OCEAN DREAMS MINOR MODIFICATION
CEQR No. 10DCP038K
(ULURP Nos. M 110059(A) ZSK; M 110060(B) ZSK; M 110061(A) ZSK; M 110062(A) ZSK)
TECHNICAL MEMORANDUM 002
February 23, 2018

A. INTRODUCTION

On August 8, 2011, the New York City Department of City Planning (DCP), as Lead Agency, issued a Revised Conditional Negative Declaration for the Ocean Dreams Rezoning and Related Actions Environmental Assessment Statement (EAS). The EAS assessed a proposed zoning map change and special permits for bulk and use modifications to facilitate development of a 14-story (plus mechanical penthouse) residential building, with ground-floor retail, and an 18- to 22-story (plus mechanical penthouse) residential building, with retail and service uses on the ground floor along Surf Avenue and possibly along the Riegelmann Boardwalk, on the south side of Surf Avenue between West 35th Street and a line parallel to, and 140 feet west of, 36th Street in the Coney Island section of Brooklyn, Community District 13 (see **Figure 1**). The previously proposed buildings assessed in the EAS would contain a combined floor area of 428,256 square feet, consisting of 403,486 square feet of residential floor area (417 residential units), 24,790 square feet of local retail and service uses, and off-street accessory parking for 418 vehicles.

On August 10, 2011, the City Planning Commission (CPC) approved the special permits under Section 62-836 (C 110059 ZSK, the ZLA Waterfront Special Permit, and C 110060[A] ZSK, the ZLB Waterfront Special Permit), Section 74-743 (C 110061 ZSK) and Section 74-744 (C 110062[A] ZSK, together with C 110061 ZSK, the LSGD Special Permits) (the Waterfront Special Permits and the LSGD Special Permits, together the Special Permits) of the New York City Zoning Resolution (ZR). In connection with the grant of the Special Permits, CPC also rezoned the project site—Block 7065, Lots 6 and 12 (Zoning Lot A) and Block 7065, Lot 20 (Former Lots 15, 20 and 25) (Zoning Lot B)—from R6A to R7-3 and R7-3/C2-4 and granted certifications pursuant to ZR Section 62-811(a) regarding waterfront public access and visual corridors. The City Council approved the Special Permits, which became effective on September 8, 2011 for a term of four years. On March 24, 2016, CPC approved renewals of the Special Permits for 3-year terms, which expire on September 7, 2018 (N 160039 CMK, N 160040 ZMK, N 160041 ZMK and N 160104 CMK). As a condition to the grant of the Special Permits, R.A. Real Estate, Inc. (the Applicant) executed and recorded a Declaration of Large-Scale General Development, which requires that in the event the project site is developed in reliance upon the Special Permits, the resulting development must substantially comply with the CPC approved project site plan (the 2011 Approved Site Plan).

R.A. Real Estate, Inc. (the Applicant) is seeking modifications to the Special Permits to revise the previously approved design for the proposed mixed-use development on the project site. The proposed modifications, which are described in detail below, would not require any new authorizations or special permits to be granted or increase the degree of relief granted under the ZLB Waterfront Special Permit and would result in the withdrawal of the LSGD Special Permits and the ZLA Waterfront Special Permit. The proposed modifications would modify the approved massing of the buildings to concentrate the residential components on the northeast

8/3/2017

Project Site

0 1,000 FEET

Project Location
Figure 1

OCEAN DREAMS TECHNICAL MEMORANDUM 002

and northwest corners of the project site; structurally separate the parking facilities and portions of the retail space from the residential uses; provide for regularly shaped tower floor plates; and increase the number of dwelling units and parking spaces. The proposed modifications would substantially reduce the amount of piles needed to support the buildings and allow for more efficient apartment layouts (increasing the amount of living space for residents), and place fewer columns within the parking and retail spaces. The proposed modifications would also permit designs for the buildings that are consistent with the latest flood-resistant construction standards of the Federal government and the New York City Building Code and mitigate the effects of elevated and flood-proofed buildings on streetscape and pedestrian activity by complying with the provisions of Article VI, Chapter 4 of the Zoning Resolution (Special Regulations Applying in Flood Hazard Areas).

Pursuant to an Amended and Restated Declaration to be executed and recorded against the Project Sites as a condition to the CPC approval of the proposed modifications, the project site will be required to be developed in substantial compliance with a revised, approved site plan, which will limit the maximum permitted Floor Area Ratio (FAR) to 4.0 and the maximum permitted commercial zoning floor area to 24,790 zsf, establish permitted building envelopes, limit the maximum number of dwelling units to 509, and require the provision of 478 attended parking spaces.

As the proposed modifications require additional discretionary approvals from CPC, the Ocean Dreams Rezoning and Related Actions project requires additional environmental review under City Environmental Quality Review (CEQR) in order to determine whether the proposed modifications could result in significant adverse impacts that were not identified in the EAS.

This Technical Memorandum 002 describes the proposed modifications and examines whether they would result in any new significant adverse environmental impacts.

B. DESCRIPTION OF THE PROPOSED MODIFICATIONS

OVERVIEW

The proposed modifications would not require any new authorizations or Special Permits to be granted, or increase the degree of relief granted under the Special Permits. Rather, the proposed modifications would reduce the relief granted under the ZLB Waterfront Special Permit and the LSGD Special Permits and the ZLA Waterfront Special Permit would be withdrawn.

The existing Special Permits allow the project site to be developed with two new mixed-used buildings—one with a 3- to 5-story base and a 14-story hexagonal-shaped tower on Zoning Lot A, and one with a 3- to 6-story base and two hexagonal-shaped towers (18 stories and 22 stories) on Zoning Lot B. The building on Zoning Lot A would contain 119,838 gsf (100,532 zsf) of residential use (106 market-rate dwelling units), 3,792 gsf (3,640 zsf) of ground-floor local retail use along Surf Avenue and an off-street accessory parking garage containing 158 spaces. The building on Zoning Lot B would contain up to 362,691 gsf (302,884 zsf) of residential use (311 dwelling units), 28,423 gsf (21,150 zsf) of retail space along Surf Avenue and, optionally, the Riegelmann Boardwalk, and an off-street accessory parking garage containing 260 spaces. Together, the buildings would contain a total of 645,216 gross square feet (gsf) of floor area at an FAR of 4.0, with 417 dwelling units and 418 accessory off-street parking spaces.

The Special Permits granted waivers to allow: (i) a maximum lot coverage of 92 percent for Zoning Lot A and 91 percent for Zoning Lot B, versus 70 percent permitted as-of-right under ZR

62-322 (the "Lot Coverage Waivers"); (ii) the maximum base height for street walls facing West 36th Street (a narrow street) to be 122.34 feet on Zoning Lot A and 191.93 feet on Zoning Lot B, versus 65 feet permitted as of right for narrow streets under ZR 62-341(c)(1) (the "Base Height Waivers"); (iii) the minimum setback above the base height for street walls facing West 36th Street to be 10 feet, versus 15 feet for street walls facing narrow streets under ZR 62-341(a)(2) (the "Setback Waivers"); (iv) the maximum building height of the west tower of the building on Zoning Lot B to extend to a height of 221.93 feet, versus 185 feet under ZR 62-341(c)(2), and the maximum penthouse height of the west tower to extend to a height of 243.93 feet, versus 225 feet under ZR 62-341(a)(4)(ii) (the "Height Waivers"); (v) the penthouse floor plates on Zoning Lot B to deviate from the minimums and maximums permitted under ZR 62-341(a)(4)(ii) (the "Penthouse Floorplate Waiver"); (vi) the size of the tower floor plate on Zoning Lot A to be 7,800 gsf, versus a maximum of 7,000 gsf permitted as-of-right under ZR 62-341(a)(4)(ii) (the "Tower Floorplate Waiver"); (vii) the ground floors along Zoning Lot A and Zoning Lot B to deviate from the minimum floor area required under ZR 62-341(c)(6) (the "Ground Floor Waivers"); (viii) portions of the parking facility in the required rear yard of Zoning Lot A to exceed the maximum height of 14 feet for permitted rear yard obstructions under ZR 23-44 (the "Rear Yard Waiver"); (ix) relief from the supplemental use regulations of ZR 32-421 to locate commercial floor area to be located above the ground floor (the "Supplemental Use Waiver"); and (x) relief from the regulations of ZR 23-87 to allow balconies in inner courts on Zoning Lot A (the "Court Waiver").

The proposed modifications to the Special Permits would:

(i) Modify the approved massings of the buildings to provide: for the building on Zoning Lot A, a 2- to 3- story base with an 11-story rectangular tower (reaching a height of 141.4 feet to the bulkhead above the alternative height datum [AHD] permitted under ZR Sections 64-131, 64-335 and 64-336, which equates to an elevation of 158 feet relative to the North American Vertical Datum of 1988); and for the building on Zoning Lot B, a 2- to 6-story base with two 21-story rectangular towers above (each reaching a height of 247.5 feet to the bulkhead above AHD (EL. +265.5'). These revised massings would comply with the provisions of the Zoning Resolution governing maximum base heights, minimum setbacks and maximum building and penthouse heights in R7-3 and R7-3/C2-4 districts in the waterfront area and flood zone, eliminating the need for the Base Height Waivers, the Setback Waivers, the Height Waivers, the Rear Yard Waiver, the Supplemental Use Waiver, the Court Waiver and, on Zoning Lot A, the Lot Coverage Waiver;

(ii) Reduce the size of the tower floor plate on Zoning Lot A from 7,800 gsf to 6,996 gsf and increase the size of the tower floor plates on Zoning Lot B from 7,700 gsf each to 8,099 gsf each and modify the shape of the tower floorplates from hexagonal to rectangular, eliminating the need for the Tower Floorplate Waiver and Penthouse Floor Plate Waiver;

(iii) Increase the total number of dwelling units in the proposed development to 509 from 417;

(iv) Increase the total number of attended accessory off-street parking spaces to 478 from 418;

(v) Decrease the amount of floor area on Zoning Lot A by 25,156 zsf, and increase the amount of floor area on Zoning Lot B by the same amount;

(vi) Modify the location of ground floor uses to eliminate the need for the Ground Floor Waivers; and

(vii) Eliminate the need for all of the waivers previously granted under the Special Permits, except the Lot Coverage Waiver on Zoning Lot B.

In sum, the proposed modifications would eliminate the need for all of the Special Permits, including the LSGD Special Permits, except for the Lot Coverage Waiver, with respect to Zoning Lot B, granted under the Waterfront Special Permits.

PURPOSE AND NEED OF THE PROPOSED MODIFICATIONS

The proposed modifications to the Special Permits would modify the approved massing of the buildings to concentrate the residential components on the northeast and northwest corners of the project site, structurally separate the parking facilities and portions of the retail space from the residential uses, provide for regularly shaped tower floor plates, and increase the number of dwelling units and parking spaces. The proposed modifications would significantly reduce the amount of piles needed to support the building, and allow for more efficient apartment layouts (increasing the amount of living space for residents) and fewer columns within the parking and retail spaces.

As discussed in more detail below in the Section entitled "New York City Waterfront Revitalization Program," the project site is entirely within the 100-year floodplain. The Base Flood Elevation (BFE) for the site is 11 feet NAVD88 and falls within Zone AE (an area of high flood risk subject to inundation by the 1% annual-chance flood event). The proposed modifications reflect designs for the buildings that comply with the provisions of Article VI, Chapter 4 of the Zoning Resolution (Special Regulations Applying in Flood Hazard Areas). As per ZR 64-00, compliance with the regulations facilitates the development and alteration of buildings in flood zones consistent with the latest flood-resistant construction standards of the Federal government and the New York City Building Code and mitigate the effects of elevated and flood-proofed buildings on streetscape and pedestrian activity. Except for entryways at curb level, the ground floor (first floor) of both Zoning Lot A and B buildings are proposed at an elevation of 12 feet NAVD88, one foot above the current BFE. Only the garage spaces would extend below the design flood elevation, and theses spaces would be self-draining and flood proofed using a tall concrete watertable in combination with stackable flood barriers at the garage entries. Retail space and residential entryways would be located on the ground floor, but residential units are proposed only beginning at the 2nd floors of the building. The retail space and residential entries would be dry flood proofed using a combination of flood barriers, flood doors, and flood glass.

DESCRIPTION OF THE PROPOSED DEVELOPMENT

The previously approved Special Permits allow a 14-story mixed-use building on Zoning Lot A (Approved Building A) and an 18- to 22-story mixed-use building on Zoning Lot B (Approved Building B). Approved Building A would contain 119,838 gsf (100,532 zsf) of residential use (106 market-rate dwelling units) and 3,792 gsf (3,640 zsf) of ground-floor local retail use along Surf Avenue. The building would have a 3- to 5-story L-shaped base along Surf Avenue and West 36th Street and a hexagonal-shaped tower rising to 14 stories above (164.3 feet above AHD to the top of the bulkhead (EL. + 177.34).[1] Above the 4th floor, the tower floor plates

[1] As noted on the Site Plan and Project Description filed in connection with the approval by the CPC of special permit renewals in 2016, heights of buildings are measured relative to an AHD based on a base flood elevation of +11.0 feet resulting in a flood resistant construction elevation of +13.0 feet in

would decrease in area to the 14th floor. Approved Building B would contain up to 362,691 gsf (302,884 zsf) of residential use (311 dwelling units) and 28,423 gsf (21,150 zsf) of retail space along Surf Avenue and, optionally, the Riegelmann Boardwalk. The 3- to 6-story U-shaped base would be topped with a 22-story hexagonal-shaped tower (243.9 feet above AHD [EL. + 256.93'] to the top of the bulkhead) at the corner of Surf Avenue and West 36th Street and an 18-story hexagonal-shaped tower (193.9 feet above AHD [EL. + 206.93'] to the top of the bulkhead) at the corner of Surf Avenue and West 35th Street (see **Figures 2a, 2b, and 2c**).

Under the proposed modifications, Zoning Lot A would be developed with a 135,751-gsf, 11-story, mixed-use building (Building A) containing 88,865 gsf of residential uses (79 market-rate dwelling units), 4,094 gsf of commercial retail/service uses, and 42,792 gsf of attended accessory parking (170 spaces). Building A would have a 2- to 3-story L-shaped base wrapping around Surf Avenue and West 36th Street. Above the base, a rectangular tower, set back 10 feet from Surf Avenue and 15 feet from West 36th Street, would rise to 11 stories (141.42 feet to the bulkhead above AHD [EL. +158']). At the 4th through 11th stories, the tower would have a floor plate of 6,996 gsf, excluding balconies. The 2-story attended accessory parking facility would be located between the residential/retail components and Riegelmann Boardwalk. The entrance and exit to the parking facility would be located on West 36th Street. The roof of the parking facility would be used for green roofs and for residential outdoor amenity space, and a landscaped buffer area would be planted in the open area between the parking facility and Riegelmann Boardwalk.

Under the proposed modifications, Zoning Lot B would be developed with a 478,143-gsf, 21-story mixed-use building (Building B) containing 378,415 gsf of residential uses (430 market-rate dwelling units), 20,696 gsf of commercial retail/service uses, and 79,032 gsf of attended accessory parking (308 spaces). On the Riegelmann Boardwalk frontage, Building B would also include a 300-gsf seasonal commercial kiosk. Building B would have a 2- to 6-story base crowned by two rectangular 21-story towers (247.5 feet to the bulkhead above AHD [EL. +265.5']). The residential towers would be set back 10 feet from Surf Avenue and 15 feet from West 35th Street and West 36th Street beginning at the 7th floor (64.1 feet above AHD [EL. +82.10']), generating tower floorplates of 8,099 gsf each, excluding balconies. Each tower would be topped by a 3-story penthouse beginning at the 19th floor (184.5 feet above AHD [EL. +202.5']) and set back 4 feet on each side with a 6,560 gsf floorplate. The 3-story attended accessory group parking facility would be located between the residential and commercial components and Riegelmann Boardwalk. The entrance to the facility would be located on West 36th Street and the exit would be located on West 35th Street. The roof of the parking facility would be used for green roofs and for residential outdoor amenity space.

The two proposed buildings would be designed with both wet and dry flood proofing that would include flood barriers and flood vents. In addition, the retail, lobby, and support spaces are raised to the Design Flood Elevation at 12 feet. The garage on each zoning lot would be located lower than the Design Flood Elevation, but the garages will be dry floodproofed.

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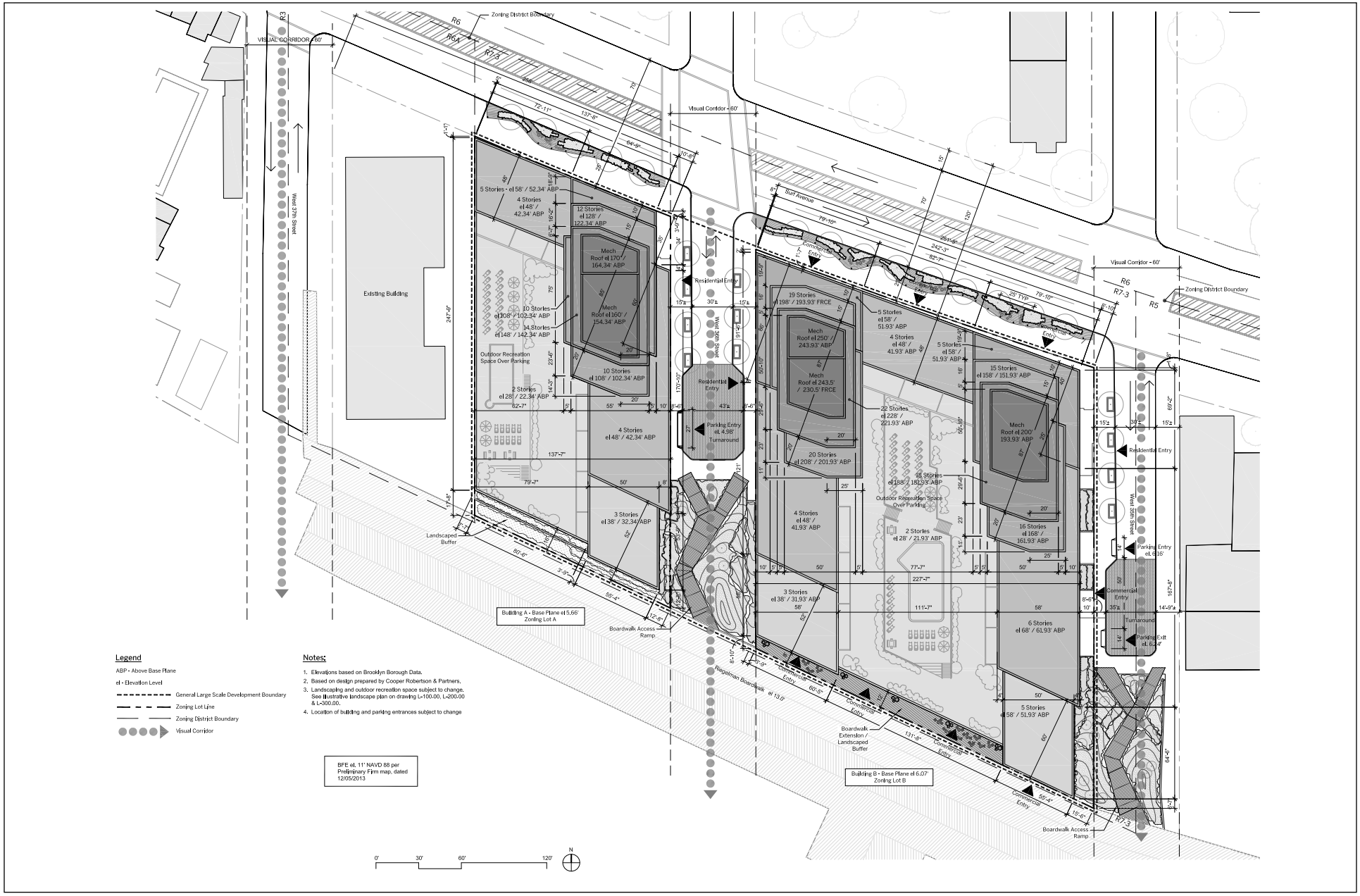
compliance with the provisions of ZR Sec. 64-131. Accordingly, heights for Approved Building A and Approved Building B are referenced herein relative to this AHD. Under the Proposed Modifications, the AHD would be increased to +16.58 feet for Zoning Lot A and +18.0 feet for Zoning Lot B, pursuant to ZR Sections 64-335 and 64-336. For ease of comparison, all heights are also referenced relative to the North American Vertical Datum of 1988 (NAVD88).



No-Action Scenario
Concept Site Plan

Figure 2a

No-Action Scenario
Concept Site Plan
Figure 2b

No-Action Scenario
Concept Site Plan
Figure 2c

Overall, the proposed development would contain 613,894 gsf, consisting of 24,790 gsf of commercial retail/service uses, 467,280 gsf of residential uses (509 market-rate dwelling units), and 121,824 gsf of attended accessory parking (478 spaces) (see **Figures 3a through 3f**).

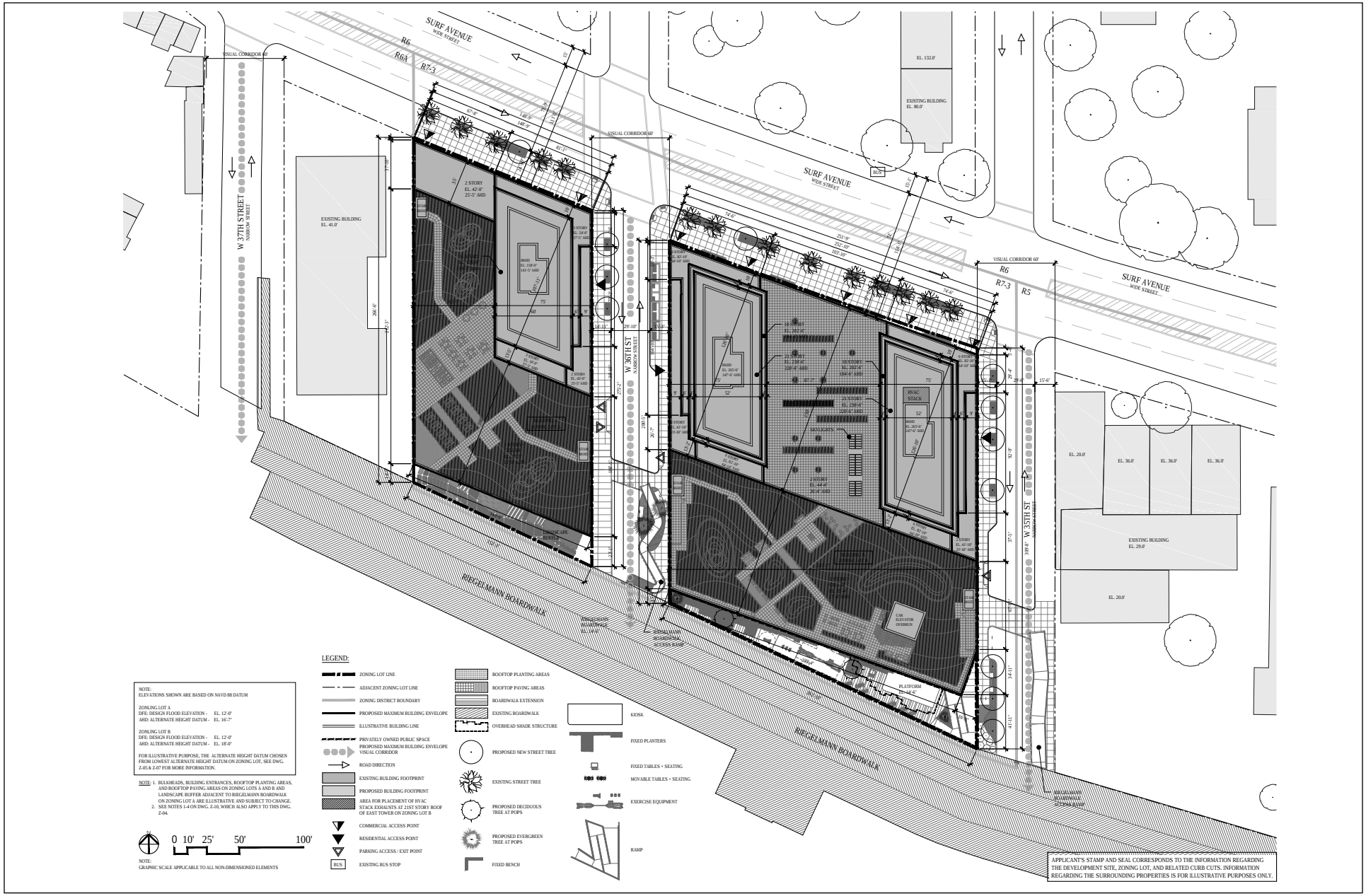
As with the Approved Buildings, both proposed buildings would be developed in compliance with the provisions of the Quality Housing Program applicable to developments and enlargements on waterfront blocks pursuant to ZR Section 62-133.

In connection with the project, the Applicant intends to construct an approximately 5,600 sf publicly accessible area(the "PAA") on a platform abutting the Boardwalk and the parking facility on Zoning Lot B. Amenities in the PAA would be defined by three different activity zones: (1) landscaping and seating would occupy the western end of the PAA providing opportunities for more passive activities; (2) a 1,000- to 1,500-sf area with outdoor fitness or other recreational or play equipment would be located near the midpoint of the PAA providing opportunities for physical activity; and (3) and an approximately 300- to 700-sf kiosk with related seating and tables would be located at the eastern end of the PAA. The PAA would include a minimum of 550 sf of landscaping in raised planters (not to exceed a height of 18 inches above the platform adjacent to seating areas) containing a mix of grasses, shrubs, perennials and two to four evergreen trees, as well as 70 to 120 linear feet of fixed seating (of which at least 50 percent would have backs); 10 to 25 movable chairs; and 5 to 10 movable and fixed tables. Canopies, pergolas and/or other shade structures would cover 1,300 to 1,500 sf in the vicinity of the kiosk. The design for the proposed PAA is subject to review and approval by the Department of Parks and Recreation (NYC Parks) and the Applicant anticipates that the Public Design Commission (PDC) may also desire to review and comment on the design. In addition, the Applicant seeks to replace the existing, steep, narrow and non-compliant ramps in the street beds of West 36th Street and West 35th Street, which provide access from the street to the Riegelmann Boardwalk, with landscaped, accessible pedestrian connections consisting of a series of wider, grade-compliant ramps connecting each street to the Boardwalk. Seating and landscaping would also be provided in the street ends adjacent to the ramps and along Surf Avenue. The ramps and street improvements are subject to review and approval by NYC Parks, PDC, the Department of Environmental Protection (DEP), and the Department of Transportation (DOT).

ACTIONS NECESSARY TO FACILITATE THE PROPOSED DEVELOPMENT

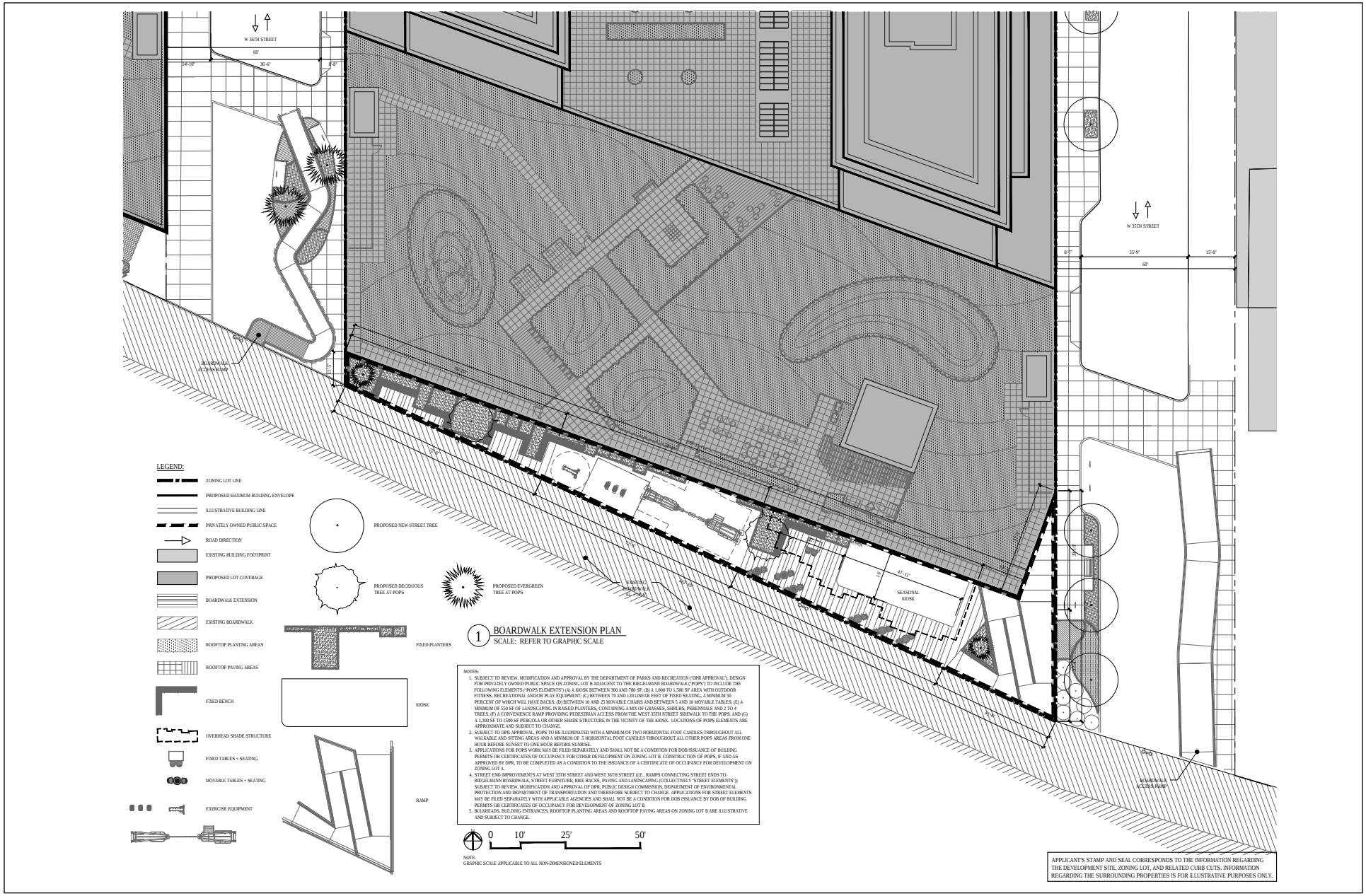
In order to utilize the existing Special Permits, Approved Building A and Approved Building B must be constructed in substantial compliance with the 2011 Approved Site Plan. Under the 2011 Approved Site Plan, Approved Building A on Zoning Lot A would have a 3- to 5-story base and a 14-story hexagonal-shaped tower. Approved Building B on Zoning Lot B would have a 3- to 6-story base and two hexagonal-shaped towers (18 stories and 22 stories) on Zoning Lot B. Approved Building A would contain 119,838 gsf (100,532 zsf) of residential use (106 market-rate dwelling units), 3,792 gsf (3,640 zsf) of ground-floor local retail use along Surf Avenue and an off-street accessory parking garage containing 158 spaces. Approved Building B would contain up to 362,691 gsf (302,884 zsf) of residential use (311 dwelling units), 28,423 gsf (21,150 zsf) of retail space along Surf Avenue and, optionally, the Riegelmann Boardwalk, and an off-street accessory parking garage containing 260 spaces. Together, the buildings would contain a total of 645,216 gross square feet (gsf) of floor area at an FAR of 4.0, with 417 dwelling units and 418 accessory off-street parking spaces.

The proposed modifications to the Special Permits would revise the 2011 Approved Site Plan to:



With-Action Scenario
Concept Site Plan

Figure 3a



With-Action Scenario
Concept Open Space Plan

Figure 3b

With-Action Scenario
Surf Avenue View

Figure 3c

With-Action Scenario
Building B - Surf Avenue View

Figure 3d

With-Action Scenario
Boardwalk View

Figure 3e

With-Action Scenario
West 35th Street View

Figure 3f

(i) Modify the approved massings of the buildings to provide: for the building on Zoning Lot A, a 2- to 3- story base with an 11-story rectangular tower (reaching a height of 141.4 feet to the bulkhead above the alternative height datum [AHD] permitted under ZR Sections 64-131, 64-335 and 64-336, which equates to an elevation of 158 feet relative to the North American Vertical Datum of 1988); and for the building on Zoning Lot B, a 2- to 6-story base with two 21-story rectangular towers above (each reaching a height of 247.5 feet to the bulkhead above AHD (EL. +265.5'). These revised massings would comply with the provisions of the Zoning Resolution governing maximum base heights, minimum setbacks and maximum building and penthouse heights in R7-3 and R7-3/C2-4 districts in the waterfront area and flood zone, eliminating the need for the Base Height Waivers, the Setback Waivers, the Height Waivers, the Rear Yard Waiver, the Supplemental Use Waiver, the Court Waiver and, on Zoning Lot A, the Lot Coverage Waiver;

(ii) Reduce the size of the tower floor plate on Zoning Lot A from 7,800 gsf to 6,996 gsf and increase the size of the tower floor plates on Zoning Lot B from 7,700 gsf each to 8,099 gsf each and modify the shape of the tower floorplates from hexagonal to rectangular, eliminating the need for the Tower Floorplate Waiver and Penthouse Floor Plate Waiver;

(iii) Increase the total number of dwelling units in the proposed development to 509 from 417;

(iv) Increase the total number of attended accessory off-street parking spaces to 478 from 418;

(v) Decrease the amount of floor area on Zoning Lot A by 25,156 zsf, and increase the amount of floor area on Zoning Lot B by the same amount;

(vi) Modify the location of ground floor uses to eliminate the need for the Ground Floor Waivers; and

(vi) Eliminate the need for all of the waivers previously granted under the Special Permits, except the Lot Coverage Waiver on Zoning Lot B.

In sum, with the proposed modifications all of the Special Permits, including the LSGD Special Permits, would be withdrawn except for the ZLB Waterfront Special Permit, which would be modified to eliminate all relief except with respect to the lot coverage waiver on Zoning Lot B. Because the proposed modifications do not substantially comply with the 2011 Approved Site Plan, modifications to the ZLB Waterfront Special Permit and the 2011 Approved Site Plan, and withdrawal of the LSGD Special Permits and ZLA Waterfront Special Permit are necessary to facilitate the proposal.

C. PROJECT SITE AND SURROUNDING AREA

PROJECT SITE

As described in the 2011 EAS, there are no existing buildings on the project site.

SURROUNDING AREA

The area around the project site has remained largely the same since 2011. The presence of multiple New York City Housing Authority (NYCHA) properties in the area limits the amount of developable property surrounding the project site. In addition, the damage caused by Hurricane Sandy in 2012 limited any significant development planned for the area. Since 2011 the majority of new construction and neighborhood redevelopment has been a result of the storm.

Post-Sandy reconstruction is currently underway at numerous NYCHA complexes located on the west end of the Coney Island peninsula. The U.S. Department of Housing and Urban Development provided significant Community Development Block Grant-Disaster Recovery funding to NYCHA to support the rebuilding of properties damaged by storm surge and flood waters. Coney Island 4 & 5 located on Surf Avenue between 125th and 128th streets are to receive the largest amount of funding for repairs; work is planned at other NYCHA sites including the O'Dwyer Gardens complex at Surf Avenue and West 33rd Street. In addition, single family homes in the neighborhood and in the adjacent Sea Gate private community may have been rebuilt or renovated as part of the post-Sandy recovery effort. The City's Build It Back program provided homeowners support in rebuilding and elevating their homes in an effort to fortify them against future storm surges. Exact data on recipient properties is unavailable for the Build it Back program. Other single family homes may have been rebuilt or significantly renovated post-Sandy through other recovery programs or without public assistance.

Significant post-Sandy infrastructure improvements have been or are underway in Coney Island adjacent to the project site. Within the Sea Gate community, these improvements include U.S. Army Corps of Engineers work to provide sand renourishment and the installation of new groins. In addition to new storm mitigation infrastructure, the City of New York is currently engaged in infrastructure improvements in Coney Island that include increasing sewer capacity on the peninsula, as well as improving water distribution.

The only large new development in the area around the project site is the Ford Amphitheater at the Coney Island Boardwalk, located 3,300 feet east of the project site. Opened in 2016, this entertainment facility hosts concerts and has a capacity of 5,000 persons. Smaller planned residential projects include three single-family attached dwellings on Mermaid Avenue at West 33rd Street and three single-family attached dwellings on West 36th Street in the vicinity of Mermaid Avenue.

D. DEVELOPMENT SCENARIOS

NO ACTION CONDITION

For purposes of environmental review, this Technical Memorandum 002 assesses the proposed development's increment over a No Action development on the project site. The No Action condition was determined based on the project approved by CPC in 2011 and renewed in 2016. Construction of the No Action development could occur as-of-right with no further discretionary actions needed.

On Zoning Lot A, the project site would be developed in the No Action condition with a 14-story (164.34 feet above AHD [EL. +177.34']) building. On Zoning Lot B, the project site would be developed with a 22-story tower (243.93 feet above AHD [EL. +256.93']) on Surf Avenue at West 36th Street and an 18-story tower (193.93 [EL. +206.93']) on Surf Avenue at West 35th Street. These No Action condition buildings would contain a total of 645,216 gsf, consisting of 24,790 gsf of commercial retail/service uses, 482,529 gsf of residential uses (417 market-rate dwelling units), and 130,472 gsf of attended accessory parking (418 spaces) (see **Figures 2a, 2b, and 2c)**.

WITH ACTION CONDITION

The proposed development (as described fully above) is the With Action scenario assessed in this Technical Memorandum 002 as the proposed development is tied to the site plan approvals. Therefore, in the With Action condition, Zoning Lot A would be developed with a 135,751-gsf, 11-story, mixed-use building containing 88,865 gsf of residential uses (79 market-rate dwelling units), 4,094 gsf of commercial retail/service uses, and 42,792 gsf of attended accessory parking (170 spaces). Zoning Lot B would be developed with a 478,143-gsf, 21-story mixed-use building containing 378,415 gsf of residential uses (430 market-rate dwelling units), 20,696 gsf of commercial retail/service uses, and 79,032 gsf of attended accessory parking (308 spaces). On the Riegelmann Boardwalk frontage, the building on Zoning Lot B would also include a 300-gsf seasonal commercial kiosk.

The With Action condition would have an increment over the No Action condition of 92 residential dwelling units and 60 accessory parking spaces. Further, the proposed buildings on Zoning Lots A and B would be massed differently than the No Action buildings, and there would be differences in tower heights. The height of the proposed building on Zoning Lot A (measured to the top of the bulkhead) would decrease by approximately 23 feet from 164.34 feet above AHD (EL. + 177.34') to 141.42 feet above AHD (EL. + 158'). The height of the northwest tower of the proposed building on Zoning Lot B (measured to the top of the bulkhead) would increase by approximately 4 feet from 243.94 feet above AHD (EL. + 256.93') to 247.5 feet above AHD (EL. + 265.5'). Likewise, the height of the northeast tower on Zoning Lot B (measured to the top of the bulkhead) would increase by approximately 54 feet from 193.93 feet above AHD (EL. + 206.93') to 247.5 feet above AHD (EL. + 265.5'). While the proposed development would contain the same amount of commercial space (24,790 gsf) as the No Action condition, the commercial space would all be located on Surf Avenue.

This Technical Memorandum 002 assumes an analysis year of 2021. Construction of the proposed building on Zoning Lot B is expected to be completed by the end of 2019, and construction of the proposed building on Zoning Lot A is expected to commence in late 2019 and be completed in late 2021.

E. POTENTIAL IMPACTS OF THE PROPOSED MODIFICATIONS

Following the approach of the 2014 *CEQR Technical Manual*, this Technical Memorandum 002 assesses the potential for the proposed modifications to result in significant adverse impacts, and each of the relevant CEQR technical areas is discussed below. Like the proposed development assessed in the 2011 EAS, the proposed development pursuant to the proposed modifications would not the meet the CEQR thresholds requiring analyses of Socioeconomic Conditions, Historic Resources, Natural Resources, Greenhouse Gas Emissions, or Construction.

LAND USE, ZONING, AND PUBLIC POLICY

LAND USE

The proposed modifications, which would result in an increment of 92 dwelling units and 60 parking spaces over the No Action condition, would not alter the land uses that were analyzed previously in the 2011 EAS. Like the development assessed in the 2011 EAS, the proposed development with the proposed modifications would be compatible with the existing uses in the surrounding area, which are predominantly characterized by medium-density "tower-in-the-

park" residential developments to the north, lower-density community facilities and residential developments to the east and west, and the Riegelmann Boardwalk and Coney Island Beach to the south. As such, the proposed development with the proposed modifications, like the proposed actions and development program assessed in the EAS, would not result in any significant adverse impacts to land use.

ZONING

As described above, the proposed modifications would not require any new authorizations or special permits to be granted. Further, development on the project site would be limited to a maximum permitted FAR of 4.0 with a maximum permitted commercial zoning floor area of 24,790 square feet like the No Action development. The proposed buildings would continue to require the Special Permit granting relief for lot coverage requirements for Zoning Lot B pursuant to ZR Section 62-836, but the extent of relief granted would be equal to or less than the relief granted under the original Special Permits. Therefore, the proposed modifications, like the proposed actions assessed in the EAS, would not result in any significant adverse impacts on zoning.

PUBLIC POLICY

Housing New York: A Five-Borough, Ten-Year Plan

On May 5, 2014, the de Blasio administration released Housing New York: A Five-Borough, Ten-Year Housing Plan ("Housing New York"), a plan to build or preserve 200,000 affordable dwelling units. To achieve this goal, the plan aims to double the New York City Department of Housing Preservation and Development (HPD)'s capital budget, target vacant and underused land for new development, protect tenants in rent-regulated apartments, streamline rules and processes to unlock new development opportunities, contain costs, and accelerate affordable construction. The plan details the key policies and programs for implementation, including developing affordable housing on underused public and private sites. The proposed development with the proposed modifications would not include any affordable housing, but it would not affect the de Blasio administration's plan to build or preserve affordable housing. Further, the No Action development would likewise not include any affordable housing units, and the proposed modifications would result in an increment of 92 dwelling units.

New York City Waterfront Revitalization Program

The project site is located in the designated Coastal Zone and is, therefore, subject to the Coastal Zone Management policies of both the City and the State. The New York City Waterfront Revitalization Program (WRP) is the City's primary coastal zone management tool and was developed in accordance with the Federal Coastal Zone Management Act of 1972 and New York State Executive Law Article 42: Waterfront Revitalization of Coastal Areas and Inland Waterway Act. The City's WRP is made up of 10 major policies focusing on the goals of improving public access to the waterfront; reducing damage from flooding and other water-related disasters; protecting water quality, sensitive habitats like wetlands and the aquatic ecosystem; reusing abandoned waterfront structures; and promoting development with appropriate land uses.

In 2011, revisions to the City's WRP were made to reflect policy elements included in DCP's 2011 "Vision 2020 New York City Comprehensive Waterfront Plan," including incorporation of climate change and sea level rise considerations to increase the resiliency of the waterfront area,

promotion of waterfront industrial development and both commercial and recreational water-borne activities, increased restoration of ecologically significant areas, and design of best practices for waterfront open spaces. These revisions to the WRP were approved by the City Council on October 30, 2013 and approved by the NYS Secretary of State on February 3, 2016. In June 2016, the U.S. Secretary of Commerce concurred with the State's request to incorporate the WRP into the NYS CMP. As of this writing, the revised WRP must be used for all local, state, and federal consistency reviews.

An assessment of the proposed modifications' consistency with the revised WRP is provided below for all questions answered "promote" or "hinder" on the revised, 2016 Coastal Assessment Form (CAF) attached in **Appendix A**.

Consistency of Proposed Project with the Waterfront Revitalization Program Policies
Summary

In general terms, the goal of the City's WRP is to encourage and preserve those uses that require a waterfront location, such as recreation/commercial/industrial uses that rely or benefit from a waterfront location, while discouraging those land uses better suited to inland areas. At the same time, the WRP is meant to balance the needs of development with protection of coastal ecological resources such as wetlands and fisheries. The development with the proposed modifications is in full conformity with the principal goals of the WRP and its Federal/State enabling legislation in that it will provide for future resiliency during storm events and flooding.

Policy 1: Support and facilitate commercial and residential development in areas well suited to such development.

Policy 1.1: Encourage commercial and residential redevelopment in appropriate coastal zone areas.

The approximately 2.5-acre project site is located on the western end of Coney Island, along Surf Avenue and adjacent to Riegelmann Boardwalk. It is vacant and in the past was used for seasonal parking. The surrounding area contains a mix of high-rise residential buildings, institutional uses, and open space (Coney Island Beach). The proposed modifications would facilitate the construction of an 11-story residential building on Zoning Lot A and a 2-tower 21-story residential building on Zoning Lot B (plus mechanical penthouses) with street-level retail along Surf Avenue and accessory parking. In total, the development program with the proposed modifications consists of: 509 dwelling units, 478 parking spaces, and 24,790 gsf of retail space along Surf Avenue. Like the approved development, at this location the proposed development with proposed modifications would be appropriate, as it would not introduce out-of-scale development or uses that are not already present in the study area. As a result, the proposed modifications would promote development that is consistent with this policy.

Policy 5: Protect and improve water quality in the New York City coastal area.

5.1 Manage direct or indirect discharges to waterbodies.

5.2 Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.

Stormwater management measures would be designed in accordance with the New York City Department of Environmental Protection's (NYCDEP's) Guidelines for the Design and Construction of Stormwater Management Systems and Chapter 31 of Title 15 of RCNY. These guidelines require onsite stormwater detention such that water quality is

treated and discharge rates to the City's sewer system do not exceed allowable levels. By treating stormwater runoff in accordance with NYCDEP regulations, potential water quality impacts from the proposed development would be avoided. Therefore, the proposed project with proposed modifications is consistent with this policy.

Policy 6: Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future conditions created by climate change.

Policy 6.1: Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.

Policy 6.2: Integrate consideration of the latest New York City projections of climate change and sea level rise (as published by the New York City Panel of Climate Change [NPCC], or any successor thereof) into the planning and design of project's in the city's Coastal Zone.

Guidance provided by DCP[2] recommends a detailed methodology to determine a project's consistency with Policy 6.2. A summary of this process is provided below.

1. Identify vulnerabilities and consequences: assess the project's vulnerabilities to future coastal hazards and identify what the potential consequences may be.

a. Complete the Flood Evaluation Worksheet

The information in the following subsections is based on the results of the completed worksheet, which is provided in **Appendix A**.

b. Identify any project features that may be located below the elevation of the 1% floodplain over the lifespan of the project under any sea level rise scenario.

The lifespan of residential buildings is at least 80 years, often longer. NPCC projected that sea levels are likely to increase by up to 10 inches by the 2020s, 30 inches by the 2050s, and up to 75 inches by the end of the century under the "High" scenario projections. Under current conditions, the project site is entirely within the 100-year floodplain (see **Figure 4**). The Base Flood Elevation (BFE) for the site is 11 feet NAVD88 and falls within Zone AE (an area of high flood risk subject to inundation by the 1% annual-chance flood event). Based on the NPCC projections, the 100-year flood elevation at the project site could increase to 11.83 feet NAVD88 in the 2020s, 13.5 feet NAVD88 by the 2050s, and up to 17.25 feet NAVD88 by the end of the century.

The lower parking areas and crawl space would be at an elevation of 7 feet NAVD88, which is below the current 100-year flood elevation. The ground floor (first floor) of both Zoning Lot A and B buildings are proposed at an elevation of 12 feet NAVD88 and would be below the projected flood elevations sometime between the 2020s and 2050s. Retail space, lobby entrances, and a mail room would be located on the ground floor; no residential units are proposed for the lower level. Residential units would start on the second floor of each building at an elevation of about 30.3 feet NAVD88, which is well above the BFE.

[2] NYC Planning. The New York City Waterfront Revitalization Program: Climate Change Adaptation Guidance. March 2017.

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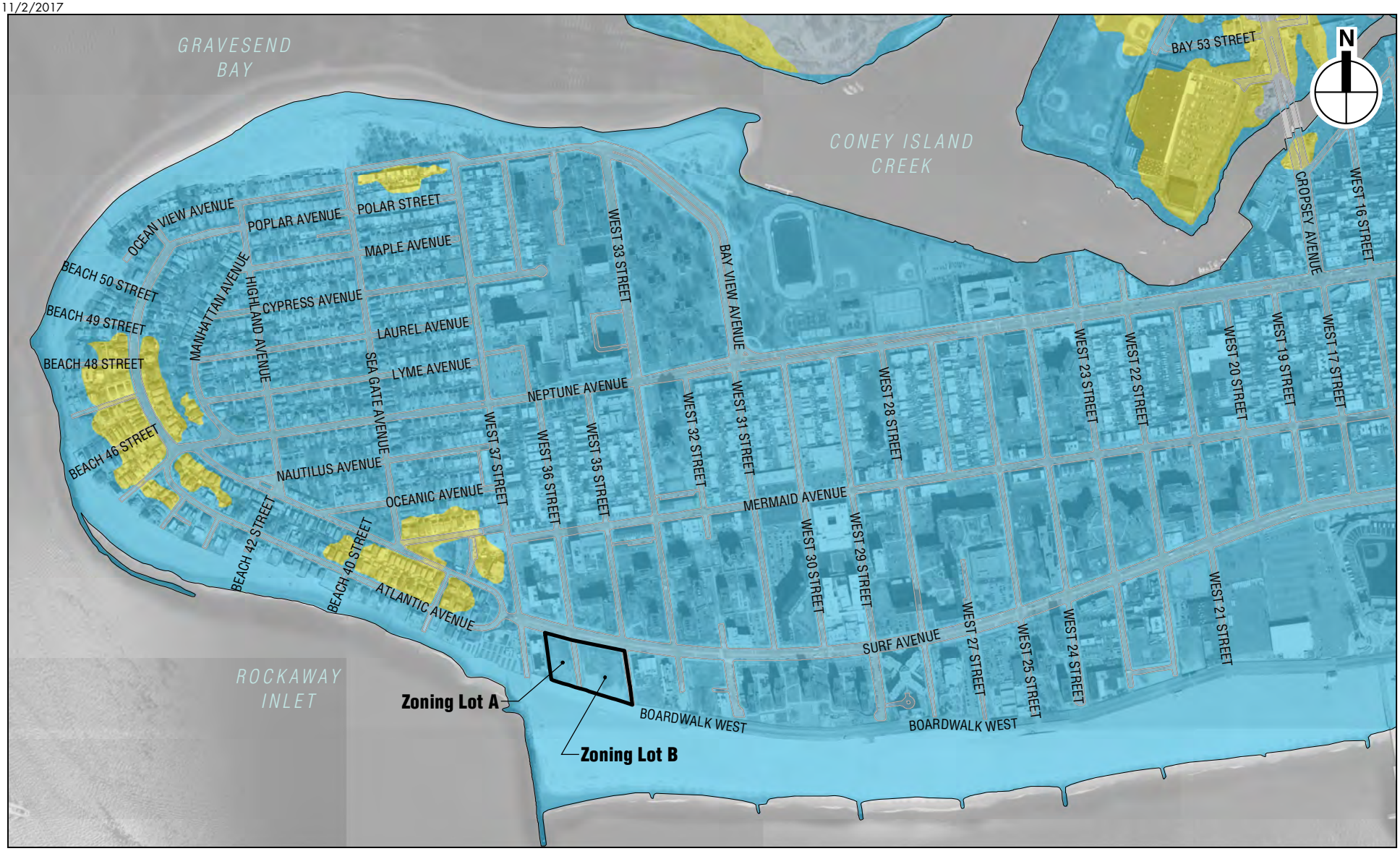

Project Site

100-Year Floodplain

500-Year Floodplain

0 1,000 FEET

Preliminary FIRM Flood Hazard Areas

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Figure 4

c. Identify any vulnerable, critical, or potentially hazardous features that may be located below the elevation of Mean Higher High Water (MHHW) over the lifespan of the project under any sea level rise scenario.

Based on the range of sea level rise predictions described above, MHHW at the NOAA Station nearest to the study area (currently 2.41 feet NAVD88 at Sandy Hook Station #8531680) could range up to 8.66 feet NAVD88 by the end of the century. Given these projections, vulnerable features (lower parking areas and crawl spaces) and potentially hazardous features (automobiles, if present in lower parking areas) would be below MHHW by 2100. No occupied residential spaces (i.e., second floor and above) would be below MHHW under any projection scenario.

d. Describe how any additional coastal hazards are likely to affect the project, both currently and in the future, such as waves, high winds, or debris.

Since the project site is within Zone AE, the project site is currently and would continue to be at risk for inundation from 1% annual-chance flood events. However, wave action hazards (i.e., Zone VE or Coastal A Zone) have not been designated for the project site. Therefore, storm impacts due to waves, high winds, or debris would not be expected to affect the project features.

2. Identify adaptive strategies: assess how the vulnerabilities and consequences identified in Step 1 are addressed through the project's design and planning.

a. For any features identified in Step 1(b), describe how any flood damage reduction elements incorporated into the project, or any natural elevation on the site, provide any additional protection. Describe how would any planned adaptive measures protect the feature in the future from flooding?

To account for current flood conditions, the ground floor (first floor lobby/retail) elevation of the proposed development would be 12.0 feet (NAVD88), which is one foot above the current base flood elevation (BFE). The lower parking areas of each building would be below the current 100-year flood elevation and, therefore, would be fully dry flood-proofed. These measures are in compliance with Appendix G of the NYC Building Code, Sections G304.1.1 and G304.1.2. The second floor of each building would remain above the flood elevations under all projection scenarios.

However, as discussed above, the proposed ground floor (first floor) elevation of 12 feet NAVD88 would be below projected 100-year flood elevations by the 2050s under the mid-range projections. To adapt to these projected conditions, additional protection would be provided through temporary barriers, or subsequent retrofits to extend dry and wet flood-proofed measures and materials to higher elevations. These may include dry flood barriers (e.g., Presray fast log system) and flood vents (e.g., Smart Vent door flood vent). The location of each flood protection element would be determined with the final design for the project.

b. For any features identified in Step 1(c), describe how any flood damage reduction elements incorporated into the project, or any natural elevation on the site, provide any additional protection. Describe how would any planned adaptive measures protect the feature in the future from flooding?

As described above, the lower parking areas and crawl spaces of the buildings would be below MHHW by 2100. The flood-proofing measures described above under 2(c) would likewise provide protection under projected MHHW elevations.

c. Describe any additional measures being taken to protect the project from additional coastal hazards such as waves, high winds, or debris.

As described in 1(d), the project site is not within a wave impact zone in the City's designated flood hazard area. Therefore, no specific measures are required.

d. Describe how the project would affect the flood protection of adjacent sites, if relevant.

The proposed design would include green roofs on the roofs of the parking facilities for both Zoning Lots A and B, as well as landscaped buffer areas in the open areas between the parking facilities and Riegelmann Boardwalk, each of which would provide infiltration opportunities for stormwater. Landscaping would also be provided in the sidewalk area along Surf Avenue adjacent to the project site, subject to review and approval by DOT and PDC. All accessory off-street parking would be located above grade. Because the floodplain within New York City is controlled by astronomic tide and meteorological forces (e.g., nor'easters and hurricanes) and not by fluvial flooding, the proposed development would not have the potential to adversely affect the floodplain or result in increased coastal flooding at adjacent sites or within the study area.

In addition to measures undertaken by the proposed development, significant post-Hurricane Sandy infrastructure improvements have been or are underway in Coney Island adjacent to the project site. Planned flood protection measures associated with these improvements include: rebuilding of the area's bulkhead, installation of a new sea wall, and improvement of water distribution. The proposed development would not adversely impact any of these efforts.

3. Assess policy consistency: conclude whether the project is consistent with Policy 6.2 of the Waterfront Revitalization Program.

The project site is within the 100-year floodplain but is not within a wave impact zone in the flood hazard area. The ground floors and lower parking areas would be below the projected 100-year elevation sometime within the next century, according to NPCC predictions. Both features would be within the 100-year floodplain under all sea level rise scenarios. For this reason, the proposed development incorporates flood protection measures wherever possible to protect against future flooding. Portions of the parking areas would be below grade, and as such, would be fully dry floodproofed. The use of dry flood barriers and flood vents at lower elevations would provide flood protection for the ground level of each zoning lot. To adapt to projected conditions, additional protection would be provided through subsequent retrofits to extend dry and wet floodproofed measures and materials to higher elevations. The location of each flood protection element would be determined with the final design. Therefore, with these measures in place, the proposed development with the proposed modifications would be consistent with Policy 6.2.

Policy 7: Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials, and industrial materials that may pose risks to the environment and public health and safety.

Policy 7.2: Prevent and remediate discharge of petroleum products.

There would be excavation for construction of the proposed development. As described below, a Restrictive Declaration was recorded on April 14, 2005 against the project site to ensure that no adverse impacts related to hazardous materials would occur either during or following construction at the project site. This Restrictive Declaration shall continue to

apply and be in full force and effect with respect to the proposed modifications. Further, the New York City Office of Environmental Remediation (OER) has issued a Notice to Proceed for development on Zoning Lot B. With the measures provided in the Restrictive Declaration and following the OER-approved remedial action plan and health and safety plan for Zoning Lot B, no significant adverse impacts related to hazardous materials would be expected to occur during or following construction. Therefore, the proposed modifications would be consistent with this policy.

Policy 8: Provide public access to, from, and along New York City's coastal waters.

Policy 8.1: Preserve, protect, maintain, and enhance physical, visual, and recreational access to the waterfront.

Policy 8.3: Provide visual access to the waterfront where physically practical.

The proposed development would not directly affect Coney Island Beach or Riegelmann Boardwalk. With the proposed modifications, the proposed development would maintain existing visual access to the beach along the view corridors of West 35th and West 36th Streets and, in connection with the proposed modifications, the applicant is proposing to replace the existing steep, narrow and noncompliant ramps in the street beds of West 35th and West 36th Streets, which provide access from the street to the Rieglemann Boardwalk, with new accessible ramps. Therefore, the proposed modifications would be consistent with this policy.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

Policy 9.1: Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.

Policy 9.2: Protect and enhance scenic values associated with natural resources.

It is not expected that the proposed development with the proposed modifications would have significant adverse impacts on the urban design or visual resources of the study area. The proposed buildings would not alter the street pattern, block shapes, or natural features of the study area and would not adversely affect the study area's streetscape. In the study area, Surf Avenue provides long east-west views due to the avenue's width—including the 270-foot-tall Parachute Jump further off in the distance to the east—and Riegelmann Boardwalk provides long and unobstructed views along the beach and the ocean.

The proposed actions would not have any significant adverse impacts on visual resources located within the study area (Coney Island Beach and the Atlantic Ocean) or on views of visual resources from within the study area (the Parachute Jump). While the proposed development would be constructed on a project site that is currently vacant, the proposed actions would not block any view corridors or views of visual resources and it would not limit access to any visual resource. As the project site is situated between the Riegelmann Boardwalk and Surf Avenue, the proposed development would be at least partially visible from long distances along both of these corridors and from the beach; located on an existing block, however, the proposed buildings would not block views along these corridors. In addition, the taller portions of the proposed buildings would be located along Surf Avenue and away from the boardwalk and the beach, with 1- and 2-story portions of the proposed buildings containing the parking garages along the boardwalk. The proposed buildings would be of comparable height to existing high-rise residential buildings in the study area. Therefore, there would not be significant adverse impacts to visual resources as a result of the proposed development with the proposed modifications. Overall, the proposed development

with the proposed modifications would be consistent with the revised WRP, and like the proposed actions assessed in the EAS, would not result in any significant adverse impacts on public policy.

COMMUNITY FACILITIES

As recommended by the *CEQR Technical Manual*, a community facilities assessment is warranted if a project has the potential to result in either direct or indirect effects on community facilities. If a project would physically alter a community facility, whether by displacement of the facility or other physical change, this "direct" effect triggers the need to assess the service delivery of the facility and the potential effect that the physical change may have on that service delivery. New population added to an area as a result of a project would use existing services, which may result in potential "indirect" effects on service delivery. Depending on the size, income characteristics, and age distribution of the new population, there may be effects on public schools, libraries, or child care centers.

DIRECT EFFECTS

The proposed development with the proposed modifications, like the No Action development, would not displace or otherwise directly affect any public schools, child care centers, libraries, health care facilities, or police and fire protection services facilities. Therefore, an analysis of direct effects on community facilities is not warranted.

INDIRECT EFFECTS

The *CEQR Technical Manual* provides thresholds for guidance in making a determination of whether a detailed analysis is necessary to determine potential indirect impacts (see **Table 1**). If a project exceeds the threshold for a specific facility type, a more detailed analysis is warranted.

Table 1
Preliminary Screening Analysis Criteria

Community Facility	Threshold For Detailed Analysis
Public schools	More than 50 elementary/intermediate school or 150 high school students
Libraries	Greater than 5 percent increase in ratio of residential units to libraries in borough
Health care facilities (outpatient)	Introduction of sizeable new neighborhood where none existed before[1]
Child care centers (publicly funded)	More than 20 eligible children based on number of low- and low/moderate-income units by borough
Fire protection	Introduction of sizeable new neighborhood where none existed before[1]
Police protection	Introduction of sizeable new neighborhood where none existed before[1]

Note: [1] The *CEQR Technical Manual* cites the Hunters' Point South project as an example of a project that would introduce a sizeable new neighborhood where none existed before. The Hunters' Point South project would introduce approximately 5,000 new residential units to the Hunters' Point South waterfront in Long Island City, Queens.
Source: 2014 *CEQR Technical Manual*.

The proposed modifications would allow two new buildings containing a total of 509 market-rate residential units. Compared to the No Action condition, in which the project site would be developed with two buildings containing a total of 417 market-rate residential units pursuant to the existing Special Permits, the proposed modifications would result in an increment of 92 residential units. This increment of market-rate residential units would not trigger the need for detailed analyses of libraries, child care facilities, police/fire services, and health care facilities.

The *CEQR Technical Manual* recommends conducting a detailed analysis of public schools if a proposed action would generate more than 50 elementary/intermediate school students and/or

more than 150 high school students. The number of residential units that would trigger such an analysis in Brooklyn following CEQR guidelines is 121 units for elementary/intermediate schools and 1,068 units for high schools.

Based on the increment of 92 residential units and the student generation rates provided in the *CEQR Technical Manual* (0.29 elementary, 0.12 intermediate, and 0.14 high school students per household unit in Brooklyn), the proposed modifications would generate an increment of approximately 27 additional elementary school students, 11 additional intermediate school students, and an additional 13 high school students over the No Action condition. The number of elementary, intermediate, and high school students that would be added by the proposed modifications would not exceed the *CEQR Technical Manual* thresholds warranting an analysis of potential effects on elementary schools, intermediate schools, or high schools. Therefore, the proposed modifications would not have a significant adverse impact on any community facilities.

OPEN SPACE

The proposed modifications would not alter the findings of the open space analyses presented in the 2011 EAS. The proposed modifications would add 92 dwelling units over the No Action condition, as well as an additional 60 garage spaces. Commercial space would remain the same at 24,790 zsf.

The open space analysis in the 2011 Ocean Dreams EAS was based on an average household size of 2.94 residents per unit for Census Tracts 326, 328, 330, 336, 340, 342, and 352 obtained from 2000 United States Census data, and used 2011 demographic data for the study area. The average household size in the study area has changed, and the analysis in this Technical Memorandum 002 uses the 2010 United States Census average household size of 2.49 for Census Tracts 326, 328, 330, 336, 340, 342, and 352 for calculating both the No Action and With Action conditions. The analysis has also been updated using 2017 demographic data for the study area. Residents and workers from independent projects within the study area expected to be completed by the build year have also been incorporated into the analysis. Only the boundary of Census Tract 336 has been modified since the 2011 EAS. This modification expanded the boundaries of the census tract to include a piece of beach that includes Coney Island Creek Park, but did not capture any additional populations.

Compared to the 2011 Ocean Dreams EAS's analysis of Open Space, one public open space resource no longer exists and one resource has been created within the study area. Public open space resource number 10 in the 2011 EAS, the Surf Side Community Garden, no longer exists as noted in a field survey conducted on October 19th, 2017. This community garden formerly consisted of approximately 0.70 acres of passive open space, with amenities such as benches, chicken coops, and planter boxes. This is now marked as "Former Resource A" on **Figure 5**.

One additional Public Open Space Resource was noted during the same field survey, Coney Island Creek Park. This approximately 8.66 acre park on the northern shore of Coney Island features a large open beach, pathways to the beach, and large sand dunes. It is in good condition with low patronage (see Open Space Resource #10 on **Figure 5**). In total, the changes to publicly accessible open space resources in the study area since completion of the 2011 EAS have removed approximately 0.70 acres of passive open space but added 8.66 acres of passive open space, a net gain of 7.96 acres of passive open space in the study area.

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Project Site
Half-mile boundary
Open Space Study Area
340 Census Tracts
1 Open Space Resource
A Former Open Space Resource

Open Space Study Area and Resources

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Figure 5

The 2011 Ocean Dreams EAS found that the proposed actions would not have a significant adverse impact on the non-residential open space study area. Compared to the No Action condition, the proposed modifications would not change the amount of retail space and would only add six additional employees to the non-residential study area through the additional parking spaces and residential units. As a result, the proposed modifications do not meet the *CEQR Technical Manual* threshold for a non-residential open space analysis, which is an additional 500 employees in an area that is neither "underserved" nor "well-served." Additionally, the addition of 7.96 acres of passive open space to the study area would only increase the passive open space ratio in the non-residential study area, reducing the impact of the proposed modifications. Therefore, the proposed modifications would not have a significant adverse impact on passive open spaces within the non-residential study area.

The *CEQR Technical Manual* threshold for an open space assessment for a residential study area that is neither "underserved" nor "well-served" is an addition of 200 or more residents. The proposed modifications would add an additional 92 residential units over the No Action condition. These 92 units would result in an additional 229 residents when using the 2010 United States Census average household size of 2.49 residents per unit in for census tracts 326, 328, 330, 336, 340, 342, and 352 triggering the need for an open space analysis of the residential study area.

As shown in **Table 2**, with the proposed modifications there would be a decrease in the total open space ratio for the residential study area compared to the No Action condition. The total open space ratio for the residential study area would decrease from 3.60 acres per 1,000 residents in the No Action condition to 3.43 acres per 1,000 residents with the proposed modifications, a 0.87 percent decrease. A total open space ratio of 3.40 acres per 1,000 residents is more than the City guideline of 2.5 acres per 1,000 residents, and the decrease is less than 5 percent, the *CEQR Technical Manual* threshold for further analysis. The passive and active open space ratios for the residential study area would also decrease with the proposed modifications. As shown in **Table 2**, with the proposed modifications the passive open space ratio for the residential study area would decrease from 1.54 acres per 1,000 residents in the No Action condition to 1.53 acres per 1,000 residents, a 0.65 percent decrease. With the proposed modifications, the active open space ratio for the residential study area would decrease from 1.89 acres per 1,000 residents to 1.87 acres per 1,000 residents, a 1.06 percent decrease. The passive open space ratio with the proposed modifications of 1.53 acres per 1,000 residents is more than twice the city guideline of 0.5 acres per 1,000 residents. The active open space ratio with the proposed modifications of 1.87 is less than the city guideline of 2 acres per 1,000 residents, but more active open space such as the remainder of Coney Island Beach is available just outside the study area, and the ratio is near the guideline. Additionally, the beach areas of Coney Island Creek Park, while considered to be passive space, could also be used for active recreational activities. Neither of the open space ratio decreases that would result from the proposed modifications approaches the *CEQR Technical Manual* impact threshold of a 5 percent decrease. Therefore, the proposed development with the proposed modifications would not result in any significant adverse impacts on total, passive, or active open space within the residential study area.

Table 2
Open Space Ratios Summary
Future with the Proposed Modifications

Ratio	City Guideline	Existing Ratio[1]	No Action Ratio[2]	With Action Ratio: Proposed Mod. TM 001[4]	Percent Change No Action to With Action
Residential Study Area					
Total/residents	2.5	3.60	3.43	3.40	-0.87%
Passive/residents	0.5	1.62	1.54	1.53	-0.65%
Active/residents	2.0	1.98	1.89	1.87	-1.06%

Notes: Ratios in acres per 1,000 people.
1. The existing conditions ratios for this analysis were re-calculated using 2017 demographic data.
2. The No Action condition ratios for this analysis are calculated using the 2011 EAS as a basis. The No Action condition uses the 2010 United States Census data average household size multiplier of 2.49 for Census Tracts 326, 328, 330, 336, 340, 342, and 352 but updated 2017 demographic data for the residential study area.
4. The With Action condition ratios and percentage changes for this analysis were calculated using 2017 demographic data and the 2010 United States Census data average household size multiplier of 2.49.
Sources: *US Census Bureau, American Community Survey; Population Division – New York City Department of City Planning; Ocean Dreams Environmental Assessment Statement (EAS),* August 2011; DCP website, May 2017; Field Survey, October 2017.

SHADOWS

With the proposed modifications, the massing of the proposed developments on Zoning Lots A and B would be altered. When compared to the No Action condition, these modifications would introduce new incremental shadow on open spaces within two NYCHA developments—Coney Island I and O'Dwyer Gardens—as well as on the Coney Island Public Beach and the Atlantic Ocean; all of these are sunlight-sensitive natural resources. On some analysis days, the durations of new incremental shadow from the proposed developments with the proposed modifications could be several hours long, but, as described below, the extent of the incremental shadow resulting from the proposed modifications would be small, and would not result in significant adverse shadow impacts.

PRELIMINARY ASSESSMENT

With the proposed modifications, the maximum heights of the proposed developments on Zoning Lots A and B would increase slightly. According to the *CEQR Technical Manual*, the longest shadow that a structure can cast at the latitude of New York City occurs on December 21, the winter solstice, at the start of the analysis day at 8:51 AM, and is equal to 4.3 times the height of the structure. With modifications, the proposed developments would reach a maximum height of 269 feet, including rooftop bulkhead. **Figure 6** illustrates the resulting 1,114-foot longest shadow study area and the five intersecting sunlight-sensitive resources; the Atlantic Ocean, Coney Island Public Beach, Nautilus Playground, and the recreation areas within the NYCHA-operated Coney Island I and O'Dwyer Gardens Houses.

DETAILED ASSESSMENT

Table 3 presents the entry and exit times and total duration of incremental shadow resulting from the proposed modifications when compared to the No Action condition. The extent, duration, and effects of these incremental shadows are discussed below for each analysis day.

With Modifications Base Map & Tier 1 Assessment

Table 3
Incremental Shadow Durations

Resource	March 21/Sept. 21 7:36 AM–4:29 PM	May 6/August 6 6:27 AM–5:18 PM	June 21 5:57 AM–6:01 PM	December 21 8:51 AM–2:53 PM
Open Spaces				
Coney Island Public Beach	—	—	5:57 AM–7:25 AM Total: 1 hr 28 mins	—
Coney Island I open space	9:25 AM–4:29 PM Total: 7 hrs 4 mins	—	—	8:51 AM–2:53 PM Total: 6 hrs 2 mins
O'Dwyer Gardens open space	12:50 PM–4:29 PM Total: 3 hrs 39 mins	—	—	12:00 PM–2:53 PM Total: 2 hrs 53 mins
Natural Features				
Atlantic Ocean (portion)	—	—	5:57 AM–6:50 AM Total: 53 mins	—

Notes:
EST—Eastern Standard Time
Daylight Saving Time is not used, as mandated by the *2010 CEQR Technical Manual*.

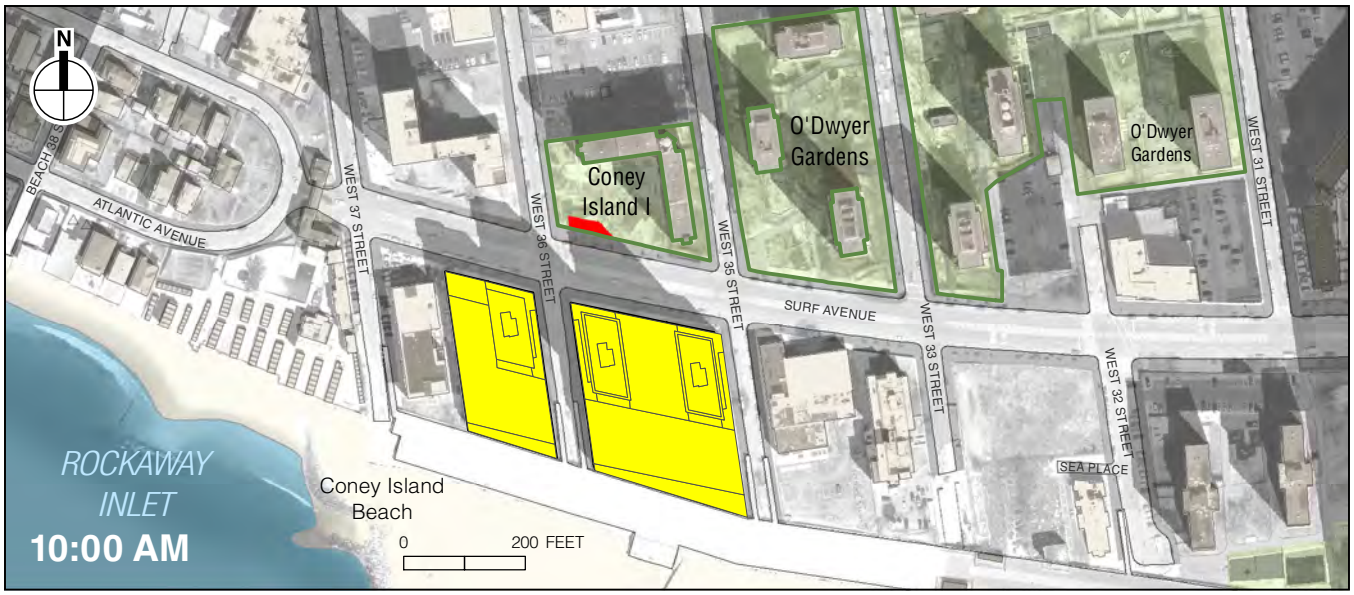
*March 21/September 21 (see **Figure 7**)*

With the proposed modifications, incremental shadow from the proposed development would be cast on the recreation areas within two NYCHA developments: Coney Island I and O'Dwyer Gardens. The incremental shadow on any one area of these resources would not last for more than one hour and, for most affected portions, would not exceed 30 minutes. Beginning at 9:25 AM, incremental shadows would fall on the westernmost recreation areas within Coney Island I Houses and then gradually move east until the end of the analysis day approximately 7 hours later. New shadows on the O'Dwyer Gardens recreation areas would begin at 12:50 PM and remain until the end of the analysis day, just over three and a half hours later. During the affected hours, the extent of incremental shadow on both resources would not exceed approximately 300 square feet at any one time. The affected features of the two recreation areas include playgrounds, seating areas and landscaping. With the proposed modifications, all features affected by incremental shadow would receive at least six hours of direct sunlight during this analysis day. The incremental shadow from the proposed modifications on the March 21/September 21 analysis day would not significantly alter the public use of the affected resources, and would allow for four through six hours of direct sunlight, enough direct sunlight to support vegetation as required by the *CEQR Technical Manual*.

*June 21 (see **Figure 8**)*

When compared to the No Action condition, incremental shadow cast from the proposed buildings with the proposed modifications would fall on Coney Island Public Beach and a portion of the Atlantic Ocean in the early morning of the June 21 analysis day. At any one time, the extent of incremental shadow would not exceed approximately 1,000 square feet on either the Atlantic Ocean or the beach, and would exit the resources at approximately 6:50 AM and 7:25 AM, respectively. The small portion of the resources affected by incremental shadows would receive at least 10 hours of direct sunlight during the remainder of the analysis day. Because the affected portions of the resources would continue to receive many hours of direct sunlight, the incremental shadow would not significantly affect the use of the resources or their ability to support the same variety of plant and animal life as in the No Action condition.

11/2/2017



With Modifications Incremental Shadow
March 21/September 21

Figure 7

11/2/2017

With Modifications Incremental Shadow
June 21

Figure 8

*December 21 (see **Figure 9**)*

With the proposed modifications, incremental shadow from the proposed development would be cast on the recreations areas within two NYCHA developments: Coney Island I and O'Dwyer Gardens. Incremental shadows would fall on the Coney Island I recreation areas for the entire duration of the analysis day, from 8:51 AM to 2:53 PM, and on O'Dwyer Gardens recreation areas for nearly three hours of the day from 12:05 PM to 2:53 PM. During the affected hours, the extent of incremental shadow on both resources at any one time would not exceed approximately 750 square feet. The affected feature of the two recreation areas includes playgrounds, seating areas and landscaping. With the proposed modifications, all sunlight-sensitive features affected by incremental shadow within O'Dwyer Gardens Houses would be in direct sunlight for at least four of the approximately six hours of this analysis day. The sunlight sensitive features within Coney Island I Houses would receive, at most, two hours of direct sunlight on this analysis day. Given that the extent and duration of shadows cast by the proposed buildings with the proposed modifications would not change significantly as compared to the No Action condition, the incremental shadow from the proposed modifications would not significantly alter the public use of the affected resources.

CONCLUSION

With the proposed modifications, the massing of the proposed developments on Zoning Lots A and B would differ from the massing of the No Action developments. When compared to the No Action condition, these modifications would introduce new incremental shadow on open spaces within two NYCHA developments—Coney Island I and O'Dwyer Gardens—as well as on the Coney Island Public Beach and the Atlantic Ocean. On some analysis days, the durations of new incremental shadow from the proposed developments with the proposed modifications could be several hours long, but, as described above, the extent of the incremental shadow resulting from the proposed modifications would not result in significant adverse shadow impacts.

URBAN DESIGN AND VISUAL RESOURCES

URBAN DESIGN

With the proposed modifications, the buildings on Zoning Lots A and B would be massed somewhat differently than the No Action buildings, and there would be minor differences in tower heights (see **Figures 2a, 2b, 2c, and 3a-3f)**. Both the No Action and proposed buildings would be massed with towers on Surf Avenue, but the No Action buildings would have mid-rise sections that step down toward Riegelmann Boardwalk, while the proposed buildings with the proposed modifications would not have those sections and the tower massings would be concentrated at the north corners of the zoning lots. With the proposed modifications, the towers would have rectangular floorplates. In comparison, the towers of the No Action buildings would have angled façades. Further, the two proposed towers on Zoning Lot B would be the same height, whereas the west tower (on West 36th Street) of the No Action building is 3 stories taller than the east tower (on West 35th Street). The building on Zoning Lot A would be approximately 23 feet shorter than the No Action building, and on Zoning Lot B, the west tower of the proposed building would be approximately 4 feet taller than the corresponding tower of the No Action building, and the east tower of the proposed building would be approximately 54 feet taller than the corresponding tower of the No Action building. Overall, the proposed modifications would not result in appreciable differences to the pedestrian experience along Surf Avenue compared to the No Action condition, as the two zoning lots would be developed in the No Action and With Actions

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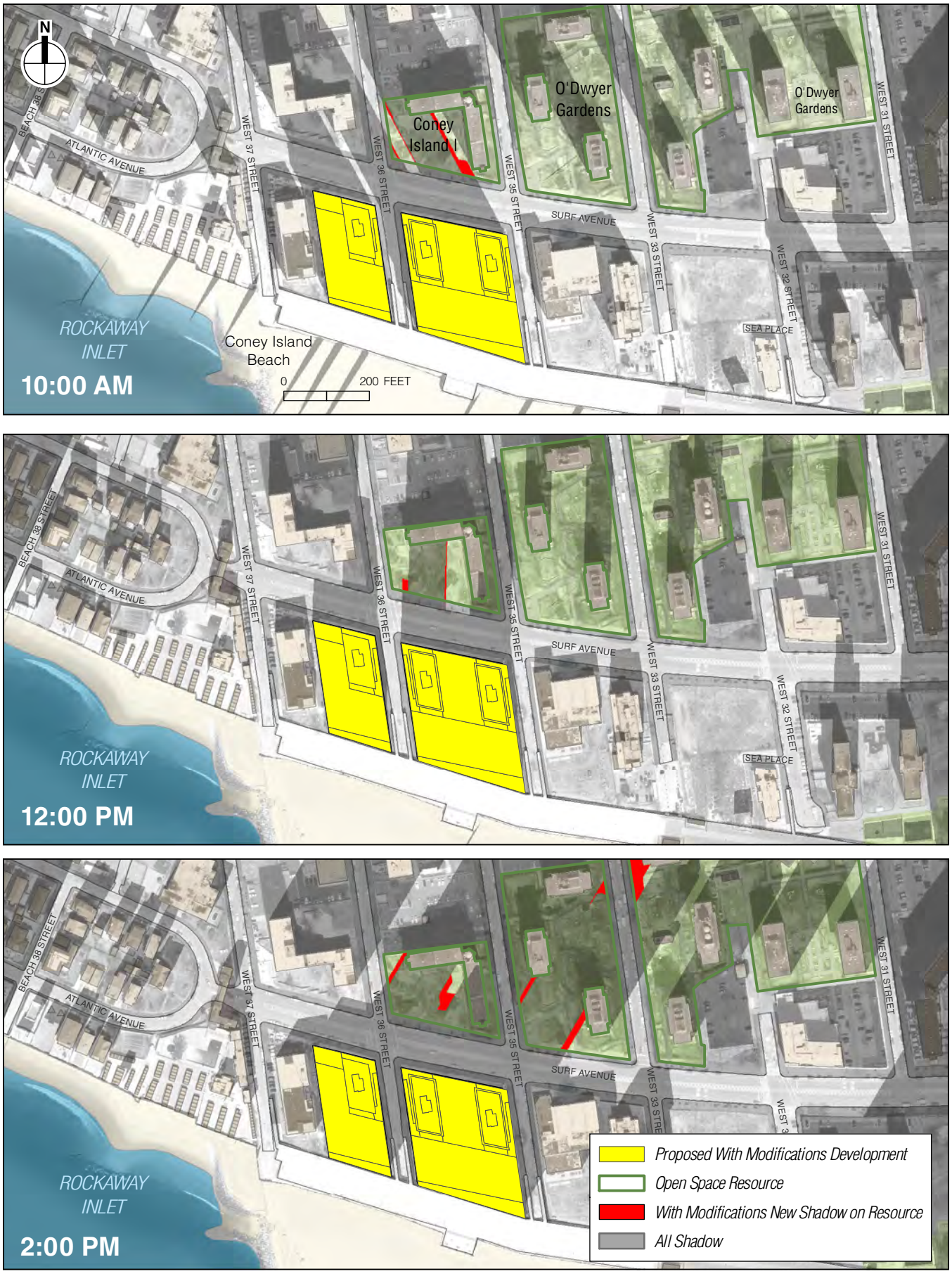


With Modifications Incremental Shadow
December 21

Figure 9

with residential buildings that have towers on Surf Avenue. See **Figures 10 through 12** for street-level view comparisons of the No Action and With Action buildings. **Figure 13** shows an elevated view from Riegelmann Boardwalk that compares the massings of the No Action and With Action buildings.

Along Riegelmann Boardwalk and from Coney Island Beach, with the proposed modifications the pedestrian experience would be different as compared to the No Action condition, but this difference would not result in adverse urban design impacts. With the proposed modifications, the buildings would have lower heights along Riegelmann Boardwalk as the massing of the buildings would be pulled toward Surf Avenue. In the No Action condition, the building on Zoning Lot A would have a 3-story section fronting Riegelmann Boardwalk, and the building on Zoning Lot B would have 3- and 4-story sections fronting Riegelmann Boardwalk. With the proposed modifications, parking garages (of 1 story on Zoning Lot A and of 2 stories on Zoning Lot B) would front on Riegelmann Boardwalk. The No Action buildings also have parking garages that front Riegelmann Boardwalk. The roofs of the proposed garages would be used for green roofs. The façades of the proposed garages would be clad with vertical bands of metal panel screens with some panels projected and others recessed in order to provide a visually interesting, articulated façade. A landscaped buffer would be planted in the open area between the Zoning Lot A parking garage and Riegelmann Boardwalk.

The approximately 5,600-sf PAA is intended to be constructed on Zoning Lot B on a platform abutting Riegelmann Boardwalk and the parking garage. Amenities in the PAA would be defined by three different activity zones: (1) landscaping and seating would occupy the western end of the PAA providing opportunities for more passive activities; (2) a 1,000- to 1,500-sf area with outdoor fitness or other recreational or play equipment would be located near the midpoint of the PAA providing opportunities for physical activity; and (3) and an approximately 300- to 700-sf kiosk with related seating and tables would be located at the eastern end of the PAA. The PAA would include a minimum of 550 sf of landscaping in raised planters (not to exceed a height of 18 inches above the platform adjacent to seating areas) containing a mix of grasses, shrubs, perennials and two to four evergreen trees, as well as 70 to 120 linear feet of fixed seating (of which at least 50 percent would have backs); 10 to 25 movable chairs; and 5 to 10 movable tables. Canopies, pergolas and/or other shade structures would cover 1,300 to 1,500 sf in the vicinity of the kiosk. The design for the proposed PAA is subject to review and approval by NYC Parks, and the Applicant anticipates that PDC may also desire to review and comment on the design. The Applicant is also proposing to provide seating and landscaping in the sidewalk along Surf Avenue adjacent to the project site and the street ends of West 35th Street and West 36th Street, which improvements will also be subject to review and approval by DOT, NYC Parks, and PDC. This seating and landscaping and the PAA would activate the Riegelmann Boardwalk frontage of the proposed building on Zoning Lot B and would enhance the pedestrian experience along this section of Riegelmann Boardwalk (see **Figure 3e**).

In addition, with the proposed modifications, the Applicant is proposing to replace the existing steep, narrow and non-compliant ramps in the street beds of West 36th Street and West 35th Street, which provide access from the street to the Riegelmann Boardwalk, with landscaped, accessible pedestrian connections consisting of a series of wider, grade-compliant ramps connecting each street to Riegelmann Boardwalk (see **Figure 3f**). The design and location of the proposed ramps is subject to the review and approval of NYC Parks, DOT, DEP, and PDC. These ramps would enhance pedestrian access to Riegelmann Boardwalk and the pedestrian experience in this location.

Source: Hill | West

No Action ***With-Action***

No Action and With-Action View Comparisons
View West on Surf Avenue

Source: Hill | West

No Action ***With-Action***

No Action and With-Action View Comparisons
View South on 36th Street

Source: Hill | West

No Action ***With-Action***

No Action and With-Action View Comparisons
View East on Surf Avenue

Figure 12

Source: Hill | West

No Action ***With-Action***

No Action and With-Action Massing Comparison
Aerial View on Boardwalk

Figure 13

VISUAL RESOURCES

While there would be differences in massing and height between the proposed and No Action buildings, the No Action and proposed buildings would have similar appearances in views throughout the study area as shown in **Figures 10 through 12**. Further, they would be similarly visible in views along Surf Avenue, along West 36th Street, and along Riegelmman Boardwalk and from Coney Island Beach. Like the No Action buildings, the proposed buildings would not block any view corridors or views of visual resources within the study area (Coney Island Beach and the Atlantic Ocean) or views of visual resources outside the study area (the Parachute Jump), and the proposed buildings would not limit access to any visual resource.

CONCLUSION

The 2011 EAS concluded that the proposed actions would not result in significant adverse urban design or visual resource impacts, and it is similarly expected that the proposed buildings with the proposed modifications would not have significant adverse impacts on the urban design or visual resources of the study area. The proposed buildings, like the No Action buildings, would not alter the street pattern, block shapes, or natural features of the study area and would not adversely affect the study area's streetscape. Like the No Action buildings, the proposed buildings with the proposed modifications would not block existing view corridors or views of visual resources, and they would be of comparable height to existing high-rise residential buildings in the study area.

HAZARDOUS MATERIALS

As disclosed in the 2011 EAS, a Restrictive Declaration (CRFN tracking number 2005000214806, see Appendix C) was recorded on April 14, 2005 against the project site by a prior owner to ensure that the following actions occur prior to any new construction at the site:

- A subsurface investigation would be performed to determine if soil has been impacted by past uses at the site and in the surrounding area. The scope of work for the investigation would be submitted to NYCDEP for review and approval.
- All activities involving disturbance of existing soils would be conducted in accordance with an Environmental Health and Safety Plan (HASP) that details measures to reduce the potential for exposure (e.g., dust control) and measures to identify and manage construction and demolition debris, and unexpectedly encountered contamination (e.g., petroleum storage tanks or contaminated soil). If petroleum storage tanks are encountered during construction of any onsite site structures, the tanks would be properly registered, if required, with the New York State Department of Environmental Conservation (NYSDEC) and be removed (along with any associated contaminated soil), cleaned and disposed of in accordance with applicable local, state and federal regulations and guidelines. In the event that soil containing petroleum or other contaminated materials is discovered during excavation activities, such soil would be segregated and disposed of in accordance with all applicable federal, state, and local regulations and guidelines. The scope of work for the HASP would also be submitted to NYCDEP for review and approval.

The previously recorded Restrictive Declaration continues to apply and be in full force and effect with respect to the proposed development. In 2016, the Applicant filed a remedial action plan for Zoning Lot B with OER and prepared a HASP. On February 17, 2017, OER issued a Notice to Proceed for development on Zoning Lot B. With the measures provided in the Restrictive Declaration and following the remedial action plan and HASP for Zoning Lot B, no

significant adverse impacts related to hazardous materials would be expected to occur during or following construction pursuant to the proposed modifications.

WATER AND SEWER INFRASTRUCTURE

With the proposed modifications, there would be no significant adverse impacts to water and sewer infrastructure. In comparison to the No Action condition, the area of impermeable surfaces on the project site would not increase. Additionally, the increment in daily flow at the Coney Island Water Pollution Control Plant (WPCP) would be miniscule. The total water demand for the No Action condition would be 195,994 gpd, while the water demand with the proposed modifications would be 216,302 gpd, an increase of 20,308 gpd (see **Table 4**). The total sewer demand increase from the No Action condition would be 22,900 gpd, for a total sewer demand of 132,650 gpd with the proposed modifications. The daily average flow at the Coney Island WPCP is a capacity of 110 million gallons a day (mgd); therefore, this slight increase represents a small addition to the daily flows and would result in an incremental increase daily flow of 0.02 percent.

Table 4
No Action and With Action Water Consumption and Sewage Generation

Use	Floor Area/Units/Persons	Rate[1]	Consumption (gpd)
No Action			
Residential			
Domestic	1,038 persons	100 gpd/person	103,800
Air Conditioning	482,529 gsf	0.17 gpd/sf	82,030
Retail			
Domestic	24,790 gsf	0.24 gpd/sf	5,950
Air Conditioning	24,790 gsf	0.17 gpd/sf	4,214
		Total Water Supply Demand (gpd)	**195,994**
		Total Sewage Generation (gpd)	**109,750**
With Action			
Residential			
Domestic	1,267 persons	100 gpd/person	126,700
Air Conditioning	467,280 gsf	0.17 gpd/sf	79,438
Retail			
Domestic	24,790 gsf	0.24 gpd/sf	5,950
Air Conditioning	24,790 gsf	0.17 gpd/sf	4,214
		Total Water Supply Demand (gpd)	**216,302**
		Total Sewage Generation (gpd)	**132,650**
Note: Rates are from the *CEQR Technical Manual*, Table 13-2			

SOLID WASTE AND SANITATION SERVICES

The proposed development with the proposed modifications would not overburden the City's solid waste disposal capacities. The proposed modifications would introduce, over the No Action condition, an additional 92 households and an additional 6 employees for the 92 incremental residential units and the incremental 60 parking spaces. Assuming the *CEQR Technical Manual* generation rates of 41 pounds per week per household and 79 pounds per week per employee (conservatively assuming the general retail generation rate), the proposed

modifications would generate an additional approximately 4,157 pounds per week of solid waste as compared to the No Action condition. With this increment, the amount of solid waste produced per week would be below the CEQR threshold of 50 tons per week of generated solid waste requiring further analysis. Therefore, the proposed modifications would not result in significant adverse impacts.

ENERGY

With the proposed modifications, the proposed development would result in a demand of approximately 64,566 MBTUs per year. This is approximately 1,932 MBTUs per year less than the No Action condition of 66,498 MBTUs per year (due to the net decrease in density with the proposed modifications). As was concluded in the 2011 EAS, this level of energy demand would be a negligible increase compared to what is consumed annually within Con Edison's service area, and would not overburden the energy generation, transmission, and distribution system. The proposed modifications would, therefore, not result in significant adverse impacts.

Table 5
Projected Energy Consumption in the Future with the Proposed Modifications

Use	Size (gsf)	Average Annual Energy Rate (NBTUs/sf)	Energy Consumption (Million BTUs/Year)
Residential	467,280	126,700	59,204
Retail	24,790	216,300	5,362
Total Energy Consumption			***64,566***
Incremental Energy Consumption over No Action			***-1,932***

Notes: sf = square feet.
Totals may not sum due to rounding.
Source: 2014 *CEQR Technical Manual*, Table 15-1, "Average Annual Whole-Building Energy Use in New York City."

TRANSPORTATION

A trip generation analysis was performed to estimate the numbers of person and vehicle trips generated by the proposed buildings with the proposed modifications. **Table 6** provides a summary of the program assumptions used for the transportation assessments presented below. For purposes of environmental review, the approved program from the 2011 EAS has been assumed to be developed as-of-right in the No Action condition. Compared to the No Action condition, the proposed buildings with the proposed modifications would introduce the same uses; however, there would be increases in residential units and shifts in the composition of the commercial space (from boardwalk retail to local retail). Travel demand projections were prepared for each of the proposed development components under the proposed modifications for the weekday AM, midday, and PM peak hours. **Table 7** shows the transportation planning assumptions used in estimating the number of person and vehicle trips for the program with the proposed modifications.

Table 6
Comparison of No Action Program and Proposed Modifications Program

Use		No Action Program	Proposed Modifications Program	Difference
Residential	Units	417	509	92
Local Retail	GSF	15,210	24,790	9,580
Boardwalk Retail	GSF	9,580	300	-9,280

Table 7
Travel Demand Assumptions

Use	Residential			Local Retail			Boardwalk Retail		
Total Daily Person Trip	(1) Weekday 8.075 Trips/DU			(1) Weekday 205.0 Trips/KSF			(1) Weekday 205.0 Trips/KSF		
Trip Linkage[(2)]	0%			25%			75%		
	AM	**MD**	**PM**	**AM**	**MD**	**PM**	**AM**	**MD**	**PM**
Temporal	(1)			(1)			(1)		
	10%	5%	11%	3%	19%	10%	3%	19%	10%
Direction	(2)			(2)			(2)		
In	15%	50%	70%	50%	50%	50%	50%	50%	50%
Out	85%	50%	30%	50%	50%	50%	50%	50%	50%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
Modal Split	(3)			(2)			(2)		
	AM	**MD**	**PM**	**AM**	**MD**	**PM**	**AM**	**MD**	**PM**
Auto	31.0%	31.0%	31.0%	15.0%	15.0%	15.0%	0.0%	0.0%	0.0%
Taxi	1.0%	1.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Subway	44.0%	44.0%	44.0%	5.0%	5.0%	5.0%	0.0%	0.0%	0.0%
Bus	14.0%	14.0%	14.0%	10.0%	10.0%	10.0%	0.0%	0.0%	0.0%
Walk	10.0%	10.0%	10.0%	70.0%	70.0%	70.0%	100%	100%	100%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
Vehicle Occupancy	(2)(3) Weekday			(2) Weekday			(2) Weekday		
Auto	1.13			2.00			2.00		
Taxi	1.18			2.00			2.00		
Daily Delivery Trip Generation Rate	(1) Weekday 0.06 Delivery Trips/DU			(1) Weekday 0.35 Delivery Trips/KSF			(1) Weekday 0.35 Delivery Trips/KSF		
	AM	**MD**	**PM**	**AM**	**MD**	**PM**	**AM**	**MD**	**PM**
Delivery Temporal	(1)			(1)			(1)		
	12%	9%	2%	8%	11%	2%	8%	11%	2%
Delivery Direction	(1)			(1)			(1)		
In	50%	50%	50%	50%	50%	50%	50%	50%	50%
Out	50%	50%	50%	50%	50%	50%	50%	50%	50%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Sources:
(1) 2014 *CEQR Technical Manual.*
(2) *Ocean Dreams Rezoning and Related Actions EAS* (2011).
(3) U.S. Census Bureau, ACS 2011–2015 Five-Year Estimates – Journey-to-Work (JTW) Data

TRIP GENERATION

Trip generation factors for the previously analyzed uses (residential and local retail) are based on the assumptions utilized in the 2011 EAS. For the residential use, the modal splits and auto occupancy were updated based on the latest 2011–2015 U.S. Census Bureau American Community Survey (ACS) Journey-to-Work (JTW) data.

Summary

As summarized in **Table 8**, the No Action condition would generate approximately 424, 704, and 654 person trips and 113, 90, and 129 vehicle trips during the weekday AM, midday, and PM peak hours, respectively. As summarized in **Table 9**, the project with the proposed modifications would generate approximately 527, 930, and 838 person trips and 141, 122, and 164 vehicle trips during the weekday AM, midday, and PM peak hours, respectively. The net incremental trips between the No Action scenario and the With Action scenario are shown in **Table 10**.

Table 8
Trip Generation Summary: No Action Condition

Person Trips								Vehicle Trips				
Peak Hour	**In/Out**	**Auto**	**Taxi**	**Subway**	**City Bus**	**Walk**	**Total**	**In/Out**	**Auto**	**Taxi**	**Delivery**	**Total**
AM	In	21	1	24	11	37	94	In	17	4	3	24
	Out	94	3	128	44	61	330	Out	82	4	3	89
	Total	115	4	152	55	98	424	Total	99	8	6	113
MD	In	59	1	48	34	210	352	In	40	2	3	45
	Out	59	1	48	34	210	352	Out	40	2	3	45
	Total	118	2	96	68	420	704	Total	80	4	6	90
PM	In	98	3	120	48	132	401	In	80	4	1	85
	Out	52	1	55	28	117	253	Out	39	4	1	44
	Total	150	4	175	76	249	654	Total	119	8	2	129

Table 9
Trip Generation Summary: With Proposed Modifications

Person Trips								Vehicle Trips				
Peak Hour	**In/Out**	**Auto**	**Taxi**	**Subway**	**City Bus**	**Walk**	**Total**	**In/Out**	**Auto**	**Taxi**	**Delivery**	**Total**
AM	In	28	1	30	15	46	120	In	22	4	5	31
	Out	117	3	157	55	75	407	Out	101	4	5	110
	Total	145	4	187	70	121	527	Total	123	8	10	141
MD	In	86	1	63	50	265	465	In	55	2	4	61
	Out	86	1	63	50	265	465	Out	55	2	4	61
	Total	172	2	126	100	530	930	Total	110	4	8	122
PM	In	127	3	149	63	167	509	In	102	4	1	107
	Out	71	1	70	38	149	329	Out	52	4	1	57
	Total	198	4	219	101	316	838	Total	154	8	2	164

Table 10
Trip Generation Summary: Net Incremental Trips

Person Trips								Vehicle Trips				
Peak Hour	**In/Out**	**Auto**	**Taxi**	**Subway**	**City Bus**	**Walk**	**Total**	**In/Out**	**Auto**	**Taxi**	**Delivery**	**Total**
AM	In	7	0	6	4	9	26	In	5	0	2	7
	Out	23	0	29	11	14	77	Out	19	0	2	21
	Total	30	0	35	15	23	103	Total	24	0	4	28
MD	In	27	0	15	16	55	113	In	15	0	1	16
	Out	27	0	15	16	55	113	Out	15	0	1	16
	Total	54	0	30	32	110	226	Total	30	0	2	32
PM	In	29	0	29	15	35	108	In	22	0	0	22
	Out	19	0	15	10	32	76	Out	13	0	0	13
	Total	48	0	44	25	67	184	Total	35	0	0	35

TRAFFIC

As shown in **Table 10**, the incremental vehicle trips generated by the proposed buildings with the proposed modifications, in comparison to the No Action condition, would be 28, 32, and 35 vehicle trips during the weekday AM, midday, and PM peak hours, respectively. Since these incremental vehicle trips do not exceed the *CEQR Technical Manual* analysis threshold of 50 peak hour vehicle trips, a detailed traffic analysis is not warranted and the proposed buildings with the proposed modifications are not expected to result in any significant adverse traffic impacts.

PARKING

In the 2011 EAS, 418 accessory parking spaces were envisioned for the 417 residential units, slightly more than one parking space per residential unit. However, based on 2000 U.S. Census data, the car ownership rate of owner-occupied housing in the area was approximately 108 percent, resulting in a parking shortfall of approximately 32 spaces for the residential use. The 2011 EAS prepared an on-street parking survey encompassing an area within a ¼-mile radius of the project site and determined that on a typical weekday approximately 350 to 425 on-street parking spaces would be available. Consequently, it was concluded that the proposed project would not result in the potential for significant adverse parking impacts.

The project with the proposed modifications would include 478 parking spaces for the 509 residential units. Based on the latest 2011–2015 U.S. Census Bureau ACS data, the car ownership rate of owner-occupied housing in the area has decreased from 108 percent to 93 percent, resulting in an excess of approximately five spaces for the residential use. Similar to the 2011 EAS, in addition to the residential parking demand, the proposed local retail use would generate a small parking demand, which would be high turnover in nature. In order to calculate the parking demand and turnover for both uses, a 24-hour parking accumulation was prepared and is presented in **Table 11**. As shown, parking demand as a result of the project with the proposed modifications would be expected to be accommodated by the on-site parking spaces; therefore, the project with the proposed modifications would not result in the potential for a parking shortfall or significant adverse parking impacts. Additionally, based on the parking survey prepared for the 2011 EAS, there would also be on-street parking spaces available for use by the project's parking demand in addition to the accessory parking spaces that would be provided.

Table 11
Parking Demand—Weekday
Proposed Project with Proposed Modifications

Hour	Residential	Local/Boardwalk Retail	Total
12 AM–01 AM	473	0	473
01 AM–02 AM	473	0	473
02 AM–03 AM	473	0	473
03 AM–04 AM	473	0	473
04 AM–05 AM	473	0	473
05 AM–06 AM	473	0	473
06 AM–07 AM	473	0	473
07 AM–08 AM	437	2	439
08 AM–09 AM	358	2	360
09 AM–10 AM	313	3	316
10 AM–11 AM	285	4	289
11 AM–12 PM	275	4	279
12 PM–01 PM	275	4	279
01 PM–02 PM	275	4	279
02 PM–03 PM	275	4	279
03 PM–04 PM	276	4	280
04 PM–05 PM	293	4	297
05 PM–06 PM	343	4	347
06 PM–07 PM	385	4	389
07 PM–08 PM	423	4	427
08 PM–09 PM	439	2	441
09 PM–10 PM	452	0	452
10 PM–11 PM	463	0	463
11 PM–12 AM	473	0	473

TRANSIT

As shown in **Table 10**, the incremental subway trips generated by the project with proposed modifications, in comparison to the No Action condition, would be 35, 30, and 44 person trips during the weekday AM, midday, and PM peak hours, respectively. Since these incremental subway trips do not exceed the *CEQR Technical Manual* analysis threshold of 200 peak hour subway trips at any station, a detailed subway facilities analysis is not warranted and the proposed modifications are not expected to result in any significant adverse subway impacts.

The incremental bus trips generated by the project with proposed modifications, in comparison to the No Action condition, would be 15, 32, and 25 person trips during the weekday AM, midday, and PM peak hours, respectively. Since the nearest subway stations, the W 8th Street Station (F and Q) and the Coney Island Stillwell Avenue Station (F, D, N, and Q) are over 1.25 miles away from the project site, it is assumed that the majority of subway users would take the B36 bus route (which runs along Surf Avenue) to and from the subway. Even after accounting for these subway trips, total incremental trips on the B36 bus route would not exceed the *CEQR Technical Manual* analysis threshold of 50 or more peak hour bus riders in a single direction. Therefore, a detailed bus line-haul analysis is not warranted and the project with the proposed modifications is not expected to result in any significant adverse bus line-haul impacts.

PEDESTRIANS

As shown in **Table 10**, the incremental person trips generated by the project with proposed modifications, in comparison to the No Action condition, would be 103, 226, and 184 during the weekday AM, midday, and PM peak hours, respectively. Other than trips made by autos in and out of the on-site parking garages, all of these trips would traverse the pedestrian elements

surrounding the project sites. Therefore, even though the weekday midday peak hour incremental pedestrian trips would exceed the *CEQR* Level-1 screening threshold, no pedestrian element (i.e., sidewalks, corners, and crosswalks) would exceed the analysis threshold of 200 peak hour pedestrian trips. Therefore, a detailed pedestrian analysis is not warranted and the project with the proposed modifications is not expected to result in any significant adverse pedestrian impacts.

AIR QUALITY

MOBILE SOURCES

As discussed above, the proposed modifications would not significantly alter traffic patterns. Therefore, as was concluded in the 2011 EAS for the approved project, the proposed modifications would not result in any significant adverse air quality impacts from mobile sources at intersections in the traffic study area. The proposed modifications would increase the number of accessory parking spaces, including an attended 170 and 308-space accessory parking garage in Zoning Lots A and B, respectively. Emissions from vehicles using the multi-level naturally ventilated parking garages could potentially affect ambient levels of carbon monoxide (CO) and particulate matter (PM) in the immediate vicinity of the open façades. An analysis of the emissions from each garage and their dispersion in the environment was performed, calculating pollutant levels in the surrounding area, using the methodology set forth in the *CEQR Technical Manual*. The CO and PM concentrations were determined for the time periods when overall garage usage would be the greatest, considering the hours when the greatest number of vehicles would exit the facility.

Emissions from vehicles entering, parking, and exiting the garages were estimated using the EPA MOVES mobile source emission model as referenced in the *CEQR Technical Manual*. For all arriving and departing vehicles, an average speed of 5 miles per hour was conservatively assumed for travel within the parking garage. In addition, all departing vehicles were assumed to idle for 1 minute before proceeding to the exit. The concentrations of CO and PM within vicinity of the garages were calculated assuming a minimum wind speed of 1 meter per second, per *CEQR Technical* Manual guidance. To determine compliance with the NAAQS, CO concentrations were determined for the maximum 8-hour average period.

Traffic data for on street traffic volumes used in the parking garage analysis assumed only project generated vehicles would be present on West 36th Street and were based on predicted traffic increments on West 36th Street in support of the traffic analysis. The CO concentrations were determined for the time periods when overall garage usage would be the greatest, considering the hours when the greatest number of vehicles would exit the facility (PM concentrations were determined on a 24-hour and annual average basis). The proposed modifications would result in both garage designs with façades facing West 36th Street. Therefore receptors would be located along West 36th Street, since West 36th Street has the highest potential for cumulative impact. The closest receptors to the proposed vent location are the sidewalk receptors along the roadway; therefore, “near” and “far” receptors were placed along the sidewalks at a pedestrian height of 6 feet and at distances of 8 feet and 53 feet, respectively, from the façade. A persistence factor of 0.7 was used to convert the calculated 1-hour average maximum concentrations to 8-hour averages, accounting for meteorological variability over the average 8-hour period, as referenced in the *CEQR Technical Manual*.

Background and on-street CO concentrations were added to the modeling results to obtain the total ambient levels. The on-street CO concentration was determined using the methodology in the Air Quality Appendix of the *CEQR Technical Manual*, utilizing data collected in support of the traffic analysis.

The maximum predicted eight-hour average CO concentration is 1.53 ppm along Surf Avenue adjacent to Zoning Lot B. This value includes a predicted concentration of 0.02 ppm from the proposed parking garage, an on-street contribution of 0.01 ppm, and a background level of 1.5 ppm. The maximum predicted concentration is substantially below the applicable NAAQS of 9 ppm and the *de minimis* CO criteria of 3.8 ppm.

The maximum predicted 24-hour and annual average $PM_{2.5}$ increments are 0.1 $\mu g/m^3$ and 0.01 $\mu g/m^3$, respectively. The maximum predicted $PM_{2.5}$ increments are well below the respective $PM_{2.5}$ *de minimis* criteria of 7.25 $\mu g/m^3$ for the 24-hour average concentration and 0.3 $\mu g/m^3$ for the annual concentration. Therefore, the parking garage with the proposed modifications would not result in any significant adverse air quality impacts.

STATIONARY SOURCES

Zoning Lot A

There is an (E) designation on Zoning Lot A (Block 7065, Lots 6 and 12). The text of (E) designation R-46 is as follows:

Any new residential and/or commercial development on the above-referenced property must ensure that natural gas is used as the type of fuel for space heating and hot water (HVAC) systems, and that all HVAC exhaust stacks are located at least 25 feet from the lot line facing West 36th Street to avoid any potential significant air quality impacts.

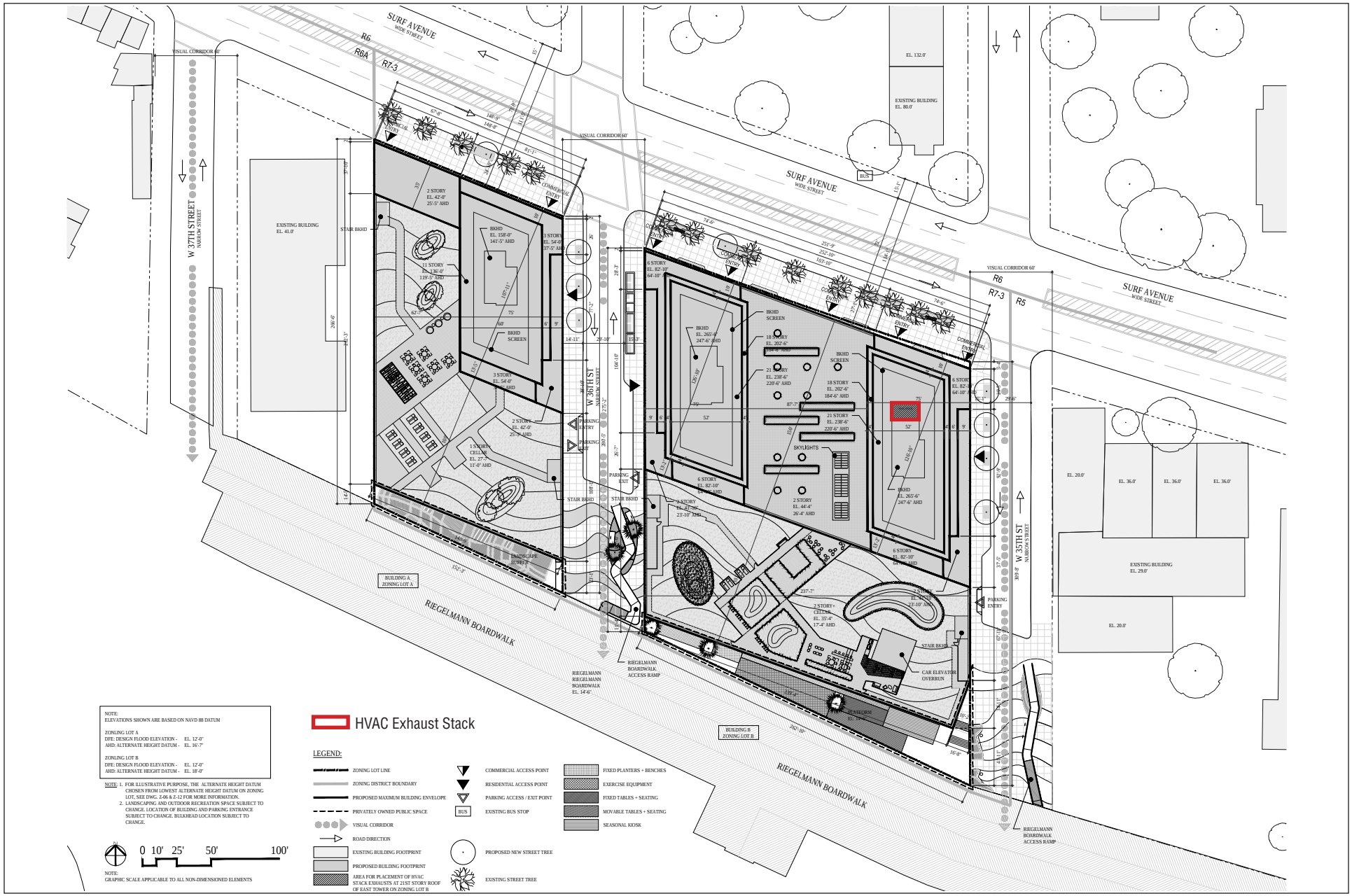
With the (E) designation, the proposed development on Zoning Lot A with the proposed modifications would not result in stationary source air quality impacts. Therefore, no additional analysis was required.

Zoning Lot B

The proposed modifications for Zoning Lot B would result in two towers of identical height. A single heating and hot water system, located in the east tower, would serve both towers. The system would exhaust from a single area on the roof of the east tower (see **Figure 14**). There are no existing or proposed buildings within 400 feet of Zoning Lot B that are similar or greater in height. Therefore, with the proposed modifications, there would be no potential for air quality impacts from emissions from proposed heating and hot water systems on any off-site locations.

Potential project-on-project impacts from the east tower of Zoning Lot B on the west tower of Zoning Lot B were evaluated. Concentrations of 1-hour average nitrogen dioxide (NO_2) and 24-hour and annual $PM_{2.5}$ were determined since these are the critical pollutants of concern and time periods for evaluating air quality impacts from heating and hot water systems.

The analysis was performed both with and without downwash in order to assess the worst-case impacts at elevated receptors (specific locations at which concentrations are projected) close to the height of the source, which would occur without downwash, as well as the worst-case impacts at lower elevations and ground level, which would occur with downwash, consistent with the recommendations in the *CEQR Technical Manual*. Five years of surface meteorological



HVAC Exhaust Stack Location

OCEAN DREAMS TECHNICAL MEMORANDUM 002

Figure 14

data collected at JFK Airport (2012–2016) and concurrent upper air data collected at Brookhaven, New York were used in the analysis.

1-hour average NO_2 concentration from the heating and hot water systems at Zoning Lot B with the proposed modifications were estimated following guidance for assessing compliance with NAAQS.[3] AERMOD model's Plume Volume Molar Ratio Method (PVMRM) module was used to analyze chemical transformation within the model. The PVMRM module incorporates hourly background ozone concentrations to estimate NO_x transformation within the source plume. The model applied ozone concentrations measured in 2012–2016 at the nearest available NYSDEC ozone monitoring station—the Queens College monitoring station in Queens. An initial NO_2 to NO_x ratio of 10 percent at the source exhaust stack was assumed, which is considered representative for boilers.[4]

To determine compliance with the 1-hour NO_2 NAAQS,[5] the monitored background was added to modeled concentrations, following EPA modeling guidance: hourly modeled concentrations from proposed sources were first added to the seasonal hourly background monitored concentrations within the AERMOD model; then the highest combined daily 1-hour NO_2 concentration was determined at each receptor location and the 98th percentile daily 1-hour maximum concentration for each modeled year was calculated within the AERMOD model; finally the 98th percentile concentrations were averaged over the latest five years.

Emission Rates and Stack Parameters

Stack exhaust parameters and emission estimates were conservatively estimated. Annual emission rates for the heating and hot water systems were calculated based on fuel usage estimates, using energy consumption estimates based on type of development and buildings' size (in square feet) as recommended in the *CEQR Technical Manual*, and applying the EPA's *Compilations of Air Pollutant Emission Factors (AP-42*) emission factors for fuel oil-fired boilers.[6] The system was conservatively assumed to use No 2 Fuel Oil. The short-term emission rates were calculated by scaling the annual emissions to account for a 100-day heating season.

The boiler stack was assumed to exhaust at an elevation of 256.5 feet (3 feet above the roof). The exhaust velocity was calculated based on the exhaust flowrate for the boiler capacity, estimated using the energy load of the proposed modifications and EPA's fuel factors.[7] Assumptions for stack diameter and exhaust temperature for the proposed systems were obtained from a survey of boiler data obtained from DEP air permits, which were also used to calculate the stack exhaust velocity.

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[3] EPA. Memorandum: Additional Clarification Regarding Application of Appendix W, Modeling Guidance for the 1-Hour NO_2 National Ambient Air Quality Standard. March 1, 2011.

[4] This is a conservatively high assumption. AP-42 Section 1.3 for NO_x emission factors for fuel oil fired boilers states that 95 percent of NO_x by weight is NO. See— *AP-42 Volume 1, Section 1.3.3.3 Nitrogen Oxide Emissions.*

[5] EPA. Memorandum: Clarification on the use of AERMOD Dispersion Modeling for Demonstrating Compliance with the NO_2 National Ambient Air Quality Standard. September 30, 2014.

[6] EPA. *Compilations of Air Pollutant Emission Factors AP-42*. Fifth Edition, Volume I, Chapter 1, Section 3. http://www.epa.gov/ttn/chief/ap42. September, 1998

[7] EPA. *Standards of Performance for New Stationary Sources.* 40 CFR Chapter I Subchapter C Part 60. Appendix A-7, Table 19-2. 2013.

Table 12 presents the stack parameters and emission rates used in the analysis.

Table 12
Exhaust Stack Parameters and Emission Rates
Zoning Lot B

Stack Parameter	Value
Building Size (gsf)	478,143
Stack Height (feet)	256.5
Stack Diameter (feet)[2]	4.38
Stack Exhaust Flow (ACFM)[1,3]	3,125
Exhaust Velocity (feet/second)[3]	3.45
Exhaust Temperature (degrees Fahrenheit)[(2)]	308
Emission Rate (grams/second)	
NO_x (1-hour average)	2.16x10-1
$PM_{2.5}$ (24-hour average)	3.57x10-2
$PM_{2.5}$ (Annual average)	9.78x10-3

Note:
1. ACFM = actual cubic feet per minute.
2. Stack parameters assumed based on survey of boiler exhaust data performed and provided by NYCDEP.
3. The stack exhaust flow rate and velocity are estimated based on the type of fuel and the estimated boiler capacity.

Receptor Locations

Receptors were modeled on the west tower of Zoning Lot B to determine project-on-project impacts. Receptors were placed along the façade of the building at 10-foot vertical and horizontal intervals.

Background Concentrations

To estimate the maximum expected pollutant concentration at a given receptor, the predicted impact must be added to a background value that accounts for existing pollutant concentrations from other sources that are not directly accounted for in the model (See **Table 13**).

Table 13
Maximum Background Pollutant Concentrations (µg/m3)

Pollutant	Average Period	Location	Concentration	NAAQS
NO_2	1-hour[1]	Queens College, Queens	121	188
$PM_{2.5}$	24-hour	JHS 126, Brooklyn	20.5	35

Notes:
1. The 1-Hour NO_2 background concentration is the annual 98th percentile of daily maximum 1-hour average concentration, averaged over the recent 3-years (2014-2016).

Sources: New York State Air Quality Report Ambient Air Monitoring System, NY State Department of Environmental Conservation (NYSDEC), 2014–2016.

A $PM_{2.5}$ 24-hour average background concentration of 20.5 µg/m^3 (based on the 2014 to 2016 average of 98th percentile concentrations measured at the JHS 126 monitoring station) was used to establish the *de minimis* value for the 24-hour increment, consistent with the guidance provided in the *CEQR Technical Manual.* $PM_{2.5}$ annual average impacts are assessed on an incremental basis and compared with the $PM_{2.5}$ *de minimis* criteria, without considering the annual background. Consequently, the annual $PM_{2.5}$ background is not presented in the table.

The results of the AERMOD analysis for 1-hour average NO_2 and 24-hour and annual average $PM_{2.5}$ on the development sites are presented in **Table 14**. The maximum overall predicted 1-hour average NO_2 concentrations were added to the maximum ambient background concentration and compared with the NAAQS, while 24-hour average $PM_{2.5}$ concentrations were compared with the $PM_{2.5}$ *de minimis* criteria. Based on the project-on-project analysis presented for the proposed modifications, the proposed heating and hot water systems on the east tower of Zoning Lot B would not result in any significant adverse air quality impacts on the west tower of Zoning Lot B.

Table 14
Maximum Modeled Project-on-Project Pollutant Concentrations (µg/m³)

Pollutant	Averaging Period	Maximum Modeled Impact	Background	Total Concentration	Criterion
NO_2	1-hour	[1]	[1]	117	188
$PM_{2.5}$	24-hour	2.7	N/A	2.7	7.25[2]
$PM_{2.5}$	Annual	0.07	N/A	0.07	0.3[3]

Notes:
N/A – Not Applicable.
1. The 1-hour NO_2 increment and background concentration is not presented in the table since AERMOD model determines the total 98th percentile 1-hour NO_2 concentration at each receptor.
2. $PM_{2.5}$ *de minimis* criteria — 24-hour average, not to exceed more than half the difference between the background concentration and the 24-hour standard of 35 µg/m³.
3. $PM_{2.5}$ *de minimis* criteria—annual (discrete receptor), 0.3 µg/m³.

To ensure that there are no significant adverse impacts from the proposed heating and hot water systems on Zoning Lot B, certain restrictions would be required through the mapping of an (E) Designation (E-467) for air quality. The requirements of the (E) Designation would be as follows:

Block 7065, Lot 20 (Zoning Lot B):

Any new residential and/or commercial development must ensure that the heating, ventilating, and air conditioning stack(s) is located at the highest tier or at an elevation of at least 263 feet above grade and 180 feet from the lot line facing West 36th Street to avoid any potential significant adverse air quality impacts.

Therefore, with the proposed modifications, there would be no potential for significant adverse impacts on air quality from the proposed development on Zoning Lot B.

NOISE

Similar to the conclusions in the 2011 EAS, the proposed development with the proposed modifications would not generate sufficient traffic that would have the potential to cause a significant noise impact (i.e., it would not result in a doubling of Noise Passenger Car Equivalents [Noise PCEs] that would be necessary to cause a 3 dBA increase in noise levels). In addition, the building mechanical systems (i.e., HVAC systems) would continue to be designed to meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code, the New York City Department of Buildings Code) and to avoid producing levels that would result in any significant increase in ambient noise levels. Therefore, the proposed modifications would not affect these conclusions.

NEW YORK CEQR NOISE CRITERIA

The *CEQR Technical Manual* defines attenuation requirements for buildings based on exterior noise levels (see **Table 15**). Recommended noise attenuation values for buildings are designed to maintain interior noise levels of 45 dBA or lower for residential and community facility uses and interior noise levels of 50 dBA or lower for commercial uses and are determined based on exterior $L_{10(1)}$ noise levels.

Table 15
Required Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally unacceptable				Clearly unacceptable
Noise Level with Proposed Project	$70 < L_{10} \leq 73$	$73 < L_{10} \leq 76$	$76 < L_{10} \leq 78$	$78 < L_{10} \leq 80$	$80 < L_{10}$
Attenuation[A]	(I) 28 dB(A)	(II) 31 dBA	(III) 33 dBA	(IV) 35 dBA	$36 + (L_{10} - 80)^{B}$ dBA

Notes:
[A] The above composite window-wall attenuation requirements are for residential dwellings and community facility development. Commercial uses would require 5 dBA less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.
[B] Required attenuation values increase by 1 dBA increments for L_{10} values greater than 80 dBA.
Source: New York City Department of Environmental Protection.

EXISTING NOISE LEVELS

Measurements of existing-condition noise levels were performed at one location adjacent to the project site. The results of the measurements of existing noise levels are summarized in **Table 16**.

Table 16
Existing Noise Levels at Site 1 (in dBA)

Site	Measurement Location	Time	L_{eq}	L_1	L_{10}	L_{50}	L_{90}
1	Corner of Surf Avenue and West 36th Street	AM	64.5	73.7	66.2	62.8	61.3
		MD	59.0	67.4	62.5	55.5	51.5
		PM	61.9	71.7	64.7	58.9	54.1

Note: Field measurements were performed on October 18, 2017.

NOISE ATTENUATION MEASURES

The proposed buildings with the proposed modifications would be built using standard construction methods, and they would provide acoustically rated windows and air conditioning as an alternate means of ventilation. The building façades, including these elements, would be expected to provide a composite Outdoor-Indoor Transmission Class[8] ("OITC") such that interior noise levels would be 45 dBA or lower for residential uses. Furthermore, because the

[8] The attenuation of a composite structure is a function of the attenuation provided by each of its component parts, and how much of the area is made up of each part. A building façade generally consists of wall, glazing, and any vents or louvers associated with building mechanical systems. The OITC classification is defined by the American Society of Testing and Materials ("ASTM") E1332-10 and is used in the acoustical design of building façades.

exterior $L_{10(1h)}$ noise levels at the project site would be less than 70 dBA, the *CEQR Technical Manual* does not provide a specific requirement for the level of window/wall attenuation.

Consequently, the proposed modifications would not result in any significant adverse impacts related to noise.

PUBLIC HEALTH

With the proposed modifications, the proposed development would not result in significant adverse impacts to air quality, water quality, hazardous materials, or noise. Therefore, the proposed development with the proposed modifications would not result in any significant adverse impacts to public health.

NEIGHBORHOOD CHARACTER

Since the proposed modifications would not result in new significant adverse impacts on any of the contributing elements that define neighborhood character (land use, urban design, visual resources, historic resources, socioeconomic conditions, shadows, open space, traffic, and noise), the proposed development with the proposed modifications—like the approved project assessed in the 2011 EAS—would not result in any significant adverse impacts on neighborhood character.

CONCLUSION

The proposed modifications would not affect the environmental impact areas assessed in the EAS or result in any new significant adverse environmental impacts. ✷

APPENDIX A

FOR INTERNAL USE ONLY	WRP No. _____
Date Received: _____	DOS No. _____

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM
Consistency Assessment Form

Proposed actions that are subject to CEQR, ULURP or other local, state or federal discretionary review procedures, and that are within New York City's Coastal Zone, must be reviewed and assessed for their consistency with the *New York City Waterfront Revitalization Program (WRP)* which has been approved as part of the State's Coastal Management Program.

This form is intended to assist an applicant in certifying that the proposed activity is consistent with the WRP. It should be completed when the local, state, or federal application is prepared. The completed form and accompanying information will be used by the New York State Department of State, the New York City Department of City Planning, or other city or state agencies in their review of the applicant's certification of consistency.

A. APPLICANT INFORMATION

Name of Applicant: R.A. Real Estate, Inc. (d/b/a Red Apple Real Estate)

Name of Applicant Representative: c/o Nick Hockens, Greenberg Traurig, LLP

Address: 200 Park Avenue, New York, NY 10166

Telephone: 212-801-3088 Email: hockensn@gtlaw.com

Project site owner (if different than above): Red Apple Surf Realty I LLC; (incl. RASR II and RASR III)

B. PROPOSED ACTIVITY

If more space is needed, include as an attachment.

1. Brief description of activity

The applicant is seeking modifications to approved special permits, which would facilitate the construction of an 11-story residential building on Lot A and a 2-tower 21-story residential building on Lot B (plus mechanical penthouses) with street-level retail along Surf Avenue and accessory parking. In total, the development with the proposed modifications consists of: 509 dwelling units, 478 parking spaces, and 24,790 gsf of retail space along Surf Avenue.

2. Purpose of activity

The proposed modifications would allow the construction of the above-mentioned mixed-use development.

C. PROJECT LOCATION

Borough: Brooklyn Tax Block/Lot(s): Block 7065, Lots 6, 12, 15, 20, and 25

Street Address: 3502, 3514, 3612, and 3616 Surf Avenue; 3033 West 36th Street

Name of water body (if located on the waterfront): Lower New York Bay (Atlantic Ocean)

D. REQUIRED ACTIONS OR APPROVALS

Check all that apply.

City Actions/Approvals/Funding

City Planning Commission ☑ Yes ☐ No

- ☐ City Map Amendment
- ☐ Zoning Map Amendment
- ☐ Zoning Text Amendment
- ☐ Site Selection – Public Facility
- ☐ Housing Plan & Project
- ☑ Special Permit
  (if appropriate, specify type: ☑ Modification ☐ Renewal ☐ other) Expiration Date: _____
- ☐ Zoning Certification
- ☐ Zoning Authorizations
- ☐ Acquisition – Real Property
- ☐ Disposition – Real Property
- ☐ Other, explain: _____
- ☐ Concession
- ☐ UDAAP
- ☐ Revocable Consent
- ☐ Franchise

Board of Standards and Appeals ☐ Yes ☑ No

- ☐ Variance (use)
- ☐ Variance (bulk)
- ☐ Special Permit
  (if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____

Other City Approvals

- ☐ Legislation
- ☐ Rulemaking
- ☐ Construction of Public Facilities
- ☐ 384 (b) (4) Approval
- ☐ Other, explain: _____
- ☐ Funding for Construction, specify: _____
- ☐ Policy or Plan, specify: _____
- ☐ Funding of Program, specify: _____
- ☐ Permits, specify: _____

State Actions/Approvals/Funding

- ☐ State permit or license, specify Agency: _____ Permit type and number: _____
- ☐ Funding for Construction, specify: _____
- ☐ Funding of a Program, specify: _____
- ☐ Other, explain: _____

Federal Actions/Approvals/Funding

- ☐ Federal permit or license, specify Agency: _____ Permit type and number: _____
- ☐ Funding for Construction, specify: _____
- ☐ Funding of a Program, specify: _____
- ☐ Other, explain: _____

Is this being reviewed in conjunction with a Joint Application for Permits? ☐ Yes ☑ No

E. LOCATION QUESTIONS

1. Does the project require a waterfront site? ☐ Yes ☑ No
2. Would the action result in a physical alteration to a waterfront site, including land along the shoreline, land under water or coastal waters? ☑ Yes ☐ No
3. Is the project located on publicly owned land or receiving public assistance? ☐ Yes ☑ No
4. Is the project located within a FEMA 1% annual chance floodplain? *(6.2)* ☑ Yes ☐ No
5. Is the project located within a FEMA 0.2% annual chance floodplain? *(6.2)* ☑ Yes ☐ No
6. Is the project located adjacent to or within a special area designation? *See Maps – Part III of the NYC WRP. If so, check appropriate boxes below and evaluate policies noted in parentheses as part of WRP Policy Assessment (Section F).* ☐ Yes ☑ No

   ☐ Significant Maritime and Industrial Area (SMIA) (*2.1*)

   ☐ Special Natural Waterfront Area (SNWA) (*4.1*)

   ☐ Priority Martine Activity Zone (PMAZ) (*3.5*)

   ☐ Recognized Ecological Complex (REC) (*4.4*)

   ☐ West Shore Ecologically Sensitive Maritime and Industrial Area (ESMIA) (*2.2, 4.2*)

F. WRP POLICY ASSESSMENT

Review the project or action for consistency with the WRP policies. For each policy, check Promote, Hinder *or* Not Applicable (N/A). *For more information about consistency review process and determination, see* ***Part I*** *of the NYC Waterfront Revitalization Program. When assessing each policy, review the full policy language, including all sub-policies, contained within* ***Part II*** *of the WRP. The relevance of each applicable policy may vary depending upon the project type and where it is located (i.e. if it is located within one of the special area designations).*

For those policies checked Promote *or* Hinder, *provide a written statement on a separate page that assesses the effects of the proposed activity on the relevant policies or standards. If the project or action promotes a policy, explain how the action would be consistent with the goals of the policy. If it hinders a policy, consideration should be given toward any practical means of altering or modifying the project to eliminate the hindrance. Policies that would be advanced by the project should be balanced against those that would be hindered by the project. If reasonable modifications to eliminate the hindrance are not possible, consideration should be given as to whether the hindrance is of such a degree as to be substantial, and if so, those adverse effects should be mitigated to the extent practicable.*

		Promote	Hinder	N/A
1	**Support and facilitate commercial and residential redevelopment in areas well-suited to such development.**	☑	☐	☐
1.1	Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.	☑	☐	☐
1.2	Encourage non-industrial development with uses and design features that enliven the waterfront and attract the public.	☐	☐	☑
1.3	Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.	☐	☐	☑
1.4	In areas adjacent to SMIAs, ensure new residential development maximizes compatibility with existing adjacent maritime and industrial uses.	☐	☐	☑
1.5	Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2.	☑	☐	☐

		Promote	Hinder	N/A
2	**Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.**	☐	☐	☑
2.1	Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.	☐	☐	☐
2.2	Encourage a compatible relationship between working waterfront uses, upland development and natural resources within the Ecologically Sensitive Maritime and Industrial Area.	☐	☐	☐
2.3	Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas or Ecologically Sensitive Maritime Industrial Area.	☐	☐	☐
2.4	Provide infrastructure improvements necessary to support working waterfront uses.	☐	☐	☐
2.5	Incorporate consideration of climate change and sea level rise into the planning and design of waterfront industrial development and infrastructure, pursuant to WRP Policy 6.2.	☐	☐	☐
3	**Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation.**	☐	☐	☑
3.1.	Support and encourage in-water recreational activities in suitable locations.	☐	☐	☐
3.2	Support and encourage recreational, educational and commercial boating in New York City's maritime centers.	☐	☐	☐
3.3	Minimize conflicts between recreational boating and commercial ship operations.	☐	☐	☐
3.4	Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.	☐	☐	☐
3.5	In Priority Marine Activity Zones, support the ongoing maintenance of maritime infrastructure for water-dependent uses.	☐	☐	☐
4	**Protect and restore the quality and function of ecological systems within the New York City coastal area.**	☐	☐	☑
4.1	Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas.	☐	☐	☐
4.2	Protect and restore the ecological quality and component habitats and resources within the Ecologically Sensitive Maritime and Industrial Area.	☐	☐	☐
4.3	Protect designated Significant Coastal Fish and Wildlife Habitats.	☐	☐	☐
4.4	Identify, remediate and restore ecological functions within Recognized Ecological Complexes.	☐	☐	☐
4.5	Protect and restore tidal and freshwater wetlands.	☐	☐	☐
4.6	In addition to wetlands, seek opportunities to create a mosaic of habitats with high ecological value and function that provide environmental and societal benefits. Restoration should strive to incorporate multiple habitat characteristics to achieve the greatest ecological benefit at a single location.	☐	☐	☐
4.7	Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.	☐	☐	☐
4.8	Maintain and protect living aquatic resources.	☐	☐	☐

		Promote	Hinder	N/A
5	**Protect and improve water quality in the New York City coastal area.**	☑	☐	☐
5.1	Manage direct or indirect discharges to waterbodies.	☑	☐	☐
5.2	Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.	☑	☐	☐
5.3	Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.	☐	☐	☑
5.4	Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.	☐	☐	☑
5.5	Protect and improve water quality through cost-effective grey-infrastructure and in-water ecological strategies.	☐	☐	☑
6	**Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future conditions created by climate change.**	☑	☐	☐
6.1	Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.	☑	☐	☐
6.2	Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in *New York City Panel on Climate Change 2015 Report, Chapter 2: Sea Level Rise and Coastal Storms*) into the planning and design of projects in the city's Coastal Zone.	☑	☐	☐
6.3	Direct public funding for flood prevention or erosion control measures to those locations where the investment will yield significant public benefit.	☐	☐	☑
6.4	Protect and preserve non-renewable sources of sand for beach nourishment.	☐	☐	☑
7	**Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials, and industrial materials that may pose risks to the environment and public health and safety.**	☑	☐	☐
7.1	Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution and prevent degradation of coastal ecosystems.	☑	☐	☐
7.2	Prevent and remediate discharge of petroleum products.	☑	☐	☐
7.3	Transport solid waste and hazardous materials and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.	☐	☐	☑
8	**Provide public access to, from, and along New York City's coastal waters.**	☑	☐	☐
8.1	Preserve, protect, maintain, and enhance physical, visual and recreational access to the waterfront.	☑	☐	☐
8.2	Incorporate public access into new public and private development where compatible with proposed land use and coastal location.	☐	☐	☑
8.3	Provide visual access to the waterfront where physically practical.	☑	☐	☐
8.4	Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.	☐	☐	☑

		Promote	Hinder	N/A
8.5	Preserve the public interest in and use of lands and waters held in public trust by the State and City.	☐	☐	☑
8.6	Design waterfront public spaces to encourage the waterfront's identity and encourage stewardship.	☐	☐	☑
9	**Protect scenic resources that contribute to the visual quality of the New York City coastal area.**	☑	☐	☐
9.1	Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.	☑	☐	☐
9.2	Protect and enhance scenic values associated with natural resources.	☑	☐	☐
10	**Protect, preserve, and enhance resources significant to the historical, archaeological, architectural, and cultural legacy of the New York City coastal area.**	☐	☐	☑
10.1	Retain and preserve historic resources, and enhance resources significant to the coastal culture of New York City.	☐	☐	☐
10.2	Protect and preserve archaeological resources and artifacts.	☐	☐	☐

G. CERTIFICATION

The applicant or agent must certify that the proposed activity is consistent with New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program. If this certification cannot be made, the proposed activity shall not be undertaken. If this certification can be made, complete this Section.

"The proposed activity complies with New York State's approved Coastal Management Program as expressed in New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program, and will be conducted in a manner consistent with such program."

Applicant/Agent's Name: Red Apple Surf Realty II LLC & Red Apple Surf Realty III LLC

Address: 800 3rd Ave., New York, New York 10022

Telephone: 212-373-8490 Email: bzorn@ragny.com

Applicant/Agent's Signature: Robert A Zorn

Date: 2-9-2018

Submission Requirements

For all actions requiring City Planning Commission approval, materials should be submitted to the Department of City Planning.

For local actions not requiring City Planning Commission review, the applicant or agent shall submit materials to the Lead Agency responsible for environmental review. A copy should also be sent to the Department of City Planning.

For State actions or funding, the Lead Agency responsible for environmental review should transmit its WRP consistency assessment to the Department of City Planning.

For Federal direct actions, funding, or permits applications, including Joint Applicants for Permits, the applicant or agent shall also submit a copy of this completed form along with his/her application to the NYS Department of State Office of Planning and Development and other relevant state and federal agencies. A copy of the application should be provided to the NYC Department of City Planning.

The Department of City Planning is also available for consultation and advisement regarding WRP consistency procedural matters.

New York City Department of City Planning
Waterfront and Open Space Division
120 Broadway, 31st Floor
New York, New York 10271
212-720-3696
wrp@planning.nyc.gov
www.nyc.gov/wrp

New York State Department of State
Office of Planning and Development
Suite 1010
One Commerce Place, 99 Washington Avenue
Albany, New York 12231-0001
518-474-6000
www.dos.ny.gov/opd/programs/consistency

Applicant Checklist

- ☑ Copy of original signed NYC Consistency Assessment Form
- ☑ Attachment with consistency assessment statements for all relevant policies
- ☐ For Joint Applications for Permits, one (1) copy of the complete application package
- ☑ Environmental Review documents
- ☐ Drawings (plans, sections, elevations), surveys, photographs, maps, or other information or materials which would support the certification of consistency and are not included in other documents submitted. All drawings should be clearly labeled and at a scale that is legible.
- ☑ Policy 6.2 Flood Elevation worksheet, if applicable. For guidance on applicability, refer to the WRP Policy 6.2 Guidance document available at www.nyc.gov/wrp

NYC Waterfront Revitalization Program - Policy 6.2 Flood Elevation Workhsheet

COMPLETE INSTRUCTIONS ON HOW TO USE THIS WORKSHEET ARE PROVIDED IN THE "CLIMATE CHANGE ADAPTATION GUIDANCE" DOCUMENT AVAILABLE AT www.nyc.gov/wrp

Enter information about the project and site in highlighted cells in Tabs 1-3. HighTab 4 contains primary results. Tab 5, "Future Flood Level Projections" contains background computations. The remaining tabs contain additional results, to be used as relevant.Non-highlighted cells have been locked.

Background Information	
Project Name	Ocean Dreams Rezoning and Related Actions
Location	Coney Island, Brooklyn, New York City
Type(s)	☑ Residential, Commercial, Community Facility ☐ Parkland, Open Space, and Natural Areas ☐ Tidal Wetland Restoration ☐ Critical Infrastructure or Facility ☐ Industrial Uses ☐ Over-water Structures ☐ Shoreline Structures ☐ Transportation ☐ Wastewater Treatment/Drainage ☐ Coastal Protection
Description	Modification to existing Special Permits to allow for: modification of the approved massings of the buildings in accordance with applicable regulations for maximum base heights, minimum setbacks, and maximum building and penthouse heights; reduction of the size of the tower floor plate on Zoning Lot A from 7,800 to 6,996 gross square feet (gsf) and increase of the size of the tower floor plates on Zoning Lot B from 7,700 to 8,099 gsf; increase of the total number of dwelling units from 417 to 509; increase of the total number of off-street parking spaces from 418 to 478; and decrease the amount of floor area on Zoning Lot A and increase the amount of floor area on Zoning Lot B by 25,156 zsf.
Planned Completion date	2021

For technical assistance on using this worksheet, email wrp@planning.nyc.gov, using the message subject "Policy 6.2 Worksheet Error."

Last update: June 7, 2017

Establish current tidal and flood heights.

	FT (NAVD88)	Feet	Datum	Source
MHHW	2.41	**2.41**	**NAVD88**	*Datums for NOAA Sandy Hook Station 8531680*
1% flood height	11.00	**11.00**	**NAVD88**	*FEMA Prelim FIRM 3604970334G, 12/5/2013*
As relevant:				
0.2% flood height	-->		**NAVD88**	
MHW	2.08	2.08	**NAVD88**	*Datums for NOAA Sandy Hook Station 8531680*
MSL	-0.24	-0.24	**NAVD88**	*Datums for NOAA Sandy Hook Station 8531680*
MLLW	-2.82	-2.82	**NAVD88**	*Datums for NOAA Sandy Hook Station 8531680*

Data will be converted based on the following datums:

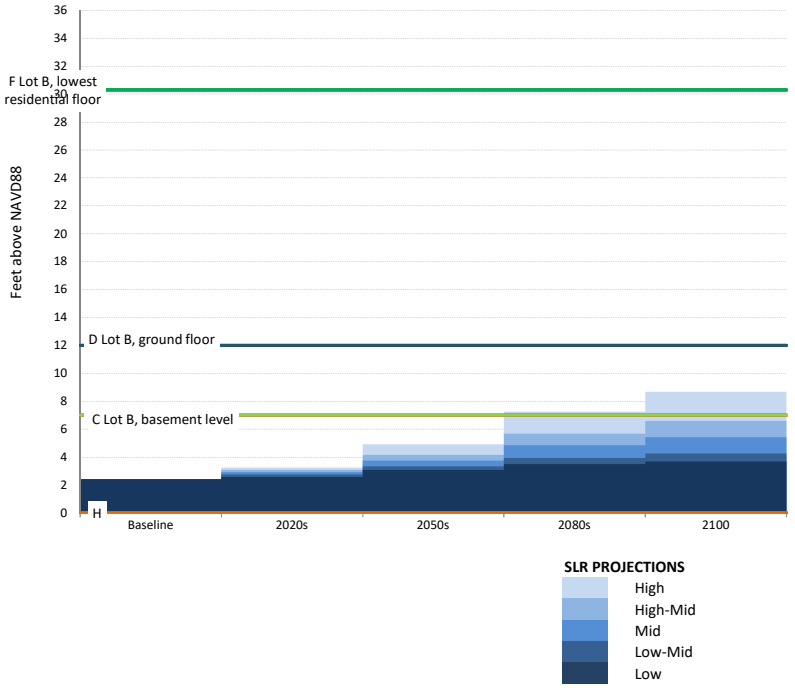
Datum	FT (NAVD88)
NAVD88	*0.00*
NGVD29	*-1.10*
Manhattan Datum	*1.65*
Bronx Datum	*1.51*
Brooklyn Datum (Sewer)	*0.61*
Brooklyn Datum (Highway)	*1.45*
Queens Datum	*1.63*
Richmond Datum	*2.09*
Station	
MLLW	

Describe key physical features of the project.

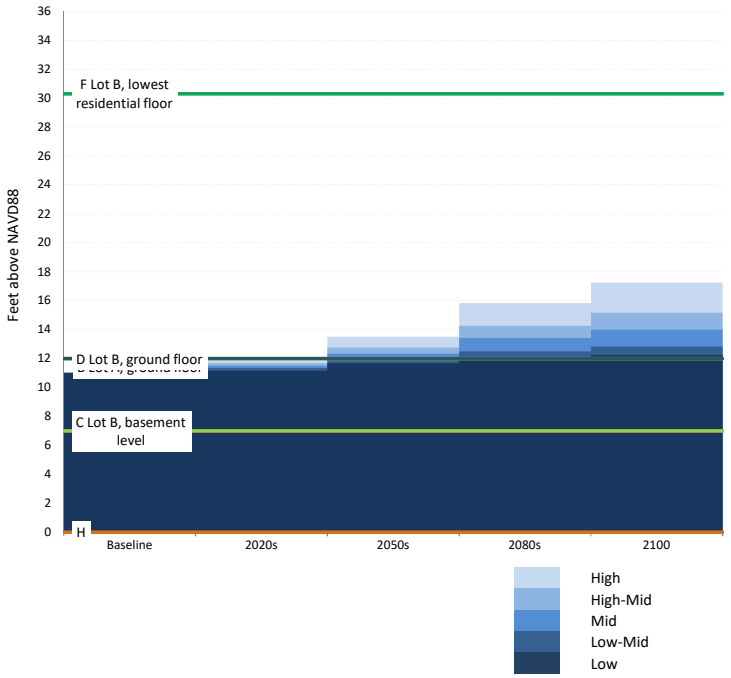
Feature *(enter name)*	Feature Category	Lifespan	Elevation	Units	Datum	Ft	Ft Above NAVD88	Ft Above MHHW	Ft Above 1% flood height	Ft Above 0.2% flood height
A Lot A, basement level	☐ Vulnerable ☐ Critical ☑ Potentially Hazardous ☐ Other	2100	7.0	Feet	NAVD88	*7.0*	*7.0*	*4.6*	*-4.0*	*#VALUE!*
Description of Planned Uses and Materials: Lower level containing parking spaces.										
B Lot A, ground floor	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	12.0	Feet	NAVD88	*12.0*	*12.0*	*9.6*	*1.0*	*#VALUE!*
Description of Planned Uses and Materials: Ground floor of a mixed use building containing residential and commercial/retail space. No residential units are located on the ground floor.										
C Lot B, basement level	☐ Vulnerable ☐ Critical ☑ Potentially Hazardous ☐ Other	2100	7.0	Feet	NAVD88	*7.0*	*7.0*	*4.6*	*-4.0*	*#VALUE!*
Description of Planned Uses and Materials: Lower level containing parking spaces and crawl space for storage.										
D Lot B, ground floor	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	12.0	Feet	NAVD88	*12.0*	*12.0*	*9.6*	*1.0*	*#VALUE!*
Description of Planned Uses and Materials: Ground floor of a mixed use building containing residential and commercial/retail space. No residential units are located on the ground floor.										
E Lot A, lowest residential floor	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	30.3	Feet	NAVD88	*30.3*	*30.3*	*27.9*	*19.3*	*#VALUE!*
Description of Planned Uses and Materials: Residential units										
F Lot B, lowest residential floor	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	30.3	Feet	NAVD88	*30.3*	*30.3*	*27.9*	*19.3*	*#VALUE!*
Description of Planned Uses and Materials: Residential units										
G	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88					
Description of Planned Uses and Materials										
H	☐ Vulnerable ☐ Critical ☑ Potentially Hazardous ☐ Other			Feet	NAVD88					
Description of Planned Uses and Materials										

Assess project vulnerability over a range of sea level rise projections.

Mean Higher High Water + Sea Level Rise



1% Flood Elevation + Sea Level Rise



	SLR (ft)					
	Low	**Low-Mid**	**Mid**	**High-Mid**	**High**	
Baseline	0.00	0.00	0.00	0.00	0.00	**2014**
2020s	0.17	0.33	0.50	0.67	0.83	**2020s**
2050s	0.67	0.92	1.33	1.75	2.50	**2050s**
2080s	1.08	1.50	2.42	3.25	4.83	**2080s**
2100	1.25	1.83	3.00	4.17	6.25	**2100**

	MHHW+SLR (ft above NAVD88)					
	Low	**Low-Mid**	**Mid**	**High-Mid**	**High**	
Baseline	2.41	2.41	2.41	2.41	2.41	**Baseline**
2020s	2.58	2.74	2.91	3.08	3.24	**2020s**
2050s	3.08	3.33	3.74	4.16	4.91	**2050s**
2080s	3.49	3.91	4.83	5.66	7.24	**2080s**
2100	3.66	4.24	5.41	6.58	8.66	**2100**

	1%+SLR (ft above NAVD88)					
	Low	**Low-Mid**	**Mid**	**High-Mid**	**High**	
Baseline	11.00	11.00	11.00	11.00	11.00	**Baseline**
2020s	11.17	11.33	11.50	11.67	11.83	**2020s**
2050s	11.67	11.92	12.33	12.75	13.50	**2050s**
2080s	12.08	12.50	13.42	14.25	15.83	**2080s**
2100	12.25	12.83	14.00	15.17	17.25	**2100**

	0.2%+SLR (ft above NAVD88)				
	Low	**Low-Mid**	**Mid**	**High-Mid**	**High**
Baseline	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2020s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2050s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2080s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2100	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!

	0	1
A Lot A, basement level	7	7
B Lot A, ground floor	12	12
C Lot B, basement level	7	7
D Lot B, ground floor	12	12
E Lot A, lowest residential floc	30.3	30.3
F Lot B, lowest residential floc	30.3	30.3
G	0	0
H	0	0

SLR (in)

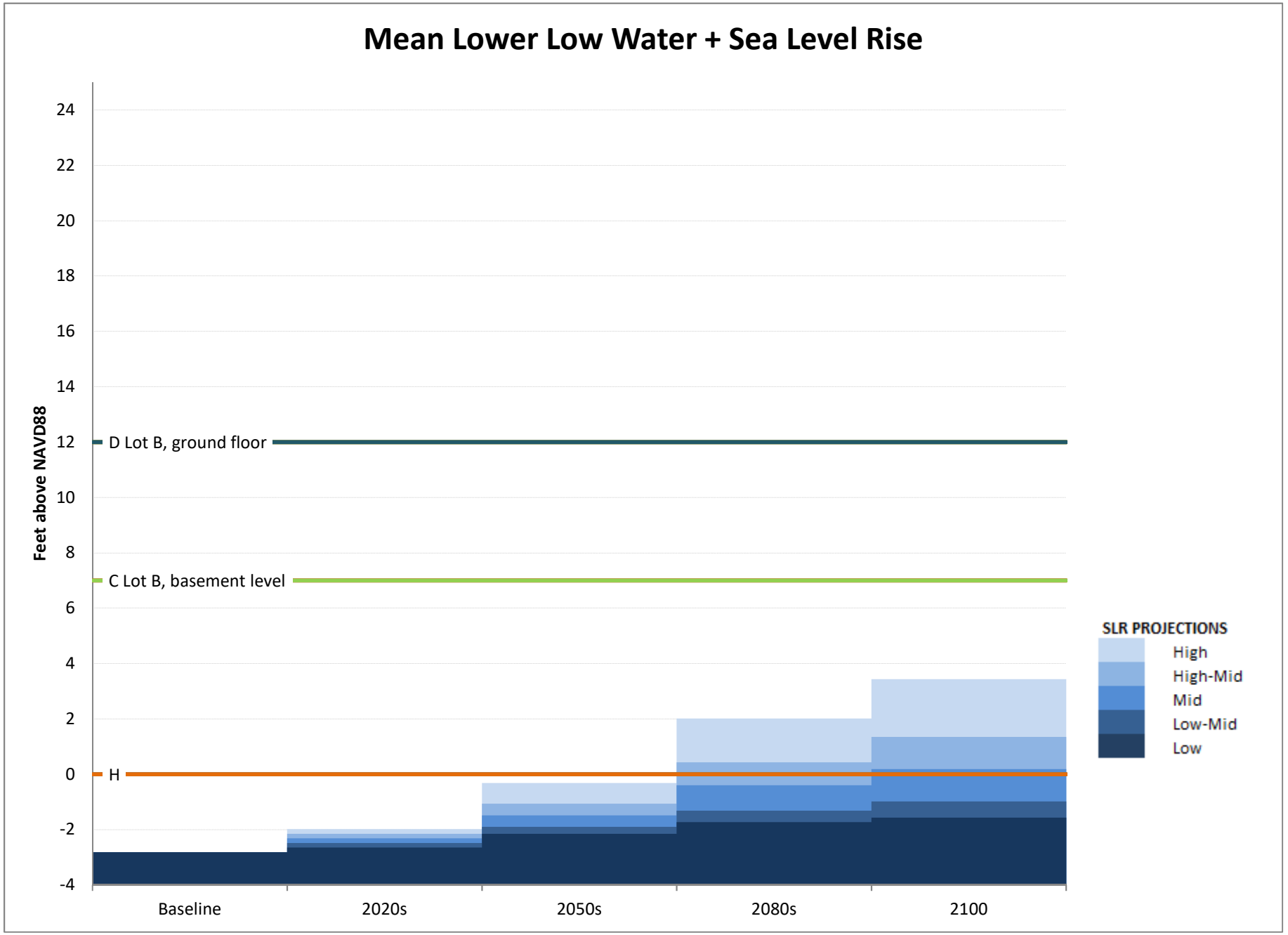
Low	Low-Mid	Mid	High-Mid	High
0	0	0	0	0
2	4	6	8	10
8	11	16	21	30
13	18	29	39	58
15	22	36	50	75

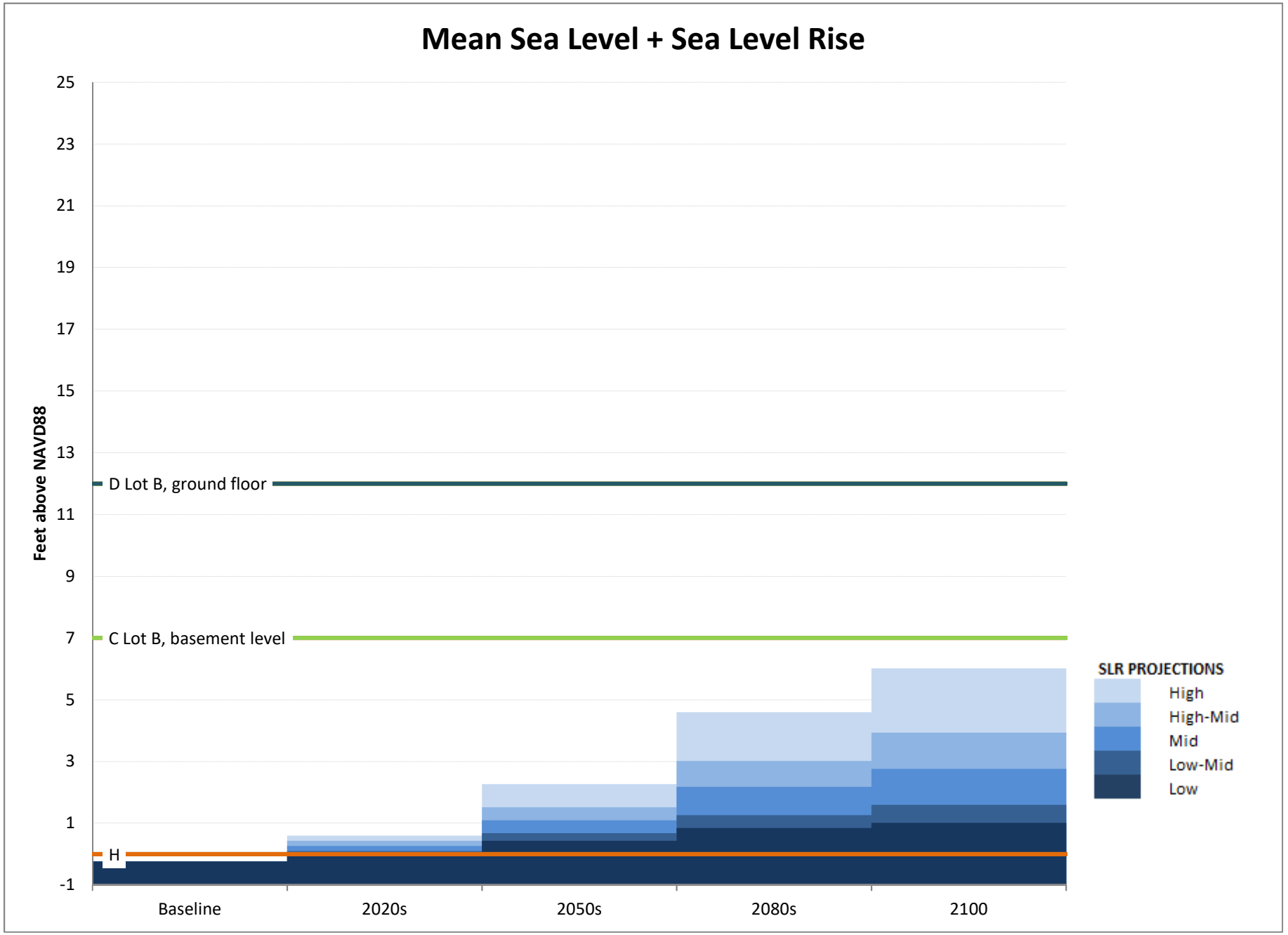
MLLW+SLR (ft above NAVD88)

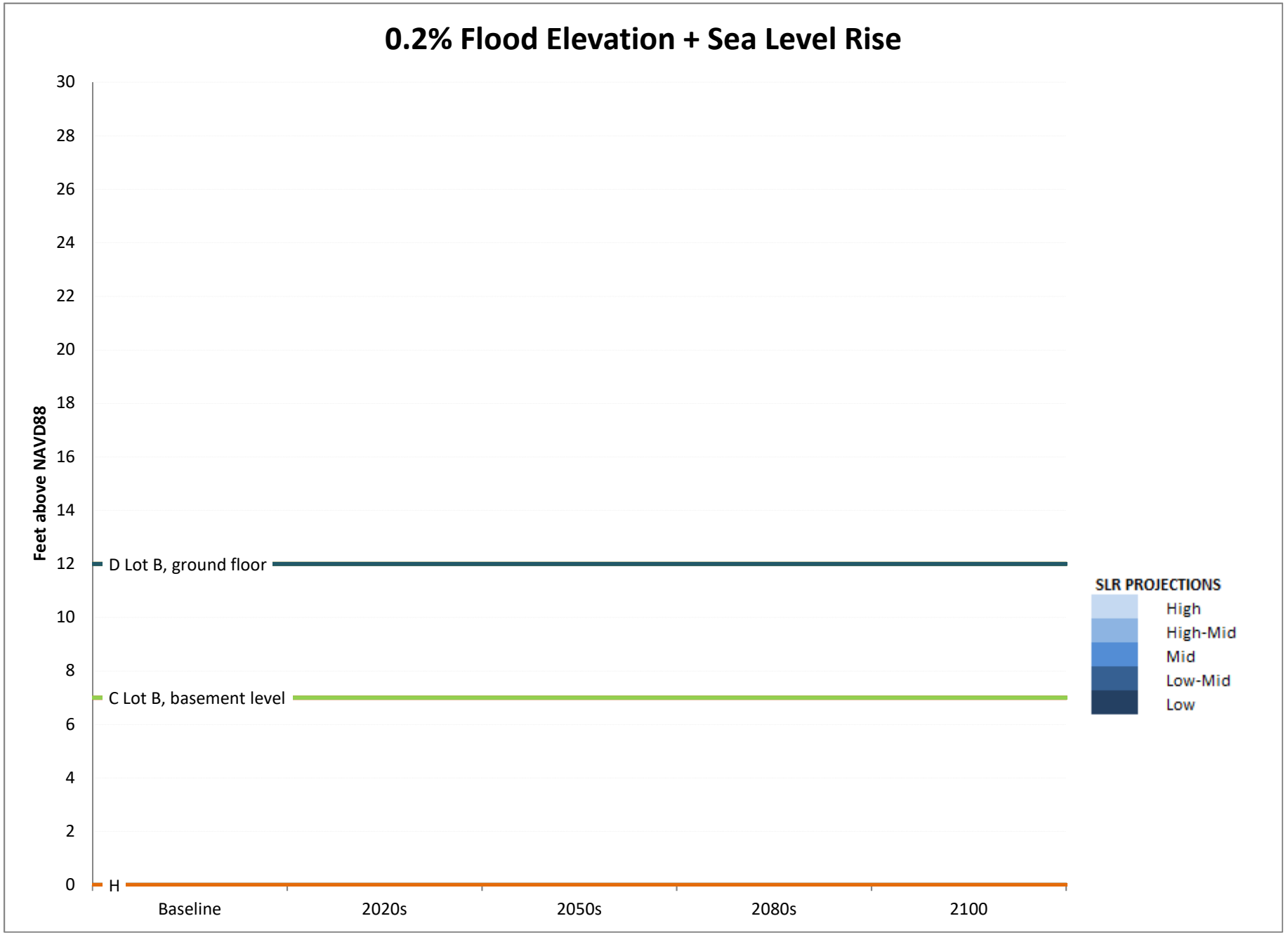
Low	Low-Mid	Mid	High-Mid	High
-2.82	-2.82	-2.82	-2.82	-2.82
-2.65	-2.49	-2.32	-2.15	-1.99
-2.15	-1.90	-1.49	-1.07	-0.32
-1.74	-1.32	-0.40	0.43	2.01
-1.57	-0.99	0.18	1.35	3.43

MSL+SLR (ft above NAVD88)

Low	Low-Mid	Mid	High-Mid	High
-0.24	-0.24	-0.24	-0.24	-0.24
-0.07	0.09	0.26	0.43	0.59
0.43	0.68	1.09	1.51	2.26
0.84	1.26	2.18	3.01	4.59
1.01	1.59	2.76	3.93	6.01


Mean Lower Low Water + Sea Level Rise
Feet above NAVD88
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
D Lot B, ground floor
C Lot B, basement level
H
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low


Mean Sea Level + Sea Level Rise
Feet above NAVD88
25
23
21
19
17
15
13
11
9
7
5
3
1
-1
D Lot B, ground floor
C Lot B, basement level
H
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low


0.2% Flood Elevation + Sea Level Rise
Feet above NAVD88
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
D Lot B, ground floor
C Lot B, basement level
H
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low