 1,000 people. Sources: NYC Parks; MapPLUTO.				

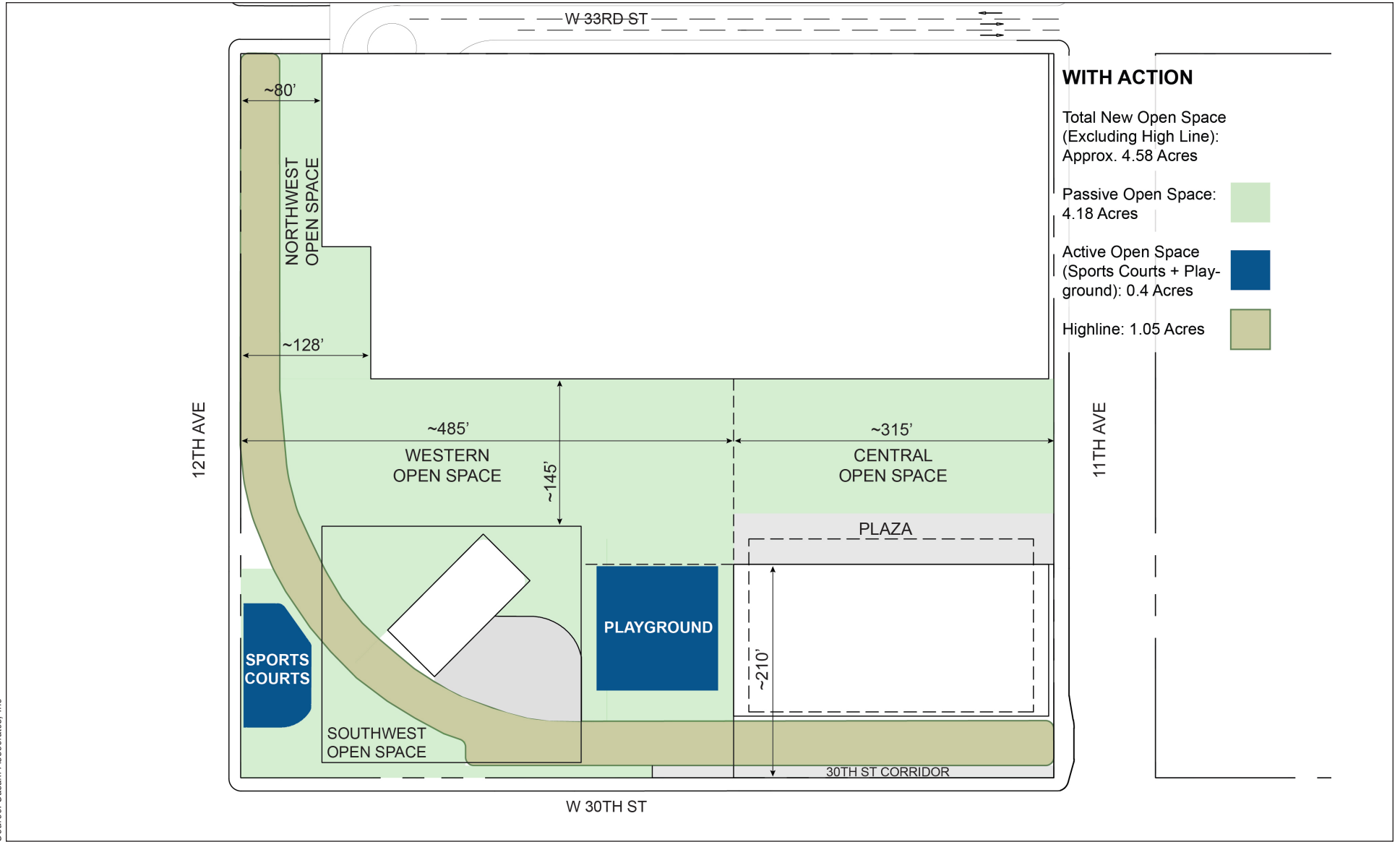
E. THE FUTURE WITH THE PROPOSED ACTIONS

DIRECT EFFECTS

The Proposed Actions would not have an adverse direct effect on the study area's open space resources under operational conditions. The Proposed Actions would result in no physical loss of existing publicly accessible open space; would not change the use of an existing open space resource so that it no longer serves the same user population; and would not limit public access to an existing open space resource.

To the contrary, the Proposed Actions would result in beneficial direct effects to open space with the addition of a new open space on the Development Site. The Proposed Project and Alternative Scenario would create 4.58 acres of new publicly accessible open space, of which 4.18 acres would be passive. As compared to the No Action condition, there would be 1.32 more acres of total open space, and 1.15 more acres of passive space on the Development Site in the With Action condition. In addition, in the With Action condition (as in the No Action condition) the portion of the High Line located on the Development Site would be independently enhanced from its current "interim walkway" condition and a connection from the new publicly accessible open space on the Development Site to the High Line would be created. Two new connections to the High Line are planned: one at West 30th Street and Twelfth Avenue, and one at West 33rd Street and Twelfth Avenue. The proposed new elevator access at West 33rd Street and Twelfth Avenue would improve the accessibility of the High Line and would enhance accessible connections between the High Line and Hudson River Park.

The new open space would provide a substantial open space amenity for workers, visitors, and residents of the Development Site and surrounding neighborhood, including both active and passive recreational opportunities. As shown in **Figures 5-4 and 5-5**, the



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new publicly accessible open space on the Development Site would consist of a network of spaces that would vary in character and purpose, including expansive lawns, landscaped areas, walking paths, seating areas, plazas, and a dog run. The new open space would provide a neighborhood and regional destination overlook above the Hudson River; provide new direct connections to the High Line; include plaza space to accommodate pedestrian circulation at the base of the office tower at Site B; and include various pathways and connections to draw pedestrians into and through the space. Extensive landscaping, seating, planting, and other public amenities would be provided throughout the open area. At the southwest corner of the Development Site, at street level, the open space would continue under the High Line on West 30th Street and Twelfth Avenue. As detailed above, two new connections to the High Line are planned: one at West 30th Street and Twelfth Avenue, and one at West 33rd Street and Twelfth Avenue. The proposed new elevator access at West 33rd Street near Twelfth Avenue would improve the accessibility of the High Line and would enhance accessible connections between the High Line and Hudson River Park. It also would provide attractive pedestrian and visual connections between the Development Site, the High Line, Hudson Yards Public Square and Gardens to the east and Hudson River Park to the west, and surrounding neighborhoods.

Unlike the No Action open space that would be built according to the design required under the existing zoning—which is interrupted by private streets and punctuated by building footprints—the design of the open space in the future with the Proposed Actions is intended to concentrate the open space in a single, continuous open space oriented in the middle of the Development Site to maximize the public experience.

Chapter 20, “Construction,” provides an analysis of the potential for construction associated with the Proposed Actions to result in temporary significant adverse noise or air quality impacts on open spaces. There would be construction-period coordination between the Applicant, NYC Parks, and Friends of the High Line to ensure that construction activities on the Development Site protects users and minimizes disruption to the use and enjoyment of the High Line as much as possible. The Applicant would also coordinate with NYC Parks and Friends of the High Line to maintain pedestrian access to the High Line during construction.

As described in Chapter 6, “Shadows,” the Proposed Actions would result in significant adverse shadow-related impacts to two open space resources: the High Line and the Hudson Yards Public Square and Gardens open space. The Proposed Actions would result in project-generated shadows on several other public open spaces and historic resources with sunlight-sensitive features; however, in those cases the shadows would be limited in extent and duration and would not result in a significant adverse impact.

The shadows on the High Line are consistent with those anticipated from the new towers on the Development Site in the 2009 FEIS; however, the 2009 FEIS accounted for project-generated shadows from the Site 5 development (current Site A), while the current No Action scenario assumes that Site A would not be developed before 2031, resulting in a larger increment of project-generated shadow from Site A. In both With Action scenarios, Site C development would be set back farther from the High Line compared with the No Action scenario, resulting in less shadow at times on that portion of the High Line (west and north of Site C) in the With Action scenarios.

Western Rail Yard Modifications

Given the High Line's urban context, adjacencies to pre-existing buildings and the dense development constructed in close proximity to the resource after its opening, the extent and duration of incremental shadow experienced as a result of the With Action scenarios described above is likely not a unique condition along the park's 1.45-mile-long extent. Portions of the High Line below West 30th Street, which are substantially improved with plantings and vegetation, are shaded for much of the day and still highly utilized by the public. In this situation, effective park landscape is achieved through a comprehensive understanding and integration of environmental factors such as wind, sun exposure, and shade distribution. These factors play a pivotal role in shaping the microclimatic conditions, influencing plant species composition and placement to optimize both aesthetic appeal and hardiness.

Recognizing where there are areas of shade is crucial for planning vegetation and amenities for lower-light environments. Selecting shade-adapted plant species are a part of a healthy planting structure (that includes emergent, canopy, understory and groundcover layers) to help create lush understory layers. Aligning hardscape features, such as pathways and seating, with shaded spaces encourages park visitors to take advantage of the benefits of shade, while preserving vegetation and soil conditions.

While the increase in shadows on the vegetation of these open spaces is considered a significant adverse shadow impact to the vegetation in the open spaces, it would not constitute a significant adverse open space impact because the additional shadow would not significantly affect the use of the open spaces and there would be no displacement or alteration of the open space. Furthermore, the final design for the portion of the High Line that extends through the Development Site is still in development. As discussed in more detail in Chapter 6, "Shadows" and Chapter 22, "Mitigation," as the owner of this resource, NYC Parks will determine the specific program and design in consideration of the shadow effects noted above and the context of the resource within an area with multiple tall, large-scale buildings. The Applicant would coordinate with NYC Parks and Friends of the High Line to ensure that appropriate mitigation for the shadow impact is implemented in connection with the future design, construction, and operation of the High Line on the Development Site. The Hudson Yards Public Square and Gardens is under the control of the Applicant, and the Applicant could monitor and evaluate plant health to determine if and how project-generated shadow affects existing plantings and vegetation. Should changes to the existing plantings and vegetation be warranted, shade-tolerant plant species that thrive in low-light conditions could be introduced, along with a diverse mix of trees, shrubs, and groundcovers with varying tolerances to create visual interest and ecological resilience.

Furthermore, based on the air quality and noise analyses described in Chapter 15, "Air Quality," and Chapter 17, "Noise," study area open spaces would not experience direct effects that would cause a significant adverse impact to open space under operational conditions.

Chapter 20, "Construction," provides an analysis of the potential for construction associated with the Proposed Actions to result in significant adverse air quality and noise impacts on open spaces.

A CPP would be developed and implemented to protect the High Line during adjacent project construction. There would also be construction-period coordination between the Applicant, NYC Parks, and Friends of the High Line to ensure that construction on the

Development Site protects users and minimizes disruption to the use and enjoyment of the High Line as much as possible.

INDIRECT EFFECTS

STUDY AREA POPULATION

The Proposed Project would result in the addition of approximately 10,030 daily workers, 2,562 residents, and 6,216 daily visitors during the daytime hours. This would result in a total non-residential population in the study area of 53,200 in the With Action condition. The study area would have a residential population of 9,577, which would result in a combined non-residential and residential population of 62,777.

The Alternative Scenario would generate 17,380 daily workers, 3,087 residents, and 1,434 daily visitors. This would result in a total non-residential population in the study area of 55,768 in the With Action condition under this Scenario. The study area would have a residential population of 10,102, which would result in a combined non-residential and residential population of 65,870.

STUDY AREA OPEN SPACES

The Proposed Actions would introduce approximately 4.58 acres of new publicly accessible open space to the study area, of which 4.18 acres would be passive space.

ASSESSMENT OF OPEN SPACE ADEQUACY

Quantitative Assessment

As shown in **Tables 5-6 and 5-7**, the Proposed Project would have a total non-residential population of 53,200 and 24.58 acres of passive open space in the With Action condition. As a result, the passive open space ratio would decrease to 0.462 acres per 1,000 non-residents. The open space ratio would remain well above the City's goal of 0.15 acres per 1,000 workers. With a combined non-residential and residential population of 62,777, the combined passive open space ratio of 0.391 acres per 1,000 non-residents and residents would also remain well above the combined goal of 0.20 acres of passive space per 1,000 non-residents and residents.

Table 5-6

With Action Condition: Adequacy of Open Space Resources

	Total Population	Passive Open Space Acreage	Passive Open Space Ratio per 1,000 People	Passive Open Space Goal
Proposed Project				
Non-Residential	53,200	24.58	0.462	0.15
Combined Non-Residential and Residential	62,777		0.391	0.20
Alternative Scenario				
Non-Residential	55,768	24.58	0.441	0.15
Combined Non-Residential and Residents	65,870		0.373	0.20
Notes: Ratios in acres per 1,000 persons. The City's open space ratio goals for total and active open spaces are not applicable to the Proposed Actions under <i>CEQR Technical Manual</i> methodology, as the Proposed Actions would only be introducing a worker population to the study area (when compared against the population that would be introduced to the study area in the No Action condition).				
Sources: NYC Parks; MapPLUTO.				

Table 5-7

With Action Condition Passive Open Space Ratios Summary

Ratio	City Goal (acres per 1,000 People)	No Action Condition	With Action Condition	Percent Change
Proposed Project				
Non-Residential	0.15	0.502	0.462	-8.03%
Combined Non-Residential and Residential	0.20	0.394	0.391	-0.52%
Alternative Scenario				
Passive Non-residential	0.15	0.502	0.441	-12.26%
Passive Combined Non-Residential and Residential	0.20	0.394	0.373	-5.19%

In the Alternative Scenario, with a total non-residential population of 55,768 and 24.58 acres of passive open space, the passive open space ratio would decrease to 0.44 acres per 1,000 non-residents in the No Action condition. The open space ratio would remain well above the City's goal of 0.15 acres per 1,000 non-residents. With a combined non-residential and residential population of 65,870, the combined passive open space ratio of 0.37 acres per 1,000 workers and residents would also remain well above the combined goal of 0.20 acres of passive space per 1,000 non-residents and residents.

Qualitative Assessment

As discussed above, in addition to the publicly accessible passive open space resources within the study area, workers and other non-resident users would be able to access various additional nearby open space resources located just beyond the study area. The residential population of the study area, including those residents generated by the Proposed Project or the Alternative Scenario, would be expected to use the new and existing open spaces within the ¼-mile study area, and would also be expected to travel farther—up to a ½ mile—to reach parks and recreational facilities, such as adjacent portions of the High Line and Hudson River Park, Chelsea Park, and other open spaces

within this larger area. In addition, due to its proximity and connections to the High Line and Hudson River Park, it is anticipated some users of those open spaces coming from outside the neighborhood could also use the new open space created by Proposed Project and Alternative Scenario. However, since the With Action passive open space ratios would be well above the City's goal under both the Proposed Project and Alternative scenario (as discussed above), it is anticipated that such users could be accommodated without adverse effect to open space and that the new, expansive open space on the Development Site would result in potential benefits to residents, workers, and visitors to the neighborhood.

IMPACT DETERMINATION FOR INDIRECT EFFECTS

In the With Action condition, the Proposed Project would change the passive open space ratio from 0.50 to 0.46 acres per 1,000 non-residents compared to the No Action condition, representing an approximately 8.03 percent decrease in the open space ratio (see **Table 5-7**). However, at 0.46 acres per 1,000 non-residents, the passive open space ratio would remain well above (more than triple) the City's goal of 0.15 acres per 1,000 non-residents. For combined non-residential and residential users, the passive open space ratio would decrease slightly, from 0.394 to 0.391, an approximately 0.52 percent decrease over the No Action condition. This percent change would be minor, and the combined non-residential and residential passive open space ratio would remain well above the City's goal. In addition, passive open space users in the study area would have access to additional nearby open space resources just beyond the study area. Therefore, the Proposed Project would not result in a significant adverse impact to open space ratios.

As noted in **Table 5-7**, the Alternative Scenario would change the passive open space ratio from 0.50 to 0.44 acres per 1,000 non-residents compared to the No Action condition, representing an approximately 12.26 percent decrease in the open space ratio (see **Table 5-7**). However, the passive open space ratio of 0.44 acres per 1,000 non-residents would remain well above (almost triple) the City's goal of 0.15 acres per 1,000 non-residents. For combined non-residential and residential users, the passive open space ratio would decrease slightly from 0.39 to 0.37, an approximate 5.19 percent decrease over the No Action condition. However, the overall combined non-residential and residential passive open space ratio would remain well above the City's goal. In addition, open space users in the study area, including passive open space users, would have access to additional nearby open space resources just beyond the study area. Therefore, the Alternative Scenario would not result in a significant adverse impact to open space ratios. *