Zoning for Coastal Flood Resiliency
Chapter 2: Land Use, Zoning, & Public Policy

A. INTRODUCTION

Under 20201~~4~~ *City Environmental Quality Review* (CEQR) *Technical Manual* guidance, a land use analysis evaluates the uses and development trends in the area that may be affected by a proposed action and determines whether the proposed action is compatible with those conditions or may affect them. Similarly, the analysis considers a proposed action's compliance with, and effect on, the area's zoning and other applicable public policies.

As detailed in **Chapter 1, "Project Description,"** the New York City Department of City Planning (DCP) is proposing a zoning text amendment to update the Special Regulations Applying in Flood Hazard Areas (Article VI, Chapter 4) of the New York City Zoning Resolution (ZR), which includes the "Flood Resilience Zoning Text" (the "2013 Flood Text") and "Special Regulations for Neighborhood Recovery" (the "2015 Recovery Text"). These temporary zoning rules were adopted on an emergency basis to remove zoning barriers that were hindering the reconstruction and retrofitting of buildings affected by Hurricane Sandy and to help ensure that new construction there would be more resilient. The 2013 Flood Text provisions are set to expire with the adoption of new and final Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs), which is anticipated to occur within the next few years. Applicability of the 2015 Recovery Text expired in July 2020. Therefore, DCP is proposing a citywide zoning text amendment, "Zoning for Coastal Flood Resiliency" (the "Proposed Action"), to improve upon and make permanent the relevant provisions of the existing temporary zoning rules of the 2013 Flood Text and 2015 Recovery Text. In addition, the Proposed Action includes special provisions to help facilitate the city's long-term recovery from the COVID-19 pandemic and its associated economic effects by providing more time for existing non-conforming uses to reopen and builders to undertake certain construction projects. The Proposed Action also includes updates to other sections of the ZR, including the Special Regulations Applying in the Waterfront Area (Article VI, Chapter 2) and provisions within various Special Purpose Districts. The Proposed Action would mostly affect New York City's current 1% annual and 0.2% annual chance floodplains. However, select provisions of the Proposed Action would be applicable citywide. To help the City prepare for or respond to other disasters, select provisions in the Proposed Action regarding power systems and other mechanical equipment, ramps and lifts, vulnerable populations, and disaster recovery rules, would be applicable citywide.

Due to the broad applicability of the Proposed Action, it is difficult to predict the sites where development would be facilitated. In addition, the Proposed Action is not in-and-of-itself expected to induce development where it would not otherwise have occurred absent the Proposed Action. Although the Proposed Action may allow developments and existing buildings to retrofit to resilient standards, the overall amount, type, and location of construction within the affected area is not anticipated to change. Owing to the generic nature of this action, there are no known or projected as-of-right development sites identified as part of the Proposed Action's Reasonable Worst-Case Development Scenario (RWCDS). To produce a reasonable analysis of the likely effects of the Proposed Action, 14 representative Prototypical Analysis Sites containing either new developments, infill, reconstructions, or retrofits of existing buildings in the city's 1% and 0.2% annual chance floodplains were identified to demonstrate the wide range of proposed regulations for sites that would be able to develop as-of-right in the future with the Proposed Action, as detailed further in **Chapter 1**.

B. PRINCIPAL CONCLUSIONS

No significant adverse impacts on land use, zoning, or public policy would occur in the future with the Proposed Action. The Proposed Action would not directly displace any land uses, nor would it generate land uses that would be incompatible with existing land uses, zoning, or public policy in the city's floodplains. The Proposed Action would not result in land uses or structures that would be substantially incompatible with the underlying zoning or conflict with public policies applicable to the city's floodplains. The Proposed Action would include a zoning text amendment to update the Special Regulations Applying in Flood Hazard Areas (ZR Article VI, Chapter 4) to provide homeowners, business owners, and practitioners living and working in the city's floodplains the option to design or otherwise retrofit buildings to: (a) reduce damage from future coastal flood events, (b) be resilient in the long-term by accounting for climate change, and (c) potentially save on long-term flood insurance costs. In addition, it would allow resiliency improvements to be more easily incorporated on waterfront sites at the water's edge and in public spaces, as well as provide zoning regulations to help facilitate the city's long-term recovery from the COVID-19 pandemic and other future disasters. The Proposed Action also includes updates to other sections of the ZR, including the Special Regulations Applying in the Waterfront Area (Article VI, Chapter 2) and provisions within various Special Purpose Districts. Overall, implementation of the Proposed Action would improve the ability of the city to withstand and recover quickly from future storms and other disaster events. The Proposed Action would not result in significant adverse impacts to zoning in the city's floodplains, but rather, would provide enhanced zoning allowances and design requirements in order to help building owners to better accommodate projected sea level rise when designing new buildings or retrofitting existing ones, without creating incongruous and uninviting streetscapes.

Additionally, as detailed below, given the health consequences and logistical challenges of evacuating nursing home residents, the Proposed Action would limit the development of new nursing homes and restrict the enlargement of existing facilities within the 1% annual chance floodplain and selected geographies with limited vehicular access after a storm (illustrated in **Appendix C**). Nevertheless, this action is not expected to substantially alter land use trends in these areas. Existing nursing homes in the specified geographies would not be displaced as a result of the Proposed Action, and nursing homes would continue to be permitted in all other areas of the city under With-Action conditions. As such, no significant adverse impacts to land use would occur.

Moreover, the Proposed Action would not hinder any New York City Waterfront Revitalization Program (WRP) policies, but rather, is anticipated to promote a number of the city's WRP policies. As detailed in the WRP Consistency Assessment Form (CAF) provided in **Appendix D** and discussed below, the Proposed Action would support and facilitate commercial and residential redevelopment in areas well-suited to such development (WRP Policy 1); incorporate consideration of climate change and sea level rise into the planning and design of waterfront industrial development and infrastructure (Policy 2.5); 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); preserve, protect, maintain, and enhance physical, visual, and recreational access to the waterfront (Policy 8.1); and protect and improve visual quality associated with New York City's urban context and the historic and working waterfront (Policy 9.1).

C. METHODOLOGY

The purpose of this chapter is to examine the effects of the Proposed Action on land use, zoning, and public policy and determine whether or not it would result in any significant adverse impacts. As described in **Chapter 1, "Project Description,"** consistent with 2020~~14~~ *CEQR Technical Manual* guidance, the Proposed Action is analyzed as a "generic action" because no known developments are projected at this time. Per CEQR, generic actions are programs and plans that have wide application or affect a range of

future alternative policies. Usually these actions effect the entire city or an area so large that site-specific description or analysis is not appropriate. To produce a reasonable analysis of likely effects of the Proposed Action, the following assessment of land use, zoning, and public policy presents existing, No-Action, and With-Action scenarios, including a general description of the zoning framework and land area potentially affected.

The 202014 *CEQR Technical Manual* also notes that for some actions, where the build-out depends on market conditions and other variables, the build year cannot be determined with precision. In these cases, a 10-year build year is generally considered reasonable because it captures a typical cycle of market conditions and generally represents the outer timeframe within which predictions of future development may usually be made without speculation. Therefore, an analysis year of 2029 has been identified for this environmental review.

Per CEQR guidance, a preliminary assessment, which includes a basic description of existing and future land uses and zoning, should be provided for all projects that would affect land use or would change the zoning on a site, regardless of the project's anticipated effects. The Proposed Action exceeds preliminary assessment thresholds outlined in the *CEQR Technical Manual*. Because the Proposed Action is an area-wide zoning text amendment, detailed land use and zoning assessments are warranted. A detailed public policy analysis was also prepared to determine the potential of the Proposed Action to alter or conflict with applicable public policies.

Study Areas

As detailed in **Chapter 1, "Project Description,"** the Proposed Action would be applicable to all lots located wholly or partially within the city's current 1% and 0.2% annual chance floodplains. Additionally, to help the City prepare for or respond to other disasters, select provisions in the Proposed Action would be applicable to all lots in the city. However, for purposes of this land use and zoning analysis, the current 1% and 0.2% annual chance floodplains will be analyzed as the study areas for the Proposed Action. The 1% and 0.2% annual chance floodplains are illustrated in **Figure 1-1** in **Chapter 1**.

As discussed above, the Proposed Action is analyzed in this environmental review as a generic action. Because the Proposed Action would affect thousands of properties across numerous zoning districts and special districts, the possible effects of the Proposed Action are considered by means of prototypical analysis. Prototypical Analysis Sites are not necessarily representative of a specific lot, but rather reflect prevalent conditions and recent development trends as a basis for analysis. To produce a reasonable analysis of the likely effects of the Proposed Action, 14 representative Prototypical Analysis Sites were identified, as detailed in **Chapter 1**.

Sources

In accordance with the 202014 *CEQR Technical Manual*, the detailed analysis describes existing and anticipated future (i.e., No-Action) conditions to a level necessary to understand the relationship of the Proposed Action to such conditions. The detailed analysis assesses any changes to these conditions that could be created by the Proposed Action in the 2029 analysis year. Existing land uses were identified through review of a combination of sources including field surveys and secondary sources, comprising the City's 2018 Primary Land Use Tax Lot Output (PLUTO™) data files, online Geographic Information Systems (GIS) databases such as the New York City Open Accessible Space Information System (OASIS, http://www.oasisnyc.net), and NYCityMap (http://gis.nyc.gov/doitt/nycitymap). Other publications and approved environmental review documents that have been completed for projects in the area were also consulted, many of which are discussed in the "Public Policy" section, below. New York City Zoning Maps and the Zoning Resolution of the City of New York (ZR) were consulted to describe existing zoning districts

and provided the basis for the zoning evaluation of the future No-Action and With-Action conditions. Applicable public policies were identified, and a public policy analysis was prepared to determine the potential for the Proposed Action to alter or conflict with applicable public policies.

D. DETAILED ASSESSMENT

Existing Conditions

Land Use

1% Annual Chance Floodplain

As shown in **Figure 2-1** and detailed in **Table 2-1** below, the vast majority of lots in the current 1% annual chance floodplain are residential (approximately 74 percent of total lots). One- and two-family buildings comprise the largest percentage of total lots (65 percent), followed by multi-family walkup buildings (seven percent) and multi-family elevator buildings (two percent). However, residential uses only comprise a total of seven percent of total lot area and nine percent of total building area in the 1% annual chance floodplain (refer to **Table 2-1**). This is likely due to a significant number of smaller dwellings on small lots throughout the 1% annual chance floodplain.

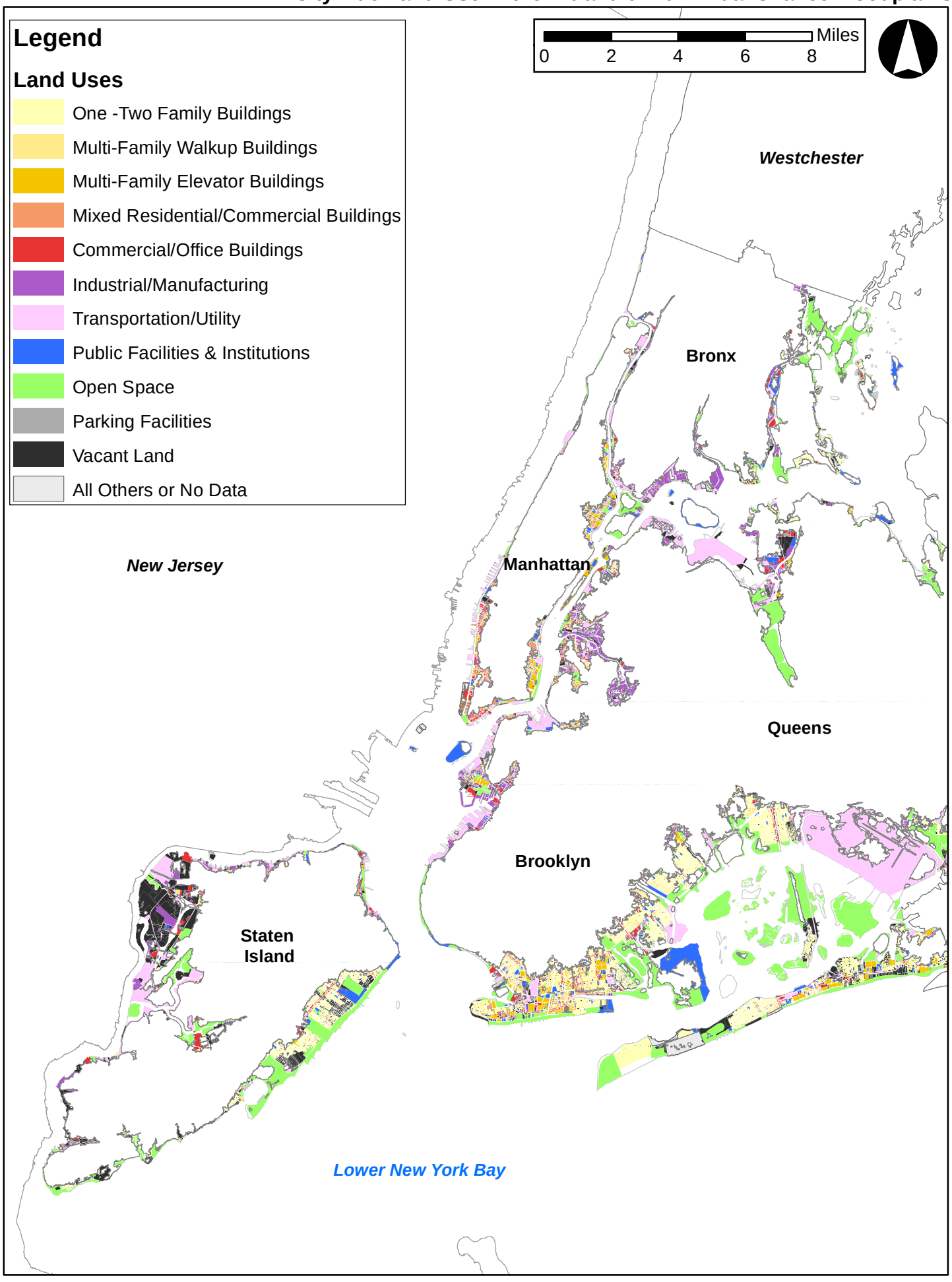
Table 2-1: Existing Land Uses within the 1% Annual Chance Floodplain

Land Use	No. of Lots	Percentage of Total Lots	Lot Area (sf)	Percentage of Total Lot Area	Building Area (sf)	Percentage of Total Building Area
Residential	49,328	74%	289,234,962	7%	174,568,659	9%
One- & Two-Family Buildings	*43,145*	*65%*	*197,288,222*	*5%*	*85,650,991*	*3%*
Multi-Family Walkup Buildings	*4,707*	*7%*	*31,417,970*	*1%*	*30,126,830*	*1%*
Multi-Family Elevator Buildings	*1,476*	*2%*	*60,528,770*	*2%*	*135,876,738*	*5%*
Mixed Commercial/Residential Buildings	2,138	3%	27,293,188	1%	105,761,760	4%
Commercial/Office Buildings	1,648	2%	64,005,168	2%	107,960,455	4%
Industrial/Manufacturing	1,493	2%	129,730,255	3%	64,729,676	3%
Transportation/Utility	1,287	2%	799,062,905	20%	103,728,854	4%
Public Facilities & Institutions	795	1%	329,680,945	8%	124,956,710	5%
Open Space	1,229	2%	1,794,326,276	45%	1,794,326,276	70%
Parking Facilities	1,179	2%	23,557,805	1%	6,102,279	< 1%
Vacant Land	7,298	11%	508,372,172	13%	42,708	< 1%
TOTALS:	**66,395**	**100%**	**3,965,263,678**	**100%**	**2,559,263,278**	**100%**

Source: 2018 PLUTO.
Note: Refer to **Figure 2-1**.

Vacant land comprises the second largest number of lots in the 1% annual chance floodplain (approximately 11 percent of total lots), and is the third largest percentage of total lot area (13 percent).

Citywide Land Use in the 1% and 0.2% Annual Chance Floodplains



The largest amount of lot area in the 1% annual chance floodplain is occupied by open space (approximately 45 percent of total lot area), followed by transportation/utility uses (approximately 20 percent). Open space resources also comprise the largest percentage of total building area in the 1% annual chance floodplain (approximately 70 percent of total built area) as detailed in **Table 2-1**.

0.2% Annual Chance Floodplain

As shown in **Figure 2-1** and detailed in **Table 2-2** below, the vast majority of lots in the current 0.2% annual chance floodplain are residential (approximately 78 percent of total lots). One- and two-family buildings comprised the largest percentage of total lots (65 percent), although, similar to the 1% annual chance floodplain, these buildings only comprise four percent of total lot area and eight percent of total building area in the 0.2% annual chance floodplain, likely due to a large number of smaller dwellings on small lots.

As shown in **Table 2-1**, approximately 23 percent of total built area in the 0.2% annual chance floodplain consists of multi-family elevator buildings, which comprise only two percent of total lots and three percent of total lot area in the 0.2% annual chance floodplain. This is likely due to an abundance of large residential campuses located on single tax lots in the 0.2% annual chance floodplain, a contrast to the 1% annual chance floodplain detailed above.

Table 2-2: Existing Land Uses within the 0.2% Annual Chance Floodplain

Land Use	No. of Lots	Percentage of Total Lots	Lot Area (sf)	Percentage of Total Lot Area	Building Area (sf)	Percentage of Total Building Area
Residential	26,397	78%	152,543,151	8%	192,392,452	35%
One- & Two-Family Buildings	*21,938*	*65%*	*76,917,110*	*4%*	*42,174,369*	*8%*
Multi-Family Walkup Buildings	*3,803*	*11%*	*21,144,967*	*1%*	*24,329,154*	*4%*
Multi-Family Elevator Buildings	*656*	*2%*	*54,481,074*	*3%*	*125,888,929*	*23%*
Mixed Commercial/Residential Buildings	1,567	5%	20,778,024	1%	86,143,098	15%
Commercial/Office Buildings	928	3%	43,032,816	2%	82,638,479	15%
Industrial/Manufacturing	1,147	3%	70,366,040	4%	43,523,019	8%
Transportation/Utility	518	2%	408,408,960	21%	40,586,800	7%
Public Facilities & Institutions	505	1%	181,095,583	9%	80,557,282	14%
Open Space	421	1%	916,599,173	47%	25,193,386	5%
Parking Facilities	548	2%	17,290,493	1%	6,535,737	1%
Vacant Land	1,759	5%	145,781,196	7%	27,130	< 1%
TOTALS:	**33,790**	**100%**	**1,955,895,436**	**100%**	**557,597,383**	**100%**

Source: 2018 PLUTO.
Note: Refer to **Figure 2-1**.

Like the 1% annual chance floodplain, the largest amount of lot area in the 0.2% annual chance floodplain is occupied by open space (approximately 47 percent of total lot area), followed by transportation/utility uses (approximately 21 percent). However, in the 0.2% annual chance floodplain, mixed commercial/residential buildings and commercial/office buildings each comprise approximately 15 percent of total built area, as detailed in **Table 2-2**, followed by public facilities and institutions which comprise 14 percent of total building area in the 0.2% annual chance floodplain.

Prototypical Analysis Sites

Chapter 1, "Project Description," detailed the methodology used to develop the 14 Prototypical Analysis Sites for the Proposed Action. A summary of the Prototypical Analysis Sites is provided below in **Table 2-3**, and illustrative renderings are provided in **Appendix A**. As detailed in **Chapter 1**, these sites are not intended to represent specific lots, but rather to illustrate how the Proposed Action would apply to a range of sites and conditions. As detailed therein, the Prototypical Analysis Sites are assumed to be spread throughout the 1% and 0.2% annual chance floodplains.

As detailed in **Table 2-3**, six of the Prototypical Analysis Sites (Nos. 2, 5, 7, 9, 11, and 14) are undeveloped, vacant land. Five sites (Nos. 1, 3, 4, 12, and 13) are developed with low-rise, low-density, one- to three-family residential buildings. Prototypical Analysis Site 6 contains an eight-story residential building with 320 DUs and an FAR of 2.4, and Prototypical Analysis Site 8 contains a seven-story residential building (4.0 FAR) with 13 DUs and ground-floor commercial space. These sites are located in a variety of residential zoning districts, ranging from low-density R3-1, R3A, R3X, R4, and R5 Districts to medium- and higher-density R6, R7A, and R8 Districts, some with commercial overlays. Most of these sites occupy interior lots of 12,000 square feet or less, except for Prototypical Analysis Site 14, which is a 50,000-sf waterfront lot, and Prototypical Analysis Site 6, which occupies a lot of 100,000 sf. Additionally, as detailed in **Table 2-3**, Prototypical Analysis Site 10 is a one-story industrial building with an FAR of 1.0. Site 10 is located on a 10,000 sf lot in an M1-1 manufacturing zoning district. As shown in **Table 2-3**, the existing structures on Prototypical Analysis Sites 12 and 13 are both non-compliant; the use on Site 13 is also non-conforming to existing zoning regulations.

Table 2-3: Prototypical Analysis Sites – Existing Conditions

Site	Zoning District	Lot Area (SF)	Existing Building Typology	Existing Use/Condition	Existing FAR
1	R3-1	4,000	Single-family detached residence	Two-story + cellar residential building w/ one DU (2,900 gsf / 1,800 zsf)	0.45
2	R3-1	2,500	*Vacant Lot*	*Vacant Lot*	*0*
3	R4	2,000	Two-family attached residence	Two-story + basement residential building w/ two DUs (2,835 gsf / 2,700 zsf)	1.35
4	R5	2,500	Low-rise multi-family building	Three-story + basement residential building w/ three DUs (5,500 gsf / 4,125 zsf)	1.65
5	R7A	11,500	*Vacant Lot*	*Vacant Lot*	*0*
6	R6	100,000	Campus-style housing	Eight-story residential building w/ 320 DUs (270,000 gsf / 240,000 zsf)	2.4
7	R5 / C1-2	12,000	*Vacant Lot*	*Vacant Lot*	*0*
8	R7A / C1-2	2,500	High-rise mixed-use building	Seven-story mixed residential/commercial building w/ 13 DUs (10,800 gsf /10,000 zsf)	4.0
9	R3-1 / C1-2	10,000	*Vacant Lot*	*Vacant Lot*	*0*
10	M1-1	10,000	Industrial building	One-story industrial building (11,500 gsf / 10,000 zsf)	1.0
11	R4	2,500	*Vacant Lot*	*Vacant Lot*	*0*
12	R3A	2,500	Single-family detached residence (non-compliant)	One-story + cellar residential building w/ one DU (2,204 gsf / 1,052 zsf)	0.42
13	R3X	2,000	Two-family detached (non-conforming / non-compliant)	Two-story + cellar residential building w/ two DUs (2,100 gsf / 1,370 zsf)	0.49
14	R8 / C2-4	50,000	*Vacant Lot*	*Vacant Waterfront Site*	*0*

Note: Refer to **Appendix A** for illustrative renderings of the Prototypical Analysis Sites.
*Site 14 illustrates the proposed modifications specific to waterfront regulations for open space. See **Appendix A** for more details.

Zoning

Low-Density Residential Districts (R1 – R5)

Low-density communities occupy the largest portion of the city's floodplains, with about three quarters of all lots (approximately 78,100 buildings) located in low-density residential zoning districts (R1 through R5). These areas include bungalow communities and areas with larger detached homes, but also several neighborhoods with a prevalence of semi-detached buildings, attached structures, and small multi-family buildings. R1 and R2 Districts permit a maximum FAR of 0.50 and maximum building heights pursuant to a sky exposure plane that begins at 25 feet, whereas R5 Districts permit a maximum FAR of 1.25 and a maximum building height of 40 feet.

Low-density Residence Districts have the most vulnerable building stock in the city's floodplains, with smaller and lighter structures that are susceptible to flood damage. Additionally, most low-density neighborhoods in the floodplains are located within low-lying areas, with base flood elevations (BFEs) sometimes exceeding 10 feet above grade level. Therefore, they are more likely to be substantially damaged by a future storm, and be required to comply with flood-resistant construction standards when rebuilt. Due to lower building market values when compared to large multi-family buildings, homes in low-density residential districts are more likely to trigger substantial improvement even when conducting an enlargement or alteration work, requiring homeowners to comply with flood-resistant construction standards. While compliance with these standards is difficult and expensive, fortunately these structures, especially detached homes, are easier to retrofit when comparing with large buildings since they can be physically elevated.

Medium- & High-Density Residential Districts (R6 – R10)

Medium- and high-density communities occupy a small percentage of the city's floodplains, with less than one-tenth of all lots (approximately 7,300 buildings) located in medium- and high-density residential zoning districts (R6 though R10). These areas include a high concentration of multi-family structures, such as mid-rise apartment buildings served by elevators, as well as walk-up structures, and areas with large residential campuses. Despite the fact that there are fewer buildings located within medium- and high-density neighborhoods when compared to low-density communities, almost half of all residential units in the floodplains are located within these areas. R6 Districts permit a maximum FAR of 2.43 and maximum building heights pursuant to a sky exposure plane that begins at 60 feet, whereas R10 Districts permit a maximum FAR of 12.0 when utilizing the Inclusionary Housing Bonus, without height restrictions for towers-on-a-base.

Flood risk varies across medium- and high-density residential communities with flood elevations ranging from low (up to three feet above grade) to moderate (between three and six feet above grade). Buildings in these areas are not as vulnerable as single- and two-family homes, as they are typically larger and better able to structurally withstand flood waters. Therefore, buildings in medium- and high-density residential districts are less likely to experience substantial damage in the event of flooding. Additionally, because of their higher market value as compared to smaller homes, these structures are also less likely to trigger substantial improvement and be required to comply with flood-resistant construction standards. However, residential units and mechanical equipment often found located below flood elevations in these buildings are highly vulnerable to flooding.

Commercial Districts (C1 – C7)

Although most lots located within the city's floodplains are occupied by residential uses, approximately one-tenth of lots (approximately 12,410 buildings) are zoned for commercial uses (C1 through C7). Most of these commercial zones play an important role in providing retail and services to local residents, and include a wide range of building types, from single-story retail stores to mixed-use developments and office buildings.

C1 and C2 Districts permit a maximum FAR of 2.0, whereas C6 Districts permit a maximum FAR of up to 10.0.

The flood risk varies across these commercial areas with BFEs ranging from low (up to three feet above grade) to high (above six feet above grade). However, in general, owners of small buildings are more vulnerable to flooding and more likely to trigger substantial damage, when compared to those with larger structures. Additionally, depending on the building's market value and the nature of the alteration work filed with the New York City Department of Buildings (DOB), these smaller structures are more likely to trigger substantial improvement, which would mean that the buildings must be either elevated or dry-floodproofed. In contrast, property owners of larger mixed-use structures or office buildings are generally less likely to trigger substantial improvement when filling for building permits with the DOB. Therefore, alteration work is less likely to include resiliency investments that lead to buildings that will fully meet flood-resistant construction standards. Instead, building owners may opt to undertake only partial resiliency improvements, such as the relocation of important equipment or the installment of flood panel systems in advance of a future storm.

Heavy Commercial & Industrial Districts (C8 and M1 – M3)

A large portion of New York City's industrial neighborhoods were historically built on the shorefront because of shipping needs. Therefore, roughly half of the city's industrially zoned land falls within the city's floodplains. The flood risk in these areas varies, with BFEs ranging from low (up to three feet above grade) to high (above six feet above grade). Approximately one-tenth of the lots in the floodplain are located in districts zoned for manufacturing and heavy commercial uses (C8, M1, M2, and M3). These areas contain about 7,960 buildings, most of which are single-story structures. They include warehouses and factory buildings, as well as open uses such as construction material distributors, automobile dismantlers, or maritime facilities. C8 Districts permit a maximum FAR of 5.0, whereas M1 Districts permit up to 10.0 FAR.

Since most industrial businesses have large footprints and are located in single-story buildings, their entire operations are located on the ground floor, and are therefore highly vulnerable to flooding. The industrial parts of the city have seen even less resiliency improvements at the building scale when compared to other neighborhood types because the buildings found here are large and owners rarely undertake major renovations or improvements. Like commercial corridors, the resiliency work is currently limited to small improvements, such as the relocation of important equipment or the installation of flood panels and emergency egress for future storm events. In the future, while it is unlikely that buildings in industrial areas would be able to conduct major alterations to comply with flood-resistant construction standards, building owners may opt to invest in small improvements. However, some of this work is currently limited by existing zoning rules. For example, existing businesses located in light manufacturing districts, which have a low maximum floor area allowance, may not have enough zoning floor area available to relocate essential equipment and office spaces to upper stories and mezzanines situated above the flood elevation. Consequently, these areas will be continually exposed to future flood risks.

Aside from industrial businesses, these areas zoned for manufacturing and heavy commercial uses also contain approximately 800 homes and small apartment buildings that are not conforming with the district's use regulations, since residential uses are not permitted here. As a result, under the current zoning rules, these homes, which are generally clustered together, may not be able to proactively retrofit to resiliency standards or be able to be reconstructed if damaged by a future storm. Without any paths to resiliency improvements, these pockets of residential communities will be exceptionally vulnerable to forthcoming storms.

Public Policy

Waterfront Revitalization Program

Projects that are located within the designated boundaries of New York City's Coastal Zone must be assessed for their consistency with the City's Waterfront Revitalization Program (WRP). The federal Coastal Zone Management Act (CZMA) of 1972 was enacted to support and protect the distinctive character of the waterfront and to set forth standard policies for reviewing proposed development projects along coastlines. The program responded to City, State, and Federal concerns about the deterioration and inappropriate use of the waterfront. In accordance with the CZMA, New York State adopted its own Coastal Management Program (CMP), which provides for local implementation when a municipality adopts a local waterfront revitalization program, as is the case in New York City. The New York City WRP is the City's principal coastal zone management tool. The WRP was originally adopted in 1982 and approved by the New York State Department of State (NYSDOS) for inclusion in the New York State CMP. The WRP encourages coordination among all levels of government to promote sound waterfront planning and requires consideration of the program's goals in making land use decisions. NYSDOS administers the program at the State level, and the New York City Department of City Planning (NYCDCP) administers it in the city. The WRP was revised and approved by the City Council in October 1999. In August 2002, NYSDOS and federal authorities (i.e., the U.S. Army Corps of Engineers [USACE] and the U.S. Fish and Wildlife Service [USFWS]) adopted the city's ten WRP policies for most of the properties located within its boundaries.

In October 2013, the City Council approved revisions to the WRP in order to proactively advance the long-term goals laid out in *Vision 2020: The New York City Comprehensive Waterfront Plan*, released in 2011. The changes solidify New York City's leadership in the area of sustainability and climate resilience planning as one of the first major cities in the U.S. to incorporate climate change considerations into its Coastal Zone Management Program. They also promote a range of ecological objectives and strategies, facilitate interagency review of permitting to preserve and enhance maritime infrastructure, and support a thriving, sustainable working waterfront. The NYSDOS approved the revisions to the WRP on February 3, 2016. The U.S. Secretary of Commerce concurred with the State's request to incorporate the WRP into the New York State CMP.

In 2013, the New York City Panel on Climate Change (NPCC) released a report (Climate Risk Information 2013: Observations, Climate Change Projections, and Maps) outlining New York City-specific climate change projections to help respond to climate change and accomplish OneNYC and PlaNYC goals, which are described below. The 2013 NPCC report predicted future city temperatures, precipitations, sea levels, and extreme event frequency for the 2020s and 2050s. Subsequently, in January 2015, the Second NPCC (NPCC2) released an updated report that presented the full work of the NPCC2 from January 2013 to 2015 and includes temperature, precipitation, sea level, and extreme event frequency predictions for the 2081 to 2100 time period. While updated maps and data are anticipated for further refinement of the projections in the future, current projections are useful for present planning purposes and to facilitate decision-making in the present that can reduce existing and near-term risks without impeding the ability to take more informed adaptive actions in the future. Specifically, the NPCC2 report predicts that mean annual temperatures will increase by 2.0 to 2.8˚F, 4.1 to 5.7˚F, 5.3 to 8.8˚F, and 5.8 to 10.3˚F by the 2020s, 2050s, 2080s, and 2100, respectively; total annual precipitation will rise by 1 to 8 percent, 4 to 11 percent, 5 to 13 percent, and -1 to +19 percent by the 2020s, 2050s, 2080s, and 2100, respectively; sea level will rise by 4 to 8 inches, 11 to 21 inches, 18 to 39 inches, and 22 to 50 inches by the 2020s, 2050s, 2080s, and 2100, respectively; heat waves and heavy downpours are also very likely to become more frequent, more intense, and longer in duration, with coastal flooding very likely to increase in frequency, extent, and elevation.

As the Proposed Action would include a zoning text amendment to update the Special Regulations Applying in Flood Hazard Areas in the city's 1% and 0.2% annual chance floodplains, it must be assessed for its consistency with the policies of the City's Local Waterfront Revitalization Program (LWRP). In accordance

with the guidance of the 20202014 *CEQR Technical Manual*, a Consistency Assessment Form (CAF) was prepared for the Proposed Action, which is provided in **Appendix D** and summarized in the "Future With the Proposed Action" section below.

Housing New York

On May 5, 2014, the City released *Housing New York*, a 10-year strategy to build and preserve affordable housing throughout New York City in coordination with strategic infrastructure improvements to foster a more equitable and livable New York City through extensive community engagement processes. The 2014 plan outlined more than 50 initiatives to support the administration's goal of building or preserving 200,000 units of high-quality affordable housing to meet the needs of more than 500,000 people by 2024. The 2014 plan outlined five guiding policies and principles to meet this goal: fostering diverse, livable neighborhoods; preserving the affordability and quality of the existing housing stock; building new affordable housing for all New Yorkers; promoting homeless, senior, supportive, and accessible housing; and refining City financing tools and expanding funding sources for affordable housing. *Housing New York* further calls for 15 neighborhood studies to be undertaken in communities across the five boroughs that offer opportunities for affordable housing.

Subsequently, on October 24, 2017, the City released *Housing New York 2.0*, which increased the affordable housing goal to 300,000 units by 2026. The updated and expanded plan outlines six goals: (1) creating more homes for seniors; (2) helping New Yorkers buy a piece of their neighborhoods; (3) building a firewall against displacement; (4) protecting affordability at Mitchell-Lama buildings; (5) capitalizing on advances in technology and innovative design to expand modular building and micro-units; and (6) unlocking the potential of vacant lots.

Vision Zero

The City's Vision Zero initiative seeks to eliminate all deaths from traffic crashes regardless of whether on foot, bicycle, or inside a motor vehicle. In an effort to drive these fatalities down, the New York City Department of Transportation (NYCDOT) and the New York Police Department (NYPD) developed a set of five plans, each of which analyzes the unique conditions of one New York City borough and recommends actions to address the borough's specific challenges to pedestrian safety. These plans pinpoint the conditions and characteristics of pedestrian fatalities and severe injuries; they also identify priority corridors, intersections and areas that disproportionately account for pedestrian fatalities and severe injuries, prioritizing them for safety interventions. The plans outline a series of recommended actions comprised of engineering, enforcement and education measures that intend to alter the physical and behavioral conditions on city streets that lead to pedestrian fatality and injury.

Sustainability & OneNYC

As detailed in the 2020 *CEQR Technical Manual*, until sustainability goals are more clearly defined through the incorporation of initiatives into codes, regulations, and specific policies, there are few sustainability standards to apply appropriately in assessing a proposed project for the purposes of CEQR. To ensure that publicly sponsored projects align with the broader sustainability priorities and goals the City has set for itself, it is appropriate that the *OneNYC* initiatives (detailed below) be considered. If a publicly-sponsored project is, itself, implementing a *OneNYC* initiative, a detailed sustainability assessment would likely be inappropriate.

In April 2015, Mayor Bill de Blasio released *OneNYC*, a comprehensive plan for a sustainable and resilient city for all New Yorkers that speaks to the profound social, economic, and environmental challenges faced. *OneNYC* is the update to the sustainability plan for the city started under the Bloomberg administration, previously known as *PlaNYC 2030: A Greener, Greater New York.* Growth, sustainability, and resiliency

remain at the core of *OneNYC*, but with the poverty rate remaining high and income inequality continuing to grow, the de Blasio administration added equity as a guiding principle throughout the plan. In addition to the focuses of population growth; aging infrastructure; and global climate change, *OneNYC* brings new attention to ensuring the voices of all New Yorkers are heard and to cooperating and coordinating with regional counterparts. Since the 2011 and 2013 updates of *PlanNYC*, the City has made considerable progress towards reaching original goals and completing initiatives. *OneNYC* includes updates on the progress towards the 2011 sustainability initiatives and 2013 resiliency initiatives and also sets additional goals and outlines new initiatives under the organization of four visions: growth, equity, resiliency, and sustainability.

Goals of the plan are to make New York City:

- A Growing, Thriving City—by fostering industry expansion and cultivation, promoting job growth, creating and preserving affordable housing, supporting the development of vibrant neighborhoods, increasing investment in job training, expanding high-speed wireless networks, and investing in infrastructure.
- A Just and Equitable City—by raising the minimum wage, expanding early childhood education, improving health outcomes, making streets safer, and improving access to government services.
- A Sustainable City—by reducing greenhouse gas emissions, diverting organics from landfills to attain Zero Waste, remediating contaminated land, and improving access to parks.
- A Resilient City—by making buildings more energy efficient, making infrastructure more adaptable and resilient, and strengthening coastal defenses.

~~As the 2014 *CEQR Technical Manual* has yet to be updated to address the approach of *OneNYC*, the *PlaNYC* sustainability assessment, as described below, will continue to be utilized on large publicly sponsored projects.~~

PlaNYC 2030: A Greener, Greater New York

In 2011, the Mayor's Office of Long Term Planning and Sustainability released an update to *PlaNYC: A Greener, Greater New York*. *PlaNYC* represents a comprehensive and integrated approach to planning for New York City's future. It includes policies to address three key challenges that the City faces over the next 20 years: population growth; aging infrastructure; and global climate change. In the 2011 update, elements of the plan were organized into ten categories—housing and neighborhoods, parks and public space, brownfields, waterways, water supply, transportation, energy, air quality, solid waste, and climate change—with corresponding goals and initiatives for each category. As stated in the *CEQR Technical Manual*, a project is generally considered consistent with *PlaNYC's* goals if it includes one or more of the following elements:

- Land Use: pursue transit-oriented development; preserve and upgrade current housing; promote walkable destinations for retail and other services; reclaim underutilized waterfronts; adapt outdated buildings to new uses; develop underused areas to knit neighborhoods together; deck over rail yards, rail lines, and highways; extend the Inclusionary Housing Program in a manner consistent with such policy; preserve existing affordable housing; and redevelop brownfields.
- Open Space: complete underdeveloped destination parks; provide more multi-purpose fields; install new lighting at fields; create or enhance public plazas; plant trees and other vegetation; upgrade flagship parks; convert landfills into parkland; increase opportunities for water-based recreation; and conserve natural areas.

- Water Quality: expand and improve wastewater treatment plants; protect and restore wetlands, aquatic systems, and ecological habitats; expand and optimize the sewer network; build high level storm sewers; expand the amount of green, permeable surfaces across the city; expand the Bluebelt system; use "green" infrastructure to manage stormwater; be consistent with the Sustainable Stormwater Management Plan; build systems for on-site management of stormwater runoff; incorporate planting and stormwater management within parking lots; build green roofs; protect wetlands; use water-efficient fixtures; and adopt a water conservation program.
- Transportation: promote transit-oriented development; promote cycling and other sustainable modes of transportation; improve ferry services; make bicycling safer and more convenient; enhance pedestrian access and safety; facilitate and improve freight movement; maintain and improve roads and bridges; manage roads more efficiently; increase capacity of mass transit; provide new commuter rail access to Manhattan; improve and expand bus service; improve local commuter rail service; and improve access to existing transit.
- Air Quality: promote mass transit; use alternative fuel vehicles; install anti-idling technology; use retrofitted diesel trucks; use biodiesel in vehicles and in heating oil; use ultra-low sulfur diesel and retrofitted construction vehicles; use cleaner-burning heating fuels; and plant street trees and other vegetation.
- Energy: exceed the energy code; improve energy efficiency in historic buildings; use energy efficient appliances, fixtures, and building systems; participate in peak load management systems, including smart metering; repower or replace inefficient and costly in-city power plants; build distributed generation power units; expand the natural gas infrastructure; use renewable energy; use natural gas; install solar panels; use digester gas for sewage treatments plants; use energy from solid waste; and reinforce the electrical grid.
- Natural Resources: plant street trees and other vegetation; protect wetlands; create open space; minimize or capture stormwater runoff; and redevelop brownfields.
- Solid Waste: promote waste prevention opportunities; increase the reuse of materials; improve the convenience and ease of recycling; create opportunities to recover organic material; identify additional markets for recycled materials; reduce the impact of the waste systems on communities; and remove toxic materials from the general waste system.

New York City Food Retail Expansion to Support Health Program

The New York City Food Retail Expansion to Support Health (FRESH) Program provides zoning incentives and discretionary tax incentives to promote the establishment and retention of neighborhood grocery stores in communities that lack full-line grocery stores. Portions of the study areas are located within FRESH-designated areas.

The FRESH program is open to grocery store operators renovating existing retail space or developers seeking to construct or renovate retail space that will be leased by a full-line grocery store operator in FRESH-eligible areas that meet the following criteria:

- Provide a minimum of 6,000 sf of retail space for a general line of food and non-food grocery products intended for home preparation, consumption and utilization;
- Provide at least 50 percent of a general line of food products intended for home preparation, consumption and utilization;
- Provide at least 30 percent of retail space for perishable goods that include dairy, fresh produce, fresh meats, poultry, fish, and frozen foods; and
- Provide at least 500 sf of retail space for fresh produce.

Financial incentives are available to eligible grocery store operators and developers to facilitate and encourage FRESH Food Stores in the designated area. These incentives include real estate tax reductions, sales tax exemptions, floor area bonuses, and mortgage recording tax deferrals.

Business Improvement Districts

Business Improvement Districts (BIDs) are geographical areas where local stakeholders oversee and fund the maintenance, improvement, and promotion of their commercial districts. BIDs create vibrant, clean, and safe districts, and deliver services and improvements above and beyond those typically provided by the City, such as street cleaning and maintenance; public safety and hospitality; marketing and events; capital improvements; beautification; advocacy; and business development. BIDs help to brand their districts and market small businesses on their corridor, facilitating networking among merchants, host community events, and advocate for improvements to the district. BIDs also serve as a liaison between local businesses and stakeholders and the City government. In doing so, BIDs provide a collective voice for the neighborhood and help inform City policy based on their unique local knowledge. Each BID in the city is run by a not-for-profit organization, and BID programs and services are funded by a special assessment billed to property owners within a district. There are currently 76 BIDs in New York City, several of which are located in the city's floodplains.

Industrial Business Zones

New York City's Industrial Business Zones (IBZs) were established to protect existing manufacturing districts and encourage industrial growth citywide. In 2006, the City created 16 IBZs where expanded business services are available for industrial and manufacturing businesses; there are now 21 IBZs citywide, several of which are located in the city's floodplains. The designation fosters high-performing business districts by creating competitive advantages over locating in areas outside of New York City. The IBZs are supported by tax credits for relocating within them, zone-specific planning efforts, and direct business assistance from Industrial Providers of New York City Business Solutions Industrial and Transportation.

Special Districts

The New York City Planning Commission (CPC) has been designating special zoning districts since 1969 to achieve specific planning and urban design objectives in defined areas with unique characteristics. Special districts respond to specific conditions; each special district designated by the CPC stipulates zoning requirements and/or zoning incentives tailored to distinctive qualities that may not lend themselves to generalized zoning and standard development.

The Future Without the Proposed Action (No-Action Condition)

Land Use, Zoning, & Public Policy

In the 2029 future without the Proposed Action, existing land use trends and development patterns in the city's current 1% and 0.2% annual chance floodplains are expected to continue, albeit without the benefit of special zoning relief provided in the 2013 Flood Text and 2015 Recovery Text. As detailed in **Chapter 1, "Project Description,"** it is expected that the 2013 Flood Text and 2015 Recovery Text have both expired during the 10-year analysis period in the future without the Proposed Action. It is assumed that each Prototypical Analysis Site would maximize their development under the permitted building envelope, and new developments would be required to meet the minimum standards of Appendix G of the New York City Building Code for structures in the 1% annual chance floodplain, but not in the 0.2% annual chance floodplain.

As detailed in **Chapter 1**, existing buildings, in general, only need to meet the requirements of Appendix G if they are substantially damaged or substantially improved, or if the building is conducting a horizontal enlargement. Although in certain instances these buildings could potentially pursue resilient improvements, for conservative analysis purposes, the No-Action scenarios assume that existing buildings would not be retrofitted or reconstructed. Recent development trends also indicate that it is unlikely that existing buildings would invest in resiliency, especially absent special zoning relief to assist buildings to comply with flood-resistant construction standards without needing to lose existing floor space.

Prototypical Analysis Sites

Under the No-Action scenarios in both the 1% and 0.2% annual chance floodplains, new as-of-right development is expected to occur on six of the 14 Prototypical Analysis Sites (Sites 2, 5, 7, 9, 11, and 14, which are vacant lots under existing conditions as detailed in **Table 2-3** above). In the future without the Proposed Action, new buildings on the Prototypical Analysis Sites would be constructed to comply with all height, yard, setback, and parking regulations of their respective underlying zoning districts, without the beneficial zoning relief in the expired 2013 Flood Text and 2015 Recovery Text, as discussed above.

Table 2-4a: Prototypical Analysis Sites – No-Action Condition: 1% Annual Chance Floodplain

Site	Zoning District	Lot Area (SF)	No-Action Scenario	No-Action FAR
1	R3-1	4,000	Two-story + cellar residential building w/ one DU and detached garage (2,900 gsf / 1,800 zsf)	0.45
2	R3-1	2,500	**NEW** two-story residential building w/ one DU and detached garage (1,600 gsf / 1,250 zsf)	0.50
3	R4	2,000	Two-story + basement residential building w/ two DUs (2,835 gsf / 2,700 zsf)	1.35
4	R5	2,500	Three-story + basement residential building w/ three DUs (5,500 gsf / 4,125 zsf)	1.65
5	R7A	11,500	**NEW** seven-story residential building w/ 54 DUs (56,330 gsf / 46,000 zsf)	4.0
6	R6	100,000	Eight-story residential building w/ 320 DUs (270,000 gsf / 240,000 zsf)	2.4
7	R5 / C1-2	12,000	**NEW** four-story mixed residential/commercial building w/ 10 DUs (21,600 gsf / 15,000 zsf)	1.25
8	R7A / C1-2	2,500	Seven-story mixed residential/commercial building w/ 13 DUs (10,800 gsf / 10,000 zsf)	4.0
9	R3-1 / C1-2	10,000	**NEW** one-story commercial building (5,040 gsf / 4,200 zsf)	0.42
10	M1-1	10,000	One-story industrial building (11,500 gsf / 10,000 zsf)	1.0
11	R4	2,500	**NEW** three-story + attic residential building w/ one DU (3,195 gsf / 2,245 zsf)	0.90
12	R3A	2,500	One-story + cellar residential building w/ one DU (2,204 gsf / 1,052 zsf)	0.42
13	R3X	2,000	Two-story + cellar residential building w/ two DUs (2,100 gsf / 1,370 zsf)	0.49
14	R8 / C2-4	50,000	**NEW** Mixed residential/commercial building on a Waterfront Site	N/A

Note: Refer to **Appendix A** for illustrative renderings of the Prototypical Analysis Sites.
*Site 14 illustrates the proposed modifications specific to waterfront regulations for open space. See **Appendix A** for more details.

The remaining eight Prototypical Analysis Sites are expected to remain unchanged in the No-Action scenarios, identical to existing conditions. **Tables 2-4a** and **2-4b** provide summaries of the Prototypical

Analysis Sites in the future without the Proposed Action in both the 1% and 0.2% annual chance floodplains, respectively. Illustrative renderings of both No-Action scenarios are provided in **Appendix A**.

Table 2-4b: Prototypical Analysis Sites – No-Action Condition: 0.2% Annual Chance Floodplain

Site	Zoning District	Lot Area (SF)	No-Action Scenario	No-Action FAR
1	R3-1	4,000	Two-story + cellar residential building w/ one DU and detached garage (2,900 gsf / 1,800 zsf)	0.45
2	R3-1	2,500	**NEW** two story + basement residential building w/ one DU (1,600 gsf / 1,250 zsf)	0.50
3	R4	2,000	Two-story + basement residential building w/ two DUs (2,835 gsf / 2,700 zsf)	1.35
4	R5	2,500	Three-story + basement residential building w/ three DUs (5,500 gsf / 4,125 zsf)	1.65
5	R7A	11,500	**NEW** seven-story residential building w/ 54 DUs (63,920 gsf / 46,000 zsf)	4.0
6	R6	100,000	Eight-story residential building w/ 320 DUs (270,000 gsf / 240,000 zsf)	2.4
7	R5 / C1-2	12,000	**NEW** four-story mixed residential/commercial building w/ 10 DUs (20,040 gsf / 15,000 zsf)	1.25
8	R7A / C1-2	2,500	Seven-story mixed residential/commercial building w/ 13 DUs (10,800 gsf / 10,000 zsf)	4.0
9	R3-1 / C1-2	10,000	**NEW** one-story commercial building (5,040 gsf / 4,200 zsf)	0.42
10	M1-1	10,000	One-story industrial building (11,500 gsf / 10,000 zsf)	1.0
11	R4	2,500	**NEW** two-story + attic residential building w/ one DU and detached garage (2,110 gsf / 1,880 zsf)	0.75
12	R3A	2,500	One-story + cellar residential building w/ one DU (2,204 gsf / 1,052 zsf)	0.42
13	R3X	2,000	Two-story + cellar residential building w/ two DUs (2,100 gsf / 1,370 zsf)	0.49
14	R8 / C2-4	50,000	**NEW** Mixed residential/commercial building on a Waterfront Site	N/A

Note: Refer to **Appendix A** for illustrative renderings of the Prototypical Analysis Sites.
*Site 14 illustrates the proposed modifications specific to waterfront regulations for open space. See **Appendix A** for more details.

The Future With the Proposed Action (With-Action Condition)

As detailed in **Chapter 1, "Project Description,"** the Proposed Action is a zoning text amendment to update the Special Regulations Applying in Flood Hazard Areas (ZR Article VI, Chapter 4). The Proposed Action would improve upon and make permanent the relevant provisions of the existing temporary zoning rules of the 2013 Flood Text and 2015 Recovery Text. In addition, the Proposed Action includes special provisions to help facilitate the City's long-term recovery from the COVID-19 pandemic and its associated economic effects by providing more time for existing non-conforming uses to reopen and builders to undertake certain construction projects. The Proposed Action also includes updates to other sections of the ZR, including the Special Regulations Applying in the Waterfront Area (Article VI, Chapter 2) and provisions within various Special Purpose Districts. The Proposed Action would mostly affect New York City's current 1% annual and 0.2% annual floodplains, however, select provisions of the Proposed Action would be applicable citywide.

Due to the broad applicability of the Proposed Action, it is difficult to predict the sites where development would be facilitated. In addition, the Proposed Action is not in-and-of-itself expected to induce development where it would not otherwise have occurred absent the Proposed Action. Although the Proposed Action may

allow developments and existing buildings to retrofit to resilient standards, the overall amount, type, and location of development within the affected area is not anticipated to change.

Like the 2013 Flood Text and the 2015 Recovery Text, the Proposed Action would generally provide optional zoning rules in the floodplain for buildings to fully incorporate "flood-resistant construction standards,"[1] but also for those who may want to incorporate incremental resiliency improvements to protect their buildings against flooding over time, as described in more detail below. Given the scale and variety of the city's floodplain, the Proposed Action necessarily includes modifications to many existing zoning regulations. These changes generally allow habitable spaces and other building support features to be better protected and raised out of harm's way and address the effect these elevated spaces can have on the city's streetscape. The Proposed Action also includes provisions with applicability beyond the floodplain to help address a wider variety of situations.

Land Use

The Proposed Action is not expected to induce new development where it would not have occurred absent the Proposed Action, and land use trends and development patterns are expected to remain similar to No-Action conditions in the future with the Proposed Action.

Locating Important Spaces Out of Harm's Way

As detailed in **Chapter 1, "Project Description,"** there are some situations where elevating key support spaces would improve the long-term resiliency of buildings and their uses. Many retail stores rely on basement and cellar space to support their at-grade retail, but zoning regulations often restrict these spaces from being located on the second floor, which limits the stores' ability to becomes more resilient. The Proposed Action would therefore include two modifications to address this issue.[2] In low- and medium-density C1 and C2 local Commercial Districts, where underlying zoning regulations limit commercial uses to the first story in mixed-use buildings, the Proposed Action would allow commercial uses on the second story in buildings in the floodplain. This would give businesses an opportunity to move key spaces out of basements or cellars. The space within the second floor would still be counted towards floor area calculations and generate parking requirements.

In Commercial and Manufacturing Districts with a low maximum FAR, buildings may have little available floor area to raise key spaces above the flood elevation. To remedy this, the Proposed Action would add a floor area exemption of up to 500 sf to provide businesses the option of elevating important spaces, such as offices or storage rooms, above the FRCE in Commercial and Manufacturing Districts where the permitted commercial or manufacturing FAR is less than or equal to 1.0.

Lastly, existing residential buildings in low-density Residence Districts are often hindered by underlying zoning regulations when attempting to fill in their basements or cellars and relocate the required parking found there to other portions of their lot. The Proposed Action would allow below-grade parking in existing residential buildings in R1 through R5 districts (except R4B and R5B districts) to be relocated to front, side or rear yards. To be granted this allowance, below-grade spaces would have to be removed and filled, in compliance with flood-resistant construction standards. In addition, the Proposed Action would continue to allow parking spaces and driveways to be covered with dustless gravel for all single- and two-family residences in R1 through R5 districts.

[1] "Flood-resistant construction standards" are the construction standards set forth in Appendix G of the New York City Building Code for "Post-FIRM Construction" (as defined therein) applied up to the flood-resistant construction elevation or higher to aid in protecting buildings in the floodplain from flood damage, governing both buildings that are required to comply with such standards and those that voluntarily comply.

[2] This recommendation came from NYC Planning, *Resilient Retail* (2016). New York City, NY. Source: www.nyc.gov/resilientretail

Nursing Homes

The Proposed Action would limit the growth of vulnerable populations in nursing homes in high-risk areas of the floodplain. As discussed in further detail in **Chapter 1, "Project Description,"** nursing homes are licensed to house populations that require continual medical care, but research shows that this dependency can be strained whether nursing homes shelter in place or evacuate prior to a coastal storm event. While all nursing homes in hurricane evacuation zones in the city are subject to mandatory evacuations during a declared emergency, the City believes it would be appropriate to limit the growth of nursing homes in high-risk areas to lessen the health consequences and logistical challenges of evacuating the residents of these facilities. The Proposed Action would therefore limit the development of new nursing homes and restrict the enlargement of the existing 37 facilities (out of 171 nursing homes citywide) within the 1% annual chance floodplain and other selected geographies likely to have limited vehicular access after a storm event (illustrated in **Appendix C**). The modification would restrict the enlargement of existing nursing homes in this geography to a maximum of 15,000 sf to allow for improvements, including those related to resiliency. These restrictions would also apply to the nursing home portions of Continuing Care Retirement Communities (CCRCs). The CPC special permit (ZR Section 74-901) that permits nursing homes in areas where they are not allowed as-of-right (i.e., R1 and R2 districts and certain community districts) would not be available in this geography.

Uses in Waterfront Recreation Districts

The Proposed Action would modify the zoning requirements that have made it difficult for eating or drinking establishments in some lower-density waterfront areas from making long-term resiliency improvements. In C3 and C3A Waterfront Recreation zoning districts, which are mapped along the city's waterfront in limited locations, these businesses are required to obtain a New York City Board of Standards and Appeals (BSA) special permit to operate, renewable every five years. Local elected officials and business owners have noted how this short timeframe adds uncertainty that makes it difficult for these establishments to invest in resiliency. Therefore, the Proposed Action would extend the initial special permit term from five to 10 years for new applicants. Additionally, for existing establishments with a previously approved special permit, the permit would allow the BSA to determine the required term moving forward.

Assessment

In the future with the Proposed Action, no new land uses would be allowed that are not permitted by underlying zoning. The Proposed Action would permit more flexibility in terms of commercial and manufacturing floor area location and residential parking requirements in the future with the Proposed Action. However, it would not generate new land uses or prohibit existing land uses from occupying floor area in the city's floodplains. Moreover, the Proposed Action would limit new nursing homes and restrict the enlargement of existing facilities within the 1% annual chance floodplain and selected geographies. Nevertheless, this action is not expected to substantially alter land use trends in these areas. Existing nursing homes in the specified geographies would not be displaced as a result of the Proposed Action, and nursing homes would continue to be permitted in all other areas of the city under With-Action conditions. Therefore, the Proposed Action would not generate new land uses that would be incompatible with surrounding uses, and currently established land use conditions and trends in the study areas would continue in the future with the Proposed Action.

Additionally, as detailed below, the Proposed Action would also create a new special permit that can be granted by the BSA to provide a wider range of use alternatives for the ground-floor design of residential buildings. As detailed further in **Chapter 1**, this special permit would allow offices listed in Use Group 6B on the ground floor of approved buildings in residential zoning districts in the city's floodplains, therefore allowing a new use in this geography not currently permitted by underlying zoning. However, as it is not possible to predict whether this special permit would be pursued on any one site in the future, the RWCDS

for the Proposed Action does not consider specific developments. Instead, a conceptual analysis is provided in **Chapter 23, "Conceptual Analysis,"** to assess potential environmental impacts generically. As detailed therein, no significant adverse impacts to land use are expected as a result of the proposed BSA ground-floor special permit.

Zoning

As detailed above, the Proposed Action is a zoning text amendment to update the Special Regulations Applying in Flood Hazard Areas (ZR Article VI, Chapter 4). The Proposed Action also includes updates to other sections of the ZR, including the Special Regulations Applying in the Waterfront Area (ZR Article VI, Chapter 2) and provisions within various Special Purpose Districts. Below are descriptions of the specific zoning allowances that would occur in the future with the Proposed Action.

Long-Term Resilient Design for All Building Types

The Proposed Action would include optional zoning regulations that better enable building owners to make their buildings more resilient by physically elevating habitable spaces and other building support features above expected flood elevations. These would generally modify existing regulations for building envelopes and ground floors, as well as address more unique situations. When these allowances are used, buildings would have to comply with flood-resistant construction standards and a new set of streetscape requirements meant to improve the relationship between the raised building and its surroundings.

Accommodating Current and Future Flood Risk in the Building Envelope

The Proposed Action includes optional modifications of various building envelope regulations to better allow habitable spaces to be raised above flood levels.

Flood-Resistant Construction Elevation

The Proposed Action would continue to allow building envelopes across all zoning districts to be measured from the "flood-resistant construction elevation" (FRCE), which is generally synonymous with the Design Flood Elevation (DFE) in the current rules, to continue to facilitate all buildings in meeting flood-resistant construction standards. The FRCE would be required to not be lower than two feet above lowest adjacent grade to ensure a minimum level of floodproofing. In the 0.2% floodplain, where compliance with Appendix G is voluntary and no DFEs exist, this two food minimum level of protection would also apply. Coupled with required compliance with the flood-resistant construction standards, this would mean that no living space would be located below the FRCE, and below grade basements and cellars would not be built in residences. In addition, essential facilities (such as hospitals) would be able to measure height from the 500-year flood elevation, which is required by Appendix G. Finally, the allowance to measure height from the BFE would be removed to ensure a consistent framework and any additional height would be tied to flood-resistant improvements.

Reference Plane

The Proposed Action would include a consistent framework for additional building height to encourage building owners to address long-term climate change, lower insurance costs and provide usable spaces at grade. As there may be situations where the FRCE height could result in spaces with awkward heights that could deleteriously impact the streetscape, the 2013 Flood Text allows the reference point at which heights are measured to be adjusted upwards to create more practical and viable ground floor spaces. This alternate reference plane is available in areas where the BFE equals or exceeds four feet, and the plane's maximum height (ranging from 9 to 12 feet) is dependent on the zoning district and building use.

To create a consistent framework for height measurement, the Proposed Action would allow building heights to be measured from a new reference plane that is up to 10 feet above the base plane or curb level in the 1% annual chance floodplain and up to five feet in the 0.2% annual chance floodplain. To ensure that the additional height is tied to actual improvement in the building's resiliency, the building would have to comply with flood-resistant construction standards and its "first story above the flood elevation" (FSAFE) would have to be located at or above the chosen reference plane height. The FSAFE would be defined as the level of the finished floor of the first story located at or above the level to which the building complies with flood-resistant construction standards. In areas where the FRCE is higher than 10 feet, the higher FRCE could continue to be used.

Other Envelope Modifications

To help offset the effects of the proposed additional height that would allow construction at or above the FRCE, the Proposed Action would include several allowances intended to break down the building massing in the upper portions of buildings.

For lower-density residential areas, the Proposed Action would continue to encourage sloped roof design in areas where that type of roof is the prevailing context. However, there would be a minor modification to the existing "attic allowance," which allows a 20 percent floor area bonus in exchange for a sloped roof in R2X, R3, R4, R4A and R4-1 Districts. The Proposed Action would allow the additional floor area to be located in any portion of the building which would encourage a lower roof slope and overall building height. In Lower Density Growth Management Areas (LDGMA) the rule would not change, since the ability to locate the additional floor area is already permitted (albeit with a steeper roof pitch). However, "cottage envelope" buildings, described below, would be able to use the lower pitch in LDGMAs since it is more reminiscent of bungalow homes.

In medium- and high-density contexts, the Proposed Action would make two modifications to promote lower building scale. First, while maximum base heights and overall heights in Quality Housing buildings may be measured from the FRCE or the reference plane, the Proposed Action would allow minimum base heights to continue to be measured from the base plane. This would allow setbacks in buildings to be made closer to the ground and keep the base heights lower. Additionally, the Proposed Action would modify the underlying dormer allowances to provide an alternative that could break up the bulk in the upper portion of the building, allowing a dormer that extends up to 40 percent of the building width without any diminishing.

Accommodating Flood-Resistant Construction Standards on Ground Floors

The Proposed Action includes a series of regulations intended to incentivize the floodproofing of ground floors, encourage active uses to be kept at the street level to promote more resilient neighborhoods, and encourage internal building access.

Wet-Floodproofed Spaces

The Proposed Action would provide a consistent floor area exemption for wet-floodproofed ground floor spaces for all buildings to promote long-term resiliency improvements. Flood-resistant construction standards require the ground floor of residential buildings to be wet-floodproofed, thereby limiting the use of this ground floor space solely to parking, storage and/or building access. While accessory parking is generally not counted toward zoning floor area calculations, spaces used for storage or building access typically count and therefore can act as a severe disincentive to floodproofing.

The Proposed Action would provide the full ground floor exemption for wet-floodproofed spaces to new and existing buildings. This would provide more consistent results and incentivize internal access at grade,

while encouraging living spaces to be elevated above the FRCE in new and existing buildings, including those that cannot be physically elevated.

Dry-Floodproofed Spaces

To promote a safe and lively pedestrian environment, the Proposed Action would encourage active dry-floodproofed ground floor spaces along the city's retail corridors. Flood-resistant construction standards allow non-residential ground floor uses to be dry-floodproofed. While this method allows active uses to be kept close to grade, which is beneficial in maintaining retail continuity along the city's commercial streets, this method has proven to be quite costly. The 2013 Flood Text attempted to incentivize dry-floodproofing by allowing up to 10,000 sf of non-residential uses in existing buildings to be exempted from floor area calculations if they are dry-floodproofed. However, this provision has seen limited use to date due to both the high cost of dry-floodproofing as well as existing restrictions on the use of relocated space that make the resiliency investment less viable. But if the 2013 provision was utilized, the large size of the floor area exemption could lead to out-of-scale development on small lots. For new buildings, the exemptions are limited to entryway areas used for enclosed ramps and stairs, to encourage access to be located within the building.

The Proposed Action would modify these incentives to better encourage dry-floodproofed spaces in appropriate locations. The provision would be available for both new and existing buildings facing "primary street frontages" (as defined in the ZR) in Commercial Districts and M1 Districts paired with Residence Districts. The floor area exemption would only be available for the first 30 horizontal feet of the non-residential floor space as measured from the street wall of the building, since this is the most critical space to maintaining retail continuity. The exemption would come with design requirements to ensure quality ground floors. These would require the ground floor level be within two feet of the adjacent sidewalk and follow transparency requirements. In addition, the Proposed Action would maintain the existing floor area exemption for access, to encourage ramps and stairs be located within the building.

Cellars

The Proposed Action would ensure that floor area exemptions are given only when buildings are floodproofed and remove incentives to build low-quality ground-floors. The Proposed Action would not allow the FRCE to be used as the measurement threshold for cellars and basements. In addition, the Proposed Action would modify the "base plane" definition to remove references to BFE. Taken together, this would restrict the owners of buildings subject to a high BFE from taking significant floor area exemptions for low-quality below-grade spaces. With this proposed change, floor area exemptions would only be tied to the floodproofing of the building. However, existing buildings would have the option to determine floor area calculations using either the definition prior to or after the change to ensure that significant new non-compliances are not caused for these sites.

Street Wall Location

The Proposed Action would include limited street wall modifications when access or flood protection measures are provided outside of the building. Many zoning districts have street wall location provisions that ensure new development will be constructed close to the property line to reflect the character of their area. While these regulations promote best practices in streetscape design, they can conflict with the ability to provide sufficient outdoor access from the sidewalk into buildings in the floodplain since stairs and ramps can occupy considerable space and may not fit in the permitted area.

The Proposed Action would allow sufficient space to accommodate exterior stairs and ramps, as well as flood panels, in all zoning districts that require street walls be located on or near the street line. To incorporate these measures, street walls could be located up to eight feet from the property line and, to allow ramps that

run perpendicular to the street, up to 50 percent of the street wall could be located beyond eight feet. In acknowledging the access challenges for narrow lots (less than 50 feet), the Proposed Action would allow the remaining 50 percent of the street wall to be recessed at the ground floor level. The possible visual impact of the access measures would be limited by requiring planting if the access extended along 70 percent or more of the street wall.

Ground Floor Level Requirements

The Proposed Action would accommodate resilient buildings and raised first floors by addressing conflicts with existing ground floor level zoning requirements. To promote walkability and enliven retail corridors, some zoning districts have ground floor use regulations that typically require non-residential uses (i.e., commercial and community facility) on the ground floor level in close proximity to the sidewalk level (often between two and five feet), and that the building facade adjoining these uses would be transparent to promote the feel of shopping districts with large show windows. In the floodplain, that ground floors and transparency be located close to the sidewalk level would often preclude floodproofing strategies, which could become extremely onerous in areas with a high FRCE. In addition, Commercial and Manufacturing Districts include accessory signage regulations to promote businesses on the lot that include size and height limitations measured from grade which may lead to impractical outcomes in the floodplain given the need to sometimes elevate these uses.

To address issues in applying these rules at the sidewalk level in the floodplain, the 2013 Flood Text allowed these ground floor measures to be elevated to the FRCE so that buildings could comply with Appendix G. For example, if the FRCE of the building was five feet above grade, the measurement elevation for required non-residential uses could be elevated to the FRCE along with associated transparency rules. Accessory signage could also be measured from this elevation. With these changes, owners can consider a wide variety of resilient design strategies including ground-floor elevation, dry-floodproofing, or the creation of wet-floodproofed "show pits."

The Proposed Action would continue to allow this, with small additions. In all areas, any blank walls created along retail corridors would now be subject to streetscape rules and would need to be addressed by adding elements such as planting, street furniture, or artwork. Additionally, in V zones and Coastal A zones identified by FEMA, ground floor use regulations would be made optional because dry-floodproofing is prohibited and FRCEs are often extremely high above the sidewalk.

Improving Streetscape in the Floodplain

The Proposed Action would require buildings using any of the regulations provided to comply with flood-resistant construction standards to also comply with streetscape requirements meant to help ensure flood-resistant buildings contribute to their surroundings. The Proposed Action would continue to require design features to address concerns about building elevation and blank walls but would address the issues raised with the current rules. Specifically, this would create a more consistent framework of requirements, with more design options, to better address the wide variety of building conditions found in the floodplain.

The framework would include a points system, like the 2013 Flood Text. Points would now be available in two broad categories: Building Access and Ground Floor Level. Building Access would be focused on how users reach the building's elevated first story, while Ground Floor Level would be focused on the design of the ground floor itself. Generally, for buildings with a FSAFE that is less than five feet above grade, one point would be required and may be fulfilled within either category. Where the building's FSAFE is five feet or higher, the building would have to meet a total of three points, with at least one point coming from each of the two categories. These requirements would be applicable in all zoning districts other than M2 and M3 districts. Additionally, in M1 Districts, they would not apply to heavy industrial uses. A much-expanded menu of design options would be available for each category to better address different building types and

scales found in the floodplain. For example, the Building Access category would include nine options such as front porches, stair turns, entrances close-to-grade, and multiple entrances along a facade. The Ground Floor Level category would include 14 options, including planting and raised yards, as well as wall treatments such as decorative latticework, street furniture, and ground floor level transparency. This expanded menu would give designers the toolkit to better reflect conditions found in the floodplain, such as locations along commercial corridors or in higher-density residential neighborhoods.

In addition, the Proposed Action would ensure that these design options can be more easily utilized. It would classify steps and covered porches as permitted obstructions in front yards and modify the maximum height of retaining walls to three feet to address those practical construction constraints caused by the previous maximum height of two and a half feet. In low-density Residence Districts, the Proposed Action would also exempt buildings on narrow lots from existing front yard planting requirements that inadvertently limit the use of the other available design options. Finally, for all buildings subject to these provisions, all group parking facilities provided on the ground floor level would be required to be either wrapped by usable building space, or screened by treatments such as latticework, vertical plantings, or artwork.

Accommodating Current and Future Flood Elevations in Special Conditions

The Proposed Action includes more tailored zoning regulations to address special situations found in the city's floodplain, including small or narrow lots, as well as for existing buildings that do not meet current zoning requirements. While these conditions exist throughout the floodplain, they are often concentrated in certain neighborhoods, such as the bungalow communities often found along the water's edge.

Substandard Lots (Cottage Envelope)

The Proposed Action would expand the availability of the popular cottage envelope option, first created in the 2015 Recovery Text, to small lots throughout the floodplain. This would allow for the construction of resilient buildings that better match their surroundings and accommodate better layouts.

Following the 2013 Flood Text, many neighborhoods with a prevalence of small, high-lot coverage bungalow homes on substandard zoning lots had concerns about the taller heights of recently constructed flood-resistant buildings. To better reflect the scale of surrounding buildings,[3] the 2015 Recovery Text provided an alternative cottage envelope option for single- and two-family detached residences reconstructed in the special Neighborhood Recovery Areas. This envelope came with decreased yard requirements and increased permitted lot coverages on substandard lots, in exchange for a shorter overall building height. The resulting building form mimics the wider and deeper bungalow homes and has provided homeowners the opportunity to create a more practical design and interior layout.

The Proposed Action would expand the 2015 Recovery Text provisions by allowing all new and existing single- and two-family detached residences in R1 through R5 Districts in the floodplain to use the cottage envelope option when the building is designed to flood-resistant construction standards. Specifically, the maximum permitted building height would be reduced to 25 feet, as measured from the reference plane, instead of the typical maximum height of 35 feet. In exchange for this reduction, the applicable yard and lot coverage requirements would be modified: the minimum front yard would be reduced to the depth of neighboring homes, while minimum side and rear yards would be reduced at a rate proportional to the narrowness and shallowness of the lot (up to a minimum of three and 10 feet respectively). In addition, any applicable lot coverage and open space requirements would not apply because the modified yard regulations

[3] For more information on the cottage envelope, see report outlining the City's proposal, *Zoning for Coastal Flood Resiliency: Planning for Resilient Neighborhoods*, issued by the NYC Department of City Planning. Page 20.

effectively control the building's footprint. Corner lots would be able to consider one of their front yards a (narrower) side yard to allow for a more contextual corner building.

Parking on Narrow Lots

The Proposed Action would continue to encourage single- and two-family residences on narrow lots to have parking be located below the building. Several low-density Residence Districts restrict the location of parking spaces and curb cuts on a property. For instance, in many contextual districts, parking is only allowed within the side lot ribbon on lots less than 35 feet wide, and curb cuts must be at least 16 feet from other curb cuts on the same or an adjoining zoning lot. While the combination of these regulations works well to preserve the streetscape in many neighborhoods, they may be particularly difficult to comply with in the floodplain due to the prevalence of narrow lots found there and the inability to use ground floors for habitable spaces.

To address these issues, the 2013 Flood Text included modified curb cut spacing and parking location requirements, particularly for narrow lots. These have allowed narrow residences to be elevated and parking to be located below the building provided that at least two parking spaces are located there. The Proposed Action would maintain these allowances, with small modifications to better align the number of parking spaces that may locate under an elevated building to what is required by the zoning district (which may be less than two spaces) and to only allow the curb cut spacing for narrow lots. Specifically, in providing parking spaces beneath the building single and two-family residences in R1 through R5 districts (except R4B and R5B districts) would be able to disregard underlying parking location and curb cut location rules to allow parking spaces be located under the building. On existing zoning lots with widths of less than 35 feet, the curb cut spacing regulations would become optional if four feet of curb space is provided between the new and existing curb cuts. In either case, the site would have to comply with the underlying front yard planting requirements.

Non-Complying and Non-Conforming Buildings

The Proposed Action would promote resiliency for the large number of existing buildings and land uses that do not adhere to the zoning rules that are currently applicable. These conditions exist because the buildings or uses were constructed before zoning existed or because they were legally built under the provisions in effect at the time and the regulations have since changed. These non-complying buildings or non-conforming uses can stay in place but there are limits on their reconstruction, enlargement, or alteration. Most importantly, if these buildings or uses are demolished or damaged, such that more than a specified amount of floor area is removed— (75 percent for most non-compliances, 50 percent for most non-conformances) —they cannot be put back, although single- and two-family residences located in districts that permit them can be fully demolished and replaced. This longstanding policy was intended to ensure that properties comport with the applicable zoning regulations over time.

To ensure that building owners could rebuild and get their properties out of harm's way, the 2013 Flood Text allowed non-conforming uses and non-complying buildings damaged in Hurricane Sandy beyond the applicable thresholds to be reconstructed while still retaining their previous non-conformances or non-compliances. It also encouraged buildings to be elevated or reconstructed up to the FRCE by permitting new and increasing existing non-compliances. Subsequently, the 2015 Recovery Text created two additional allowances to address situations that building owners encountered when rebuilding their homes. First, it permitted non-conforming two-family residences in single-family Residence Districts and single- and two-family residences in Manufacturing Districts to rebuild or vertically enlarge if they were in Neighborhood Recovery Areas, neither of which had been permitted under the 2013 Flood Text. Additionally, it allowed all habitable space in existing single- and two-family residences, including space in basements, to be elevated above the FRCE and accommodated all associated non-compliances.

These special rules have facilitated reconstruction of properties damaged by Hurricane Sandy, but building owners and practitioners have identified issues that deterred some owners from making their buildings more resilient. For example, the non-compliance allowances only permitted buildings to be elevated to the FRCE, which limited the ability to over-elevate to lower insurance premiums or plan for projected sea level rise. Additionally, buildings being elevated have to keep within their existing footprint to maintain existing yard and open space non-compliances, which has proven to be challenging for those on small or awkwardly configured lots. Finally, many of the provisions were only applicable in the Neighborhood Recovery Areas for a limited time period, even though similar issues are found throughout the floodplain.

In response, the Proposed Action would allow nearly all non-conforming uses and non-complying buildings to be elevated, retrofitted, or reconstructed to meet flood-resistant construction standards and measure height from the reference plane while retaining existing non-conformances and non-compliances. This allowance would come with the condition that less than 75 percent of the floor area be damaged or demolished (single- and two-family residences in districts that permit them would maintain their higher threshold). Relief beyond this threshold would be available for non-conforming uses and non-complying buildings damaged in any future disaster.

In addition, non-compliances could be created or increased as long as the change to the building does not exceed specified parameters. For example, it would be possible to retain and relocate non-complying floor area (often located in basements) above the reference plane, provided that the floor area does exceed the maximum allowed in the applicable zoning district by 20 percent. Similarly, it would be possible to increase the height of a building with non-complying height (as measured from the lowest floor to the highest point of the roof), provided that the elevated building does not exceed the maximum height allowed by the applicable zoning district by 10 percent or 10 feet, whichever is less, as measured from the reference plane. Non-compliances could also be created or increased for open areas (yards, courts, and open spaces, including minimum distance between buildings) to accommodate resiliency measures on constrained sites. For instance, a building's previous footprint could be shifted or altered provided that the building's lot coverage is not increased and that any new encroachment into required yards does not get too close to surrounding lot lines (five feet from the rear lot line and three feet from the front and side lot lines).

Building on the provisions of the 2015 Recovery Text, the Proposed Action would also allow non-conforming residential buildings in heavy Commercial (C8) Districts and in all Manufacturing Districts throughout the floodplain to be elevated, retrofitted, or reconstructed to meet flood-resistant construction standards and measure height from the reference plane as long as the buildings are located within predominantly residential areas in these districts. In addition, the residential floor area in these buildings could not be increased and the maximum height for single- and two-family residences would be 35 feet (multi-family buildings, generally rare in these areas, would be able to use the applicable zoning district height).

Allow for Adaptation Over Time Through Incremental Retrofits

While the proposal is primarily focused on encouraging all buildings in the floodplain to fully meet flood-resistant construction standards, there are situations where specific conditions, such as regulatory obstacles or cost constraints, may prevent a building from reaching that level of resiliency. The Proposed Action includes optional modifications that would encourage buildings to become more resilient over time without having to comply with those standards. These modifications, which would also be available to buildings that meet flood-resistant construction standards, include provisions to facilitate location of mechanical equipment and other critical spaces above the FRCE, allowances for some specific flood protection measures, and parking design modifications in low-density Residence Districts.

Locating Mechanical Equipment Above Flood Elevation

The Proposed Action would help protect mechanical equipment from flood damage by facilitating its elevation above flood levels, which is often the first and most cost-effective resiliency strategy for existing buildings since it requires few changes to the building's structure or floor elevations.

Within and On Top of Buildings

The Proposed Action would facilitate the relocation of mechanical equipment from basements and cellars to locations higher in or on top of buildings. The 2013 Flood Text included allowances for larger bulkheads on the top of multi-family buildings and for existing commercial or manufacturing buildings. It also included modifications in lower-density Residence Districts to facilitate the relocation of equipment from below-grade spaces to elsewhere within the building. Bulkheads were already considered permitted obstructions and permitted to extend above any required maximum heights or sky exposure planes if they remained within certain size limitations. The 2013 Flood Text increased these dimensions in the floodplain to encourage mechanical equipment to be moved onto roofs where they are more protected from flooding. For example, for buildings in R5 through R10 districts, and in Commercial and Manufacturing Districts, these changes permitted a 10 percent increase in bulkhead coverage. Alternatively, for existing buildings, it allowed an approximately 30 percent increase of their permitted height. Bulkheads in R3 and R4 Residence Districts were permitted smaller increases given their smaller scale. Screening was required for all bulkheads. The Proposed Action would maintain these provisions, while increasing their applicability for all new and existing buildings in Residence, Commercial and Manufacturing Districts. While there are no prohibitions on locating mechanical equipment in the cellars of non-residential structures, in the long-term it is safer to locate such equipment above the flood level.

In addition, the 2013 Flood Text also exempted buildings in the floodplain from limitations on interior mechanical space found in many lower-density Residence Districts, as this tended to force mechanical equipment into basements and cellars. This exemption would continue in the Proposed Action to ensure that mechanical equipment can be placed above the FRCE.

In Open Areas

The Proposed Action would also facilitate the placement of mechanical equipment above the FRCE outside of buildings to address situations where the structures cannot physically sustain additional loads or where centralizing this equipment in a single structure would be more efficient.

The 2013 Flood Text included allowances for mechanical equipment in various open areas regulated by zoning. The equipment can be considered permitted obstructions within yards, courts and other open areas if it stays within certain coverage and height limitations. These measures offered alternative locations for necessary mechanical equipment in lieu of basements and cellars. The provisions are available for existing single- and two-family residences as well as all other new and existing buildings.

The Proposed Action would consistently apply these allowances to all buildings regardless of whether they are new or existing. It would also modify some of the dimensional limitations to provide more rational standards to address various design challenges that have been identified since 2013. Mechanical equipment would have to be placed a minimum of five feet from property lines (though this could be reduced to three feet for substandard lots). Coverage would be limited to 25 percent of the minimum required open space, but the coverage would be restricted to 25 square feet if the equipment is located between the building and the front lot line, to minimize its effect on the street. The height would be limited to certain heights above the "reference plane" depending on the zoning district (10 feet in low-density Residence Districts, 15 feet in other Residence Districts, and 23 feet in Commercial and Manufacturing Districts). All equipment would be required to be screened by vegetation when located in front yards or between the street line and the street

wall and when placed in other locations, if more than one piece of equipment is provided, it would have to be screened by materials that are at least 50 percent opaque.

Finally, to allow for the construction of new utility structures on larger campus-style housing sites, the Proposed Action would permit buildings used predominantly for mechanical equipment to be considered permitted obstructions on properties larger than 1.5 acres. The structure's coverage would similarly be limited to 25 percent of the minimum required open space, and it would be required to be located at least 30 feet from any legally required windows with the exhaust stacks located above adjacent residential buildings. The structures would be subject to underlying height and setback controls.

Flood Protection Measures

The Proposed Action would allow more flood protection measures as permitted obstructions to accommodate their installation when required for compliance with flood-resistant construction standards and in situations where alternate flood protection strategies may be warranted.

The 2013 Flood Text allowed several flood protection measures, such as flood barriers and associated emergency egress, as permitted obstructions in various required open areas in recognition that they are required in front of building entrances. However, practitioners and other City agencies have subsequently identified additional viable measures that are not included and have noted the difficulty in finding on-site storage within buildings for temporary measures such as flood panels, both of which have limited the use of these measures.

The Proposed Action would therefore maintain the existing flood protection measures listed as permitted obstructions but add items which were not previously listed: landscaped berms and their associated floodgates. The Proposed Action would also allow space used for the storage of temporary flood panels to be exempted from floor area calculations, up to a maximum exemption of 15 square feet for each linear foot of protection and no more than 1,000 square feet of exemption per zoning lot. These standards account for the space that panels, trolleys and deployable access take up in a typical building configuration).

Accommodating Current and Future Flood Elevations on Waterfront Sites

The Proposed Action would modify provisions applicable in waterfront areas to better allow for coastal flood resilient design. The Proposed Action would permit the construction of bi-level esplanades that facilitate waterfront public access both close to the shoreline at the water level and at a higher elevation to meet flood design elevations at the building level. To facilitate these bi-level designs, the Proposed Action would also allow for increased retaining wall heights (generally up to three feet), provide new planting design options (including terraced planting), and provide slight reductions to the minimum required planting areas, and screening buffers so that access requirements can be satisfied.

The Proposed Action would facilitate the elevation of waterfront public access areas while maintaining visual connectivity to the water by raising the required level of visual corridors on upland streets from three feet above curb level to five feet. In addition, flood protection measures such as temporary flood control devices and associated permanent fixtures, structural landscaped berms, flood gates, and associated emergency egress systems would be permitted as obstructions in both waterfront yards and visual corridors subject to dimensional limitations (up to the FRCE or five feet above the lowest adjacent grade, whichever is higher).

Finally, to encourage waterfront sites to include soft shorelines (such as natural aquatic grasses) as a resiliency measure, the Proposed Action would allow the width of the required waterfront yard and shore public walkway to be reduced for soft shorelines by up to seven feet along up to 30 percent of the shoreline length of such yard.

Facilitate Future Recovery by Reducing Regulatory Obstacles

Power Systems and Other Mechanical Equipment

The Proposed Action would allow appropriately scaled power systems on lots throughout the city to make it easier to provide back-up energy, especially in the event of a disaster. Recovery efforts from Hurricane Sandy also identified issues with existing zoning regulations for mechanical equipment both within and outside of the floodplain. As described below, both of these issues extend beyond the floodplain and therefore modifications to address them are required on a citywide basis.

The 2013 Flood Text took the first step by allowing back-up systems, such as emergency generators, to be considered permitted obstructions in the required yards and open spaces for single- and two-family residences in the floodplain. The Proposed Action would expand this approach citywide in a more consistent fashion. Power systems (including, but not limited to, generators, solar energy systems, fuel cells, batteries, and other energy storage systems) would be added as a permitted obstruction, subject to dimensional limitations, that could encroach in any required open area in all zoning districts citywide. Similar to the limitations for the broader mechanical equipment category in the floodplain, power systems would have to be placed a minimum of five feet from property lines. Coverage would be limited to 25 percent of the minimum required open space, although the coverage would be restricted to 25 square feet if the equipment is located between the building and the front lot line to minimize its effect on the street. The height would be limited to certain heights above adjoining grade, or the reference plane for lots in the floodplain, depending on the zoning district (10 feet in low-density Residence Districts, 15 feet in other Residence Districts, and 23 feet in Commercial and Manufacturing Districts). Exempted equipment would be subject to requirements for enclosure or screening, depending on the equipment type and applicable zoning district.

In addition, the Proposed Action would clarify that the floor area exemption for mechanical equipment applies to mechanical, electrical, plumbing (MEP) equipment, as well as to fire protection and power systems, and necessary maintenance and access areas. This is consistent with the general practice at the DOB, but would ensure that buildings across the city would be treated consistently.

Ramps and Lifts

The Proposed Action would provide rules for accessible design that are consistent throughout the city. The 2013 Flood Text classified ramps and lifts as permitted obstructions in various forms of required open areas to help facilitate the elevation of living spaces. But in areas beyond the floodplain, these elements are permitted in required open areas in a piecemeal fashion. For example, lifts are classified as permitted obstructions in residential courts, yet they are not considered permitted obstructions in required yards. While DCP has been gradually adding them to the ZR as permitted obstructions through different text amendments, the Proposed Action would provide full consistency across the city by classifying both ramps and lifts as permitted obstructions in all required open areas.

Disaster Recovery Rules

The Proposed Action would include rules that could be made available to facilitate the recovery process from future disasters, some of which would be implemented now to help address the COVID-19 pandemic and its associated economic effects. The Proposed Action would include a series of disaster recovery provisions that could be made available through a text amendment when a disaster occurs. Adding these provisions to the ZR would offer a useful roadmap for the public, planners, and decision-makers when working to recover from a disaster. Applicable recovery provisions would be selected based on the issues caused by the disaster and would be available for a limited time period (set at the time of the text amendment). The provisions could be limited to designated recovery areas whose extent would be

determined based on the disaster's impacts and the City's recovery plans.

The recovery provisions would include a range of rules that could facilitate the recovery process from disasters which cause physical impacts. The 2013 Flood Text and the 2015 Recovery Text included a set of rules that facilitated the reconstruction and retrofit of Hurricane Sandy-damaged buildings, and therefore could also be useful after any other disasters that lead to a concentration of physical damage in the city. The Proposed Action would build upon this set of provisions and include modifications to the damage and destruction thresholds set forth in the underlying zoning rules to allow the reconstruction of non-complying buildings and non-conforming uses. It would also include modifications to building envelope rules to allow non-compliances to be increased, or even created, in the event new regulations would require damaged buildings be replaced in a slightly different shape and form. (For example, after Hurricane Sandy, new Building Code regulations were adopted and required buildings to elevate beyond the minimum level required prior to the storm.) These provisions would also include an allowance for property owners to use their tax lot as their zoning lot when applying zoning rules, which was found necessary in many waterfront communities. Lastly, it would allow the documentation process for obtaining DOB permits to be simplified for disaster-damaged buildings.

The recovery provisions would also facilitate the recovery process from a wider range of disasters including those that do not involve physical impacts, such as pandemics. This set of provisions is mostly drawn from the lessons learned during the COVID-19 pandemic response. The provisions would provide a framework to allow uses in zoning districts where they are not typically permitted to better respond to the situation then at hand. This framework would also allow possible relief from zoning rules that require permits to be sought with a specific timeframe, and those that require a certain level of construction and operation be completed to vest a project. It would also include possible relief from provisions that only allow non-conforming uses to remain inactive for a limited period of time (generally two years) before they can no longer legally reopen.

The Mayor's Executive Order No. 98 (March 12, 2020), which provided short-term relief from regulations hindering the pandemic recovery effort, included relief from construction timeframe and non-conforming use provisions. However, these allowances will cease when the Executive Order expires. Consistent with the general intent of the disaster recovery rules and the Mayor's Executive Order, the Proposed Action would extend the available timeframe for non-conforming uses to reactivate by an additional two years. In addition, the Proposed Action would allow for the extension of the timeframe required for substantial construction to take place under CPC special permits and authorizations for an additional term. These changes would provide greater certainty to residents, business and building owners, and therefore support the city's recovery from the ongoing pandemic.

Future Discretionary Actions

As detailed in **Chapter 1, "Project Description,"** the Proposed Action would also modify the existing special permits that can be granted by the BSA to facilitate resiliency investments in unique conditions, in addition to creation of a new special permit that would provide a wider range of use alternatives for the ground floor design of residential buildings as detailed above. As it is not possible to predict whether a discretionary action would be pursued on any one site in the future, the RWCDS for the Proposed Action does not consider specific developments. Instead, a conceptual analysis of these sites is provided in **Chapter 23, "Conceptual Analysis,"** to assess potential environmental impacts generically.

Prototypical Analysis Sites

As detailed in **Tables 2-5a** and **2-5b** below and illustrated in **Appendix A**, the Proposed Action would not result in changes to land uses on the Prototypical Analysis Sites as compared to the No-Action scenarios. In the future with the Proposed Action, it is expected that new buildings on the Prototypical Analysis Sites would exceed the minimum flood-resistant construction standards of Appendix G for buildings in both the

1% and 0.2% annual chance floodplains. Additionally, it is expected that existing buildings would retrofit to either meet the minimum flood-resistant construction standards of Appendix G or exceed it, depending on the cost and structural feasibility of construction for both the 1% annual chance floodplain and the 0.2% annual chance floodplain.

Table 2-5a: Prototypical Analysis Sites – With-Action Condition: 1% Annual Chance Floodplain

Site	Zoning District	Lot Area (SF)	1% Annual Chance Floodplain With-Action Scenario	With-Action FAR	Change between No-Action and With-Action Scenarios
1	R3-1	4,000	**RETROFIT** Three-story residential building w/ one DU (2,835 gsf / 1,800 zsf)	0.45	*- 65 gsf* **+ 8 feet**
2	R3-1	2,500	**NEW** Three-story residential building w/ one DU (2,231 gsf / 1,500 zsf)	0.60	**+ 250 zsf (+ 0.1 FAR)** **+ 631 gsf** **+ 5 feet**
3	R4	2,000	**RECONSTRUCTION** Four-story residential building w/ two DUs (3,927 gsf / 2,700 zsf)	1.35	**+ 1,092 gsf** **+ 15 feet**
4	R5	2,500	**RETROFIT** Four-story residential building w/ three DUs (5,630 gsf / 4,125 zsf)	1.65	**+ 130 gsf** **+ 9 feet**
5	R7A	11,500	**NEW** Eight-story residential building w/ 54 DUs (60,980 gsf / 46,000 zsf)	4.0	**+ 4,650 gsf** **+ 7 feet**
6	R6	100,000	**RETROFIT** Eight-story residential building w/ 320 DUs (247,200 gsf / 240,000 zsf)	2.4	*- 22,800 gsf*
7	R5 / C1-2	12,000	**NEW** Four-story mixed residential/commercial building w/ 10 DUs (19,800 gsf / 15,000 zsf)	1.25	*- 1,800 gsf* **+ 5 feet**
8	R7A / C1-2	2,500	**RETROFIT** Eight-story mixed residential/ commercial building w/ 13 DUs (12,105 gsf / 10,000 zsf)	4.0	**+ 1,305 gsf** **+ 10 feet**
9	R3-1 / C1-2	10,000	**NEW** One-story commercial building (6,000 gsf / 4,510 zsf)	0.45	**+ 310 zsf (+ 0.03 FAR)** **+ 960 gsf**
10	M1-1	10,000	**RETROFIT** One-story industrial building (12,000 gsf / 10,000 zsf)	1.0	**+ 500 gsf**
11	R4	2,500	**NEW** Three-story + attic residential building w/ one DU (3,461 gsf / 2,250 zsf)	0.90	**+ 5 zsf** **+ 266 gsf** *- 5 feet*
12	R3A	2,500	**RETROFIT** Two-story residential building w/ one DU (2,254 gsf / 1,102 zsf)	0.44	**+ 50 zsf (+ 0.02 FAR)** **+ 50 gsf** **+ 8 feet**
13	R3X	2,000	**RETROFIT** Three-story residential building w/ two DUs (2,130 gsf / 1,400 zsf)	0.50	**+ 30 zsf (+ 0.01 FAR)** **+ 30 gsf** **+ 9 feet**
14	R8 / C2-4	50,000	**SITE MODIFICATION** Waterfront Site	N/A	**N/A**

Note: Refer to **Appendix A** for illustrative renderings of the Prototypical Analysis Sites.
*Site 14 illustrates the proposed modifications specific to waterfront regulations for open space. See **Appendix A** for more details.

It is assumed that the 14 Prototypical Analysis Sites would maximize their development under the Proposed Action. Developments in the 0.2% annual chance floodplain generally follow the development rationale for the 1% annual chance floodplain, unless the limited height flexibility in the 0.2% annual chance floodplain does not allow for it. As detailed in **Table 2-5a** and **2-5b**, in both the 1% and 0.2% annual chance floodplains, five Prototypical Analysis Sites (Nos. 2, 5, 7, 9, and 11) would accommodate new development under With-Action conditions, and the remaining nine sites (Nos. 1, 3, 4, 6, 8, 10, 12, 13, and 14) would be retrofitted, reconstructed, or would undergo site modifications in the future with the Proposed Action.

Table 2-5b: Prototypical Analysis Sites – With-Action Condition: 0.2% Annual Chance Floodplain

Site	Zoning District	Lot Area (SF)	0.2% Annual Chance Floodplain With-Action Scenario	With-Action FAR	Change between No-Action and With-Action Scenarios
1	R3-1	4,000	**RETROFIT** Three-story residential building w/ one DU (2,835 gsf / 1,800 zsf)	0.45	*- 65 gsf* **+ 6 feet**
2	R3-1	2,500	**NEW** Three-story + attic residential building w/ one DU (2,231 gsf / 1,500 zsf)	0.60	**+ 250 zsf (+ 0.1 FAR)** **+ 631 gsf** **+ 8 feet**
3	R4	2,000	**RECONSTRUCTION** Three-story residential building w/ two DUs (2,835 gsf / 2,700 zsf)	1.35	**+ 9 feet**
4	R5	2,500	**RETROFIT** Four-story residential building w/ three DUs (5,630 gsf / 4,125 zsf)	1.65	**+ 130 gsf** **+ 9 feet**
5	R7A	11,500	**NEW** Eight-story residential building w/ 54 DUs (60,980 gsf / 46,000 zsf)	4.0	**+ 2,940 gsf** **+ 10 feet**
6	R6	100,000	**RETROFIT** Eight-story residential building w/ 320 DUs (247,200 gsf / 240,000 zsf)	2.4	*- 22,800 gsf*
7	R5 / C1-2	12,000	**NEW** Four-story mixed residential/commercial building w/ 10 DUs (19,850 gsf / 15,000 zsf)	1.25	*- 190 gsf* **+ 5 feet**
8	R7A / C1-2	2,500	**RETROFIT** Eight-story mixed residential/ commercial building w/ 13 DUs (12,105 gsf / 10,000 zsf)	4.0	**+ 1,305 gsf** **+ 10 feet**
9	R3-1 / C1-2	10,000	**NEW** One-story commercial building (6,000 gsf / 4,510 zsf)	0.45	**+ 310 zsf (+0.03 FAR)** **+ 960 gsf** **+ 6 feet**
10	M1-1	10,000	**RETROFIT** One-story industrial building (12,000 gsf / 10,000 zsf)	1.0	**+ 500 gsf**
11	R4	2,500	**NEW** Two-story + attic residential building w/ one DU (3,182 gsf / 1,925 zsf)	0.77	**+ 45 zsf (+ 0.02 FAR)** **+ 1,072 gsf** *- 1 foot*
12	R3A	2,500	**RETROFIT** Two-story residential building w/ one DU (2,254 gsf / 1,102 zsf)	0.44	**+ 50 zsf (+ 0.02 FAR)** **+ 50 gsf** **+ 8 feet**
13	R3X	2,000	**RETROFIT** Three-story residential building w/ two DUs (2,130 gsf / 1,400 zsf)	0.50	**+ 30 zsf (+0.01 FAR)** **+ 30 gsf** **+ 9 feet**
14	R8 / C2-4	50,000	**SITE MODIFICATION** Waterfront Site	N/A	**N/A**

Note: Refer to **Appendix A** for illustrative renderings of the Prototypical Analysis Sites.
*Site 14 illustrates the proposed modifications specific to waterfront regulations for open space. See **Appendix A** for more details.

Assessment

While the Proposed Action includes a range of zoning changes to meet its intended goals, it would continue the overarching goal of the 2013 Flood Text to maintain prevailing land uses and the planned density in neighborhoods across the floodplain, while helping buildings and neighborhoods of all types to be resilient in the long-term.

As shown in **Tables 2-5a** and **2-5b**, the Proposed Action would not modify permitted land uses or the type of development on the Prototypical Analysis Sites as compared to No-Action conditions. Although the Proposed Action would not allow for increases in maximum permitted floor area on these sites, changes to building placement, setbacks, yards, lot coverage, and building heights would allow for the construction of slightly different buildings than under No-Action conditions, resulting in minor changes to total square footages, lot coverage, and building heights.

Overall, implementation of the Proposed Action would improve the ability of the city's many flood-prone neighborhoods to withstand and recover quickly from future storms. The Proposed Action would not result in significant adverse impacts to zoning in the city's floodplains, but rather, would provide enhanced zoning allowances and design requirements in order to help building owners to better accommodate projected sea level rise when designing new buildings or retrofitting existing ones, without creating incongruous and uninviting streetscapes.

Public Policy

Waterfront Revitalization Program

As noted above, the Proposed Action must be assessed for its consistency with the policies of the WRP, as it affects zoning regulations in the city's floodplains. As mentioned above, the WRP incorporates waterfront policies in a manner consistent with the goals set forth in *Vision 2020: The New York City Comprehensive Waterfront Plan* (per the 2020 *CEQR Technical Manual*, Chapter 4, pages 4-6). The WRP includes policies designed to maximize the benefits derived from economic development, environmental preservation, and public use of the waterfront, while minimizing the conflicts among those objectives. The WRP Consistency Assessment Form (CAF), which is provided in **Appendix D**, lists the WRP policies and indicates whether the Proposed Action would promote or hinder each policy, or if that policy would be acceptable. This section provides additional information for the policies that have been checked "promote" or "hinder" in the WRP CAF.

It should be noted that an updated Comprehensive Waterfront Plan is currently being developed by the City, providing a vision for the city's waterfront for the next decade and beyond. The forthcoming plan will substantially address coastal flood resiliency at multiple levels, including building scale and shoreline measures. This multi-layered approach was outlined in *Vision 2020* in 2011, and is expected to be a significant component of the new Comprehensive Waterfront Plan. Specifically, the new plan will lay out a framework for coastal flood resiliency that is informed by other citywide initiatives and land use planning strategies, including the Proposed Action.

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.*

As detailed above, the city's floodplains encompass well-established residential and commercial neighborhoods. Although the Proposed Action is not expected to induce development where it would not otherwise have occurred absent the Proposed Action, it would encourage resiliency throughout the city's 1% and 0.2% annual chance floodplains. The Proposed Action would greatly expand the current availability of optional regulations to allow more building owners to design or retrofit their buildings to meet flood-resistant construction standards proactively. The Proposed Action would be applicable to all lots located wholly or partially within the current 1% and 0.2% annual chance floodplains (the latter serving as a proxy for the projected 2050s 1% annual chance floodplain). This geographic expansion over existing conditions is a sensible precautionary approach that would allow the City to proactively adapt to future flood risk. To address challenges that may affect areas located beyond the floodplain, select provisions in the Proposed Action would be applicable to all lots in the city.

1% Annual Chance Floodplain

The 1% annual chance floodplain encompasses approximately 65,500 lots across the city's five boroughs (refer to **Figure 1-1** in **Chapter 1**). The existing provisions are currently available to buildings located wholly or partially within the 1% annual chance floodplain. The Proposed Action would modify the way special zoning rules apply in the floodplain by extending the flexibility to any lot where at least a portion is located within this high-risk flood zone. Additionally, by allowing all buildings located within a lot in this area to use the Proposed Action rules, property owners would be able to more easily and proactively comply with resiliency standards in the Building Code or otherwise undertake partial resiliency improvements. For example, a residential campus with multiple buildings would be able to apply the same zoning rules and flood protection standards to all buildings located on the property, even those structures that are not located within the 1% annual chance floodplain. This strategy would not only simplify the design process, but it would encourage more buildings to proactively meet flood-resistant construction standards.

0.2% Annual Chance Floodplain

The 0.2% annual chance floodplain encompasses approximately 36,700 lots across the city's five boroughs (refer to **Figure 1-1** in **Chapter 1**). The existing provisions are currently not available to buildings located in the 0.2% annual chance floodplain. As a result, building owners in this area may be hindered by zoning when trying to proactively invest in resiliency measures. DCP intends to use the 0.2% annual chance floodplain geography as a proxy to the 2050s projected 1% annual chance floodplain (**Figure 2-2**), given that this area is already included within accepted regulatory maps. The Proposed Action would therefore apply to any lot where at least a portion is located within this moderate-risk flood zone. This would encourage property owners to proactively comply with resiliency standards in the Building Code or otherwise undertake partial resiliency improvements.

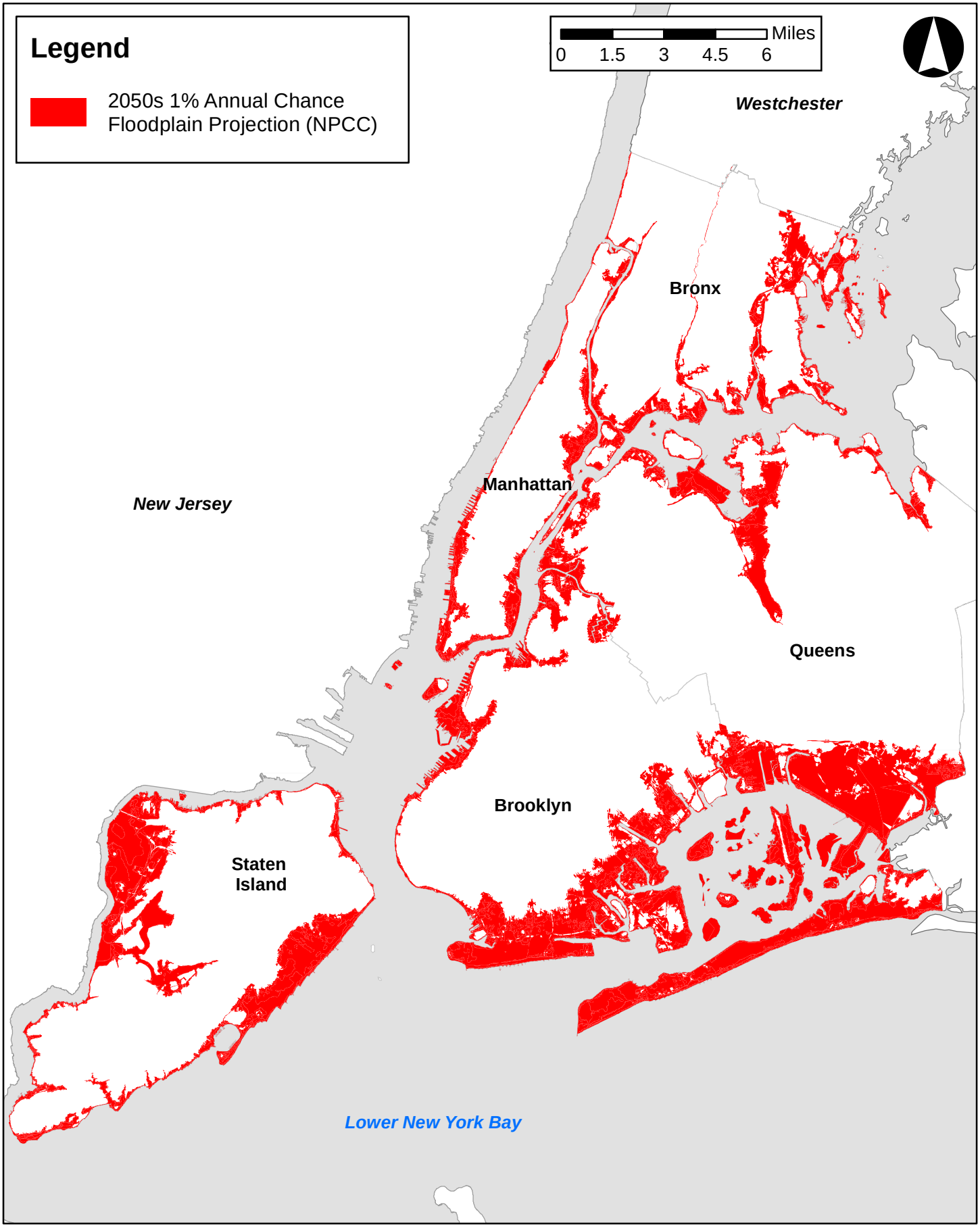
As detailed further in **Chapter 1, "Project Description,"** the Proposed Action would provide zoning allowances to permit an enhanced building envelope for structures in the city's floodplains in order to allow building owners to better accommodate projected sea level rise when designing new buildings or retrofitting existing ones. The Proposed Action would encourage resiliency throughout the current and future floodplains, allowing all building owners in areas subject to flood risk the option to proactively incorporate resiliency standards into their buildings, even when these standards aren't required by FEMA and Appendix G of the New York City Building Code; support long-term resilient design of all building types with floodplain zoning rules facilitating protection from coastal flooding for all buildings, independent of their age, typology, or specific location; allowing building owners to incrementally incorporate resiliency improvements into all buildings and waterfront sites, including existing structures that aren't able to fully meet Appendix G; and facilitate future recovery by reducing regulatory obstacles with zoning rules assisting vulnerable populations and the recovery process after a future storm or other type of disaster, including the ongoing COVID-19 pandemic. While the Proposed Action includes a range of zoning changes to meet these goals, it would continue the overarching goal of the 2013 Flood Text to maintain prevailing land uses and the planned density in neighborhoods across the floodplain, while helping buildings and neighborhoods of all types to be resilient in the long-term. Moreover, to promote a safe and lively pedestrian environment, the Proposed Action would encourage active dry-floodproofed ground floor spaces along the city's retail corridors. With the incorporation of these provisions in the city's coastal zone, the Proposed Action would promote Policy 1.1 of the WRP.

> *Policy 1.2: Encourage non-industrial development with uses and design features that enliven the waterfront and attract the public.*

As noted above, although the Proposed Action is not expected to induce development where it would not have occurred absent the Proposed Action, it would encourage resiliency throughout the city's 1% and 0.2%

Figure 2-2

NPCC's 2050s 1% Annual Chance Floodplain Projections



annual chance floodplains. The Proposed Action would provide an enhanced building envelope for structures in the city's floodplains in order to allow building owners to better accommodate projected sea level rise when designing new buildings or retrofitting existing ones, without creating incongruous and uninviting streetscapes. The Proposed Action would provide a wider range of options to comply with the requirements, in order to better accommodate different neighborhood contexts, lot conditions and ground-floor uses. For example, elevated commercial uses would be able to select options that help mitigate blank walls through changes to the building's façade (fenestration and wall treatment), or elements that can be placed at the sidewalk level (planters or street furniture). As another example, rowhouses would be able to provide elevated porches or bay windows to help soften taller facades. Single-family homes on constrained lots would also have more options to comply with the requirements, such as by providing wall treatment and additional fenestration. Furthermore, access for all buildings would be encourage to be at grade. These design options would help activate the streetscape of residential and commercial streets in the floodplain. Ensuring accessible designs that make streetscapes more inviting are expected to enliven retail corridors in the city's floodplains, attracting the public. As such, the Proposed Action would promote Policy 1.2 of the WRP, encouraging non-industrial design features that would enliven the waterfront and attract the public.

> *Policy 1.3: Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.*

As detailed above, the city's floodplains encompass well-established residential and commercial neighborhoods as well as industrial districts served by existing public facilities and infrastructure. The city's floodplains are well-served by public transportation, and as discussed in greater detail in **Chapter 4, "Community Facilities & Services,"** the 1% and 0.2% annual chance floodplains are served by existing police, fire, and health care facilities, libraries, schools, and child care centers. As discussed further in **Chapter 11, "Water & Sewer Infrastructure,"** the city's floodplains are located within combined sewer areas. Although the Proposed Action is not expected to induce development where it would not have occurred absent the Proposed Action, it would encourage resiliency throughout the city's 1% and 0.2% annual chance floodplains, providing enhanced building envelopes for structures to allow building owners in the city's floodplains to better accommodate projected sea level rise when designing new buildings or retrofitting existing ones. As such, the Proposed Action would promote Policy 1.3 of the WRP.

> *Policy 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.*

As detailed in **Chapter 1, "Project Description,"** the Proposed Action, which is aimed to improve upon and make permanent existing temporary zoning rules of the 2013 Flood Text and 2015 Recovery Text, would be applicable in the city's 1% and 0.2% annual chance floodplains (illustrated in **Figure 1-1** in **Chapter 1**). The goals of the Proposed Action include encouraging resiliency throughout the city's current and future floodplains; supporting long-term resilient design of all building types by offering flexibility in the zoning framework; allowing for adaptation over time through incremental retrofits; and facilitating future storm recovery by reducing regulatory obstacles. In summary, the Proposed Action would provide clear and simple rules that treat all buildings in the floodplain as similarly as possible, to guide long-term resilient design across New York City's 1% and 0.2% annual chance floodplains, and to prepare the city's neighborhoods to withstand future storms and disaster events.

The Proposed Action would advance Policies 1.5 and 6.2 of the WRP. As discussed in further detail above, the vast majority of all buildings located in the city's floodplains are residential, and a smaller number are commercial or mixed commercial/residential buildings. No new vulnerable, critical, or potentially hazardous features of buildings would be facilitated in areas that would flood from future Mean Higher High Water or the 1% annual chance flood by the 2050s under the 90th percentile of sea level rise projections, as the Proposed Action would provide zoning allowances coupled with enhanced design requirements to allow building owners to better accommodate projected sea level rise when designing new buildings or retrofitting

existing ones, increasing the building's and its content's safety. The Proposed Action would provide building owners with additional zoning flexibility to relocate MEP equipment or install backup systems such as generators above areas at risk of being flooded, including on roofs or in new, separate structures. Therefore, new vulnerable and critical features within the 1% and 0.2% annual chance floodplains would be designed with flood-resistant construction standards in the future with the Proposed Action, and the Proposed Action would not inhibit the ability of new vulnerable features to be made resilient through future adaptive actions, like retrofits.

The Proposed Action would continue to allow building envelopes to be measured from the FRCE to facilitate all buildings in meeting flood-resistant construction standards. Additionally, to create a consistent framework for height measurement, the Proposed Action would allow building heights to be measured from a new "reference plane" that is up to 10 feet above the base plane or curb level in the 1% annual chance floodplain, and up to five feet in the 0.2% annual chance floodplain. To ensure that the additional height is tied to actual improvement in the building's resiliency, the building would have to comply with "flood-resistant construction standards" and its FSAFE would have to be located at or above the chosen reference plane height. This allowance would assist residential and mixed residential/commercial buildings, including those that cannot be physically elevated, to have their living spaces raised beyond current flood projections and therefore be resilient in the long term.

The Proposed Action includes a series of regulations intended to incentivize the floodproofing of ground floors, encourage active uses to be kept at the street level to promote more resilient neighborhoods, and encourage internal building access. As detailed further in **Chapter 1**, the Proposed Action would provide a consistent floor area exemption for wet-floodproofed ground floor spaces for all buildings to promote long-term resiliency improvements. To promote a safe and lively pedestrian environment, the Proposed Action would encourage active dry-floodproofed ground floor spaces along the city's retail corridors. Additionally, the Proposed Action would ensure that floor area exemptions are given only when buildings are floodproofed and remove incentives to build low-quality ground-floors, and would include limited street wall modifications when access or flood protection measures are provided outside of the building. The Proposed Action would also accommodate resilient buildings and raised first floors by addressing conflicts with existing ground floor level zoning requirements.

The Proposed Action also includes more tailored zoning regulations to address special situations found in the city's floodplain, including small or narrow lots, as well as for existing buildings that do not meet current zoning requirements. While these conditions exist throughout the floodplain, they are often concentrated in certain neighborhoods, such as the bungalow communities often found along the water's edge. The Proposed Action would expand the availability of the popular cottage envelope option, first created in the 2015 Recovery Text, to small lots throughout the floodplain. This would allow for the construction of resilient buildings that better match their surroundings and accommodate better layouts. The Proposed Action would also continue to encourage single- and two-family residences on narrow lots to have parking located below the building.

Lastly, the Proposed Action would facilitate the relocation of mechanical equipment from basements and cellars to locations higher in or on top of buildings, or the placement of mechanical equipment above the FRCE outside of buildings to address situations where the structures cannot physically sustain additional loads or where centralizing this equipment in a single structure would be more efficient. This would help protect mechanical equipment from flood damage in future storms.

Therefore, the Proposed Action would promote New York City policies regarding adaptation to climate change. In the long term, the Proposed Action, in conjunction with coastal protection strategies and infrastructure improvements that are being pursued by the City and other state and federal agencies, would help to fully realize the vision of a more resilient New York City, integrating consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development.

Policy 2: Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.

Policy 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.

As detailed in **Chapter 1, "Project Description,"** the Proposed Action, which is aimed to improve upon and make permanent existing temporary zoning rules of the 2013 Flood Text and 2015 Recovery Text, would be applicable in the city's 1% and 0.2% annual chance floodplains (illustrated in **Figure 1-1** in **Chapter 1**). The goals of the Proposed Action include encouraging resiliency throughout the city's 1% and 0.2% annual chance floodplains; supporting long-term resilient design of all building types by offering flexibility in the zoning framework; allowing for adaptation over time through incremental retrofits; and facilitating future storm recovery by reducing regulatory obstacles. In summary, the Proposed Action would provide clear and simple rules that treat all buildings in the floodplain as similarly as possible, to guide long-term resilient design across New York City's 1% and 0.2% annual chance floodplains, and to prepare the city's neighborhoods to withstand future storms.

The Proposed Action would advance Policies 2.5 and 6.2 of the WRP. No new vulnerable, critical, or potentially hazardous features of industrial buildings or infrastructure would be facilitated in areas that would flood from future Mean Higher High Water or the 1% annual chance flood by the 2050s under the 90th percentile of sea level rise projections, as the Proposed Action would provide zoning allowances coupled with enhanced design requirements to allow building owners to better accommodate projected sea level rise when designing new buildings or retrofitting existing ones, increasing the building's and its content's safety. The Proposed Action would provide building owners with additional zoning flexibility to relocate MEP equipment or install backup systems such as generators above areas at risk of being flooded, including on roofs or in new, separate structures. Therefore, new vulnerable and critical features within the 1% and 0.2% annual chance floodplains would be designed with flood-resistant construction standards in the future with the Proposed Action, and the Proposed Action would not inhibit the ability of new vulnerable features to be made resilient through future adaptive actions, like retrofits.

The Proposed Action would recalibrate various floor area exemptions to continue to incentivize buildings to floodproof without giving away extensive amounts of extra floor area; encourage uses to be kept at the street level; and if uses are elevated, encourage buildings to provide internal access. To accomplish these three aims, spaces that are wet-floodproofed, in both new and existing buildings, would be exempted from floor area calculations, as these spaces would only be used for parking, storage and building access, as required by flood-resistant construction standards. This floor area allowance would be offered in all zoning districts, to help incentivize internal access at grade. Furthermore, the Proposed Action would allow a small floor area incentive for active uses to be kept at grade and dry-floodproofed. This would be achieved by exempting the first 30 feet of the floor space as measured from the street wall of the building, when facing primary streets as defined by zoning, since these are the areas in which retail continuity is key for the success of the street. This allowance would continue to incentivize buildings to dry-floodproof, as opposed to elevating active uses. Spaces that are exempted from floor area would not count towards parking calculations, as many buildings would face difficulties in fitting the extra parking spots that would otherwise be required.

While the Proposed Action would provide floor area incentives for building owners to take future risk into account and to provide a more accessible design, others may still decide to simply elevate the first floor of the building to the DFE. To encourage access to be designed internally in those situations, The Proposed Action would allow areas used for internal ramps and stairs to be exempted from floor area calculations.

The Proposed Action would also allow up to 500 sf of floor area to be added to existing heavy commercial and manufacturing buildings. This recommendation came from the *Resilient Industry* report, issued in 2018, which recognized the limitations of retrofitting existing industrial uses, especially those in districts with

limited floor area allowances. Aside from facilitating the relocation of valuable equipment to above the DFE, this minor floor area allowance would also provide businesses the option of elevating important spaces, such as offices or storage rooms, above the flood elevation, within either a second story or a mezzanine. Moreover, the Proposed Action would allow spaces used for the storage of flood panels to also be exempted from flood area, provided up to 15 sf is exempted from floor area for every linear foot of protection, and provided that no more than 1,000 sf is exempted.

Therefore, the Proposed Action would promote New York City policies regarding adaptation to climate change. In the long term, the Proposed Action, in conjunction with coastal protection strategies and infrastructure improvements that are being pursued by the City and other state and federal agencies, would help to fully realize the vision of a more resilient New York City, integrating consideration of climate change and sea level rise into the planning and design of waterfront industrial development and infrastructure.

Policy 6: Minimize the 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.*

As detailed in **Chapter 1, "Project Description,"** the Proposed Action would provide homeowners, business owners, and practitioners living and working in the city's floodplains the option to design or otherwise retrofit buildings to: (a) reduce damage from future coastal flood events, (b) be resilient in the long-term by accounting for climate change, and (c) potentially save on long-term flood insurance costs. In addition, it would allow resiliency improvements to be more easily incorporated on waterfront sites at the water's edge and in public spaces, as well as provide zoning regulations to help facilitate the city's long-term recovery from the COVID-19 pandemic and other future disasters. Overall, implementation of the Proposed Action would improve the ability of the city's many flood-prone neighborhoods to withstand and recover quickly from future storms and other disaster events.

In the future with the Proposed Action, buildings and lots in both the city's 1% and 0.2% annual chance floodplains would have access to rules that allow owners to invest in resiliency improvements to fully meet or exceed flood-resistant construction standards, even when these standards are not required by FEMA or Appendix G of the New York City's Building Code. The Proposed Action would also provide zoning allowances coupled with enhanced design requirements would allow building owners to better accommodate projected sea level rise when designing new buildings or retrofitting existing ones, without creating incongruous and uninviting streetscapes. This would increase the building's and its content's safety and allow flood insurance costs to be reduced, while ensuring an accessible design that makes the streetscape more inviting. Additionally, building owners would have additional zoning flexibility to relocate MEP equipment or install backup systems such as generators above areas at risk of being flooded, including on roofs or in new, separate structures in the future with the Proposed Action. Furthermore, the Proposed Action would modify provisions applying in the waterfront areas to ensure that existing waterfront zoning regulations allow sites to incorporate coastal flood resilient design, and would update existing provisions to allow several flood protection measures as permitted obstructions, including temporary flood shields and associated emergency egress, flood barriers, retaining walls, raised yards, landscaped berms, and floodgates in yards, open spaces, and waterfront yards, which would help minimize losses from flooding and erosion.

Additionally, the Proposed Action would limit the growth of vulnerable populations in nursing homes in high-risk areas of the floodplain. Nursing homes are licensed to house populations that require continual medical care, but research shows that this dependency ca be strained whether nursing homes shelter in place or evacuate prior to a coastal storm event. While all nursing homes in hurricane evacuation zones in the city are subject to mandatory evacuations during a declared emergency, the City believes it would be appropriate

to limit the growth of nursing homes in high-risk areas to lessen the health consequences and logistical challenges of evacuating the residents of these facilities. The Proposed Action would therefore prohibit the development of new nursing homes and restrict the enlargement of existing facilities within the 1% annual chance floodplain and other selected geographies (illustrated in **Appendix C**) likely to have limited vehicular access because of a storm event. The modification would restrict the enlargement of existing nursing homes in this geography to a maximum of 15,000 sf to allow for improvements, including those related to resiliency. These restrictions would also apply to the nursing home portion of Continuing Care Retirement Communities (CCRCs). The CPC special permit (ZR Section 74-901) that permits nursing homes in areas where they are not allowed as-of-right would not be available in this geography.

Lastly, as detailed in **Chapter 1**, the Proposed Action would create a zoning framework that facilitates recovery from future disasters, through the implementation of rules that make it easier for damaged buildings to be reconstructed would be enabled in the event of a future disaster. This would allow residents and neighborhoods to recover faster and allow the City to more quickly offer disaster assistance to those who are impacted. Therefore, the Proposed Action would promote Policy 6.1 of the WRP.

> *Policy 6.2: Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in the* 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.*

As outlined in *The New York City Waterfront Revitalization Program Climate Change Adaptation Guidance* document, for programmatic, non-site-specific actions (such as area-wide zoning text amendments), the general methodology approach should be utilized to assess a project or action's consistency with Policy 6.2 of the WRP. The general methodology consists of the following steps:

1. *Identify vulnerabilities and consequences.* The goal of this first step is to assess the project's vulnerabilities to future coastal hazards and what potential consequences may be.

    a. *Assess the project area's exposure to current and future flood risk.*

    b. *Identify if the project or action would facilitate the development of any vulnerable, critical, or potentially hazardous features within areas exposed to flooding from Mean Higher High Water or 1% Annual Chance Flood by the 2050s under the 90th percentile of sea level rise projections.*

2. *Identify adaptive strategies.* The goal of Step 2 is to assess how the vulnerabilities and consequences identified in Step 1 are addressed through the project's design and planning. Step 2 assesses how applicable codes and regulations, planned flood damage reduction elements and adaptive measures, or likely future infrastructure investments (beyond the scope of the proposed project) would or would not reduce potential flood damage for any proposed vulnerable, critical, or potentially hazardous feature.

3. *Assess Policy consistency.* The final step is to assess whether the project is consistent with Policy 6.2 of the WRP.

An assessment of the Proposed Actions' consistency with Policy 6.2, pursuant to the general methodology outlined above, is provided below.

As detailed above, the Proposed Action would be applicable in the city's 1% and 0.2% annual chance floodplains (illustrated in **Figure 1-1** in **Chapter 1**), and both areas are located in the NPCC's 2050s 1% annual chance floodplain projection (refer to **Figure 2-2**). Additionally, select provisions of the Proposed

Action would be applicable citywide. As detailed in **Chapter 1, "Project Description,"** the Proposed Action includes a zoning text amendment to update the Special Regulations Applying in Flood Hazard Areas (Article VI, Chapter 4) of the New York City Zoning Resolution (ZR), which includes the 2013 Flood Text and the 2015 Recovery Text. These temporary zoning rules were adopted on an emergency basis to remove zoning barriers that were hindering the reconstruction and retrofitting of buildings affected by Hurricane Sandy and to help ensure that new construction there would be more resilient. The 2013 Flood Text provisions are set to expire with the adoption of new and final FEMA FIRMs, anticipated to occur in the next few years. Applicability of the 2015 Recovery Text expired in 2020. Therefore, DCP is proposing the Proposed Action to improve upon and make permanent the relevant provisions of the existing temporary zoning rules of the 2013 Flood Text and 2015 Recovery Text. The Proposed Action also includes updates to other sections of the ZR, including the Special Regulations Applying in the Waterfront Area (Article VI, Chapter 2) and provisions within various Special Purpose Districts.

The Proposed Action would provide homeowners, business owners, and practitioners living and working in the city's floodplain the option to design or otherwise retrofit buildings to: (a) reduce damage from future coastal flood events, (b) be resilient in the long-term by accounting for climate change, and (c) potentially save on long-term flood insurance costs. In addition, it would allow resiliency improvements to be more easily incorporated on waterfront sites at the water's edge and in public spaces. Overall, implementation of the Proposed Action would improve the ability of the City to withstand and recover quickly from future storms. The Proposed Action would advance Policy 6.2 of the WRP. No new vulnerable, critical, or potentially hazardous features of buildings would be facilitated in areas that would flood from future Mean Higher High Water or the 1% annual chance flood by the 2050s under the 90th percentile of sea level rise projections, as the Proposed Action would provide zoning allowances coupled with enhanced design requirements to allow building owners to better accommodate projected sea level rise when designing new buildings or retrofitting existing ones, increasing the safety of the building and its contents. The Proposed Action would provide building owners with additional zoning flexibility to relocate MEP equipment or install backup systems such as generators above areas at risk of being flooded, including on roofs or in new, separate structures. Therefore, new vulnerable and critical features within the 1% and 0.2% annual chance floodplains would be designed with flood-resistant construction standards in the future with the Proposed Action, and the Proposed Actions would not inhibit the ability of new vulnerable features to be made resilient through future adaptive actions, like retrofits.

Proposed modifications to waterfront zoning regulations that would occur in the future with the Proposed Action to promote the incorporation of flood damage reduction features on sites in the city's floodplain designed to protect waterfront properties from flooding, waves, and storm damage would also advance WRP Policy 6.2. Therefore, the Proposed Action would promote New York City policies regarding adaptation to climate change. In the long-term, the Proposed Action, in conjunction with coastal protection strategies and infrastructure improvements that are being pursued by the City and other state and federal agencies,[4] would help to fully realize the vision of a more resilient New York City.

Policy 8: Provide 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.*

As detailed in **Chapter 1, "Project Description,"** the Proposed Action would modify provisions applying on waterfront sites to ensure that existing waterfront zoning regulations allow sites to incorporate coastal

[4] Coastal protection strategies and infrastructure improvements includes climate adaptation measures such as those identified in the City's *Lower Manhattan Climate Resiliency Study* issued in March 2019, the East Side Coastal Resiliency Project that is projected to be completed by 2023, and South Shore of Staten Island Hurricane and Storm Damage Reduction Project being initiated by the US Army Corps of Engineers. Examples of such measures include floodwalls and deployable flip-up barriers to protect upland areas from storm surges. For more information, refer to the Lower Manhattan Climate Resiliency Study.

flood resilient design. Proposed modifications would facilitate construction of elevated shore public walkways in order to address sea level rise and the risk of future tidal flooding, while also providing a higher degree of flood protection against future storm events. Proposed modifications would also facilitate the construction of bi-level esplanades and circulation paths that allow for continued waterfront public access in the city's floodplains, while grading up to meet flood design elevations along the remainder of the waterfront site. The Proposed Action would also include modifications to facilitate the elevation of waterfront public access areas while maintaining visual connectivity to the waterfront. Modifications would allow for establishment of an elevated reference point for measuring visual corridors from an upland street that more closely reflects design flood elevations utilized across the waterfront site and building. Therefore, the Proposed Action would preserve, protect, maintain, and enhance physical, visual, and recreational access to the waterfront while promoting resiliency in the city's floodplains, promoting WRP Policy 8.1.

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.*

As noted above, although the Proposed Action would provide an enhanced building envelope for structures in the city's floodplains in order to allow building owners to better accommodate projected sea level rise when designing new buildings or retrofitting existing ones, without creating incongruous and uninviting streetscapes. Ensuring accessible designs that make streetscapes more inviting are expected to enliven retail corridors in the city's floodplains, protecting and improving the visual quality associated with New York City's urban context. As such, the Proposed Action would promote Policy 9.1 of the WRP.

Housing New York

As discussed above, the Proposed Action is not expected to induce development where it would not have occurred absent the Proposed Action, but is expected to encourage resiliency throughout the city's 1% and 0.2% annual chance floodplains. The Proposed Action would not prohibit the development of affordable housing in the city's floodplains, and no residential DUs are expected to be eliminated as a result of the Proposed Action. As detailed in **Chapter 1, "Project Description,"** the Proposed Action would encourage building owners to elevate living spaces beyond current flood projections in order to be resilient in the long term. Although this could result in changes to the location of DUs in buildings (i.e., removal of basement apartments, replaced with upper-story units), it would not reduce the number of DUs in the city's floodplains as compared to No-Action conditions. As such, the Proposed Action would not conflict with *Housing New York*.

Vision Zero

As noted above, the Proposed Action is not expected to induce development where it would not have occurred absent the Proposed Action. As detailed in **Chapter 14, "Transportation,"** the Proposed Action would not generate pedestrian or vehicular trips that would significantly worsen pedestrian or vehicular safety conditions in the city's floodplains. Therefore, it would be consistent with this public policy.

Sustainability & OneNYC / PlaNYC

As detailed in the 2020 *CEQR Technical Manual* and summarized above, to ensure that publicly sponsored projects align with the broader sustainability priorities and goals the City has set for itself, it is appropriate that the *OneNYC* initiatives be considered. If a publicly-sponsored project is, itself, implementing a *OneNYC* initiative, a detailed sustainability assessment would likely be inappropriate.

As detailed in **Chapter 1, "Project Description,"** the Proposed Action would provide homeowners, business owners, and practitioners living and working in the city's floodplains the option to design or otherwise retrofit buildings to: (a) reduce damage from future coastal flood events, (b) be resilient in the long-term by accounting for climate change, and (c) potentially save on long-term flood insurance costs. In addition, it would allow resiliency improvements to be more easily incorporated on waterfront sites at the water's edge and in public spaces. Overall, implementation of the Proposed Action would improve the ability of the city to withstand and recover quickly from future storms and other disaster events.

In the future with the Proposed Action, buildings and lots in both the city's 1% and 0.2% annual chance floodplains would have access to rules that allow owners to invest in resiliency improvements to fully meet or exceed flood-resistant construction standards, even when these standards are not required by FEMA or Appendix G of the New York City's Building Code. The Proposed Action would also provide zoning allowances coupled with enhanced design requirements would allow building owners to better accommodate projected sea level rise when designing new buildings or retrofitting existing ones, without creating incongruous and uninviting streetscapes. This would increase the building's and its content's safety and allow flood insurance costs to be reduced, while ensuring an accessible design that makes the streetscape more inviting. Additionally, building owners would have additional zoning flexibility to relocate MEP equipment or install backup systems such as generators above areas at risk of being flooded, including on roofs or in new, separate structures in the future with the Proposed Action. Lastly, as detailed in **Chapter 1**, the Proposed Action would create a zoning framework that facilitates recovery from future disasters, through the implementation of rules that make it easier for damaged buildings to be reconstructed would be enabled in the event of a future disaster. This would allow residents and neighborhoods to recover faster and allow the City to more quickly offer disaster assistance to those who are impacted. Therefore, the Proposed Action would promote *OneNYC* and *PlaNYC*'s goals of creating a more sustainable and resilient City, and as such, no further assessment is warranted.

New York City Food Retail Expansion to Support Health Program

As discussed above, the Proposed Action is not expected to induce development where it would not have occurred absent the Proposed Action, but is expected to encourage resiliency throughout the city's 1% and 0.2% annual chance floodplains. The Proposed Action would not prohibit the development of FRESH supermarkets in the city's floodplains, and as such, would not conflict with the City's FRESH Program.

Business Improvement Districts

As discussed above, the Proposed Action is not expected to induce development where it would not have occurred absent the Proposed Action, but is expected to encourage resiliency throughout the city's 1% and 0.2% annual chance floodplains. The Proposed Action would not conflict with any BIDs in the city's floodplains.

Industrial Business Zones

As noted above, the Proposed Action is not expected to induce development where it would not have occurred absent the Proposed Action, but is expected to encourage resiliency throughout the city's 1% and 0.2% annual chance floodplains. The Proposed Action would not conflict with any IBZs in the city's floodplains.

Special Districts

While special districts respond to a range of locally-specific conditions, the coastal flood risk condition that provides the rationale for the proposed changes also exists in special districts, just as it does outside of them. Therefore, the 2013 Flood Text already applied its rules to special districts within the 1% annual chance floodplain. The Proposed Action would continue this framework, allowing the optional provisions to modify regulations applicable in all areas within any special purpose district that geographically overlaps with the 1% and 0.2% annual chance floodplains. This would allow buildings in the floodplain to have a consistent set of regulations for resiliency, ensuring that resilient strategies are not hindered by zoning rules. Additionally, the Proposed Action includes several provisions that focus on encouraging resilient designs that also contribute to the city's streetscape, ultimately reinforcing special districts' goals: to ensure the vibrancy of the city's streets and neighborhoods. Select provisions in these special purpose districts would be modified to align with the Proposed Action's ground floor use, street wall, and building envelope regulations, as well as the proposed streetscape rules. The Proposed Action would therefore complement such goals, ensuring that resilient buildings do not negatively impact the public realm.