

TECHNICAL MEMORANDUM 001
CITY COUNCIL MODIFICATION
NEW YORK BLOOD CENTER—CENTER EAST
CEQR No. 21DCP080M
ULURP Nos. C210351ZMM, N210352ZRM, C210353ZSM
November 16, 2021

A. INTRODUCTION

The New York Blood Center—Center East (the Proposed Project) is the subject of a Uniform Land Use Review Procedure (ULURP) application currently under consideration by the New York City Council. On September 10, 2021, a Final Environmental Impact Statement (FEIS) was completed for the project, and a Notice of Completion was issued.

Since completion of the FEIS, changes to the Proposed Project are now under consideration at City Council that would result in a height reduction from approximately 334 feet to approximately 233 feet as shown on revised ULURP drawings submitted to the New York City Department of City Planning (DCP) on November 16, 2021. This is the Reduced Height Building described and assessed below.

This Technical Memorandum has been prepared to examine whether the Reduced Height Building would result in any significant adverse environmental impacts not previously identified and addressed in the FEIS. This memorandum concludes that these revisions would not result in any new or different significant adverse environmental impacts not already identified.

B. BACKGROUND

The FEIS considered the potential for proposed land use actions in support of a new Center East building to replace the existing New York Blood Center (NYBC) building to have significant adverse environmental impacts. It assessed the effects of a rezoning and other discretionary actions (the Proposed Actions) from the City Planning Commission (CPC) to facilitate the construction of the Proposed Project, an approximately 596,200 gross-square-foot (gsf) state-of-the-art laboratory building with related offices on the site of the Applicant's existing building at 310 East 67th Street, Block 1441, Lot 40 (the Development Site). The Development Site is located on the Upper East Side in Manhattan Community District 8. Block 1441 is bounded by East 66th and East 67th Streets and First and Second Avenues. The Development Site is part of a larger Rezoning Area, which also includes Block 1441, Lots 1001–1202, and Block 1421, p/o Lot 21.

The FEIS considered the following actions: a zoning map amendment in order to rezone the Development Site from R8B to C2-7; designation of the Development Site for Mandatory Inclusionary Housing (MIH); and to rezone the remainder of the Rezoning Area (Block 1441, Lots 1001–1202 and the eastern 100 feet of Block 1421, p/o Lot 21) from C1-9 to C2-8. The Proposed Actions also included a zoning text amendment to Section 74-48 of the Zoning Resolution; and a special permit pursuant to the amended Section 74-48 to modify various sections of the Zoning

Technical Memorandum 001: New York Blood Center—Center East

Resolution. In addition, the Applicant may also seek a revocable consent from the New York City Department of Transportation (DOT) to allow a Marquee projection over the building’s entrance in accordance with the NYC Building Code.

The FEIS analyzed a new approximately 596,200 gsf building, split between 206,400 gsf of UG-4 community facility uses for the Applicant and 389,800 gsf of commercial laboratories and related uses for the Applicant’s partners (see Table 1). The building analyzed in the FEIS would have 16 floors and rise to a height of approximately 334 feet to the top of the screen wall (see Attachment A for figures from the FEIS).

The FEIS considered a 2026 Build Year for analysis purposes.

Table 1
Floor Area and Population Comparisons for FEIS Analysis

Program	FEIS Existing Conditions	FEIS No Action Condition	FEIS With Action Condition	Incremental Difference – FEIS No Action to FEIS With Action Conditions
Community Facility (gsf)	159,347	229,092 (Applicant=188,931/ Medical Office=40,161)	206,400 (Applicant)	(-) 22,692
Commercial (gsf)	-	-	389,800 (Commercial Labs)	(+) 389,800
Workers	230	670	2,630	(+) 1,960
Total	159,347 gsf 230 workers	229,092 gsf 670 workers	596,200 gsf 2,630 workers	367,108 gsf 1,960 workers

Source: RWCDs Memorandum and information provided by the Applicant.

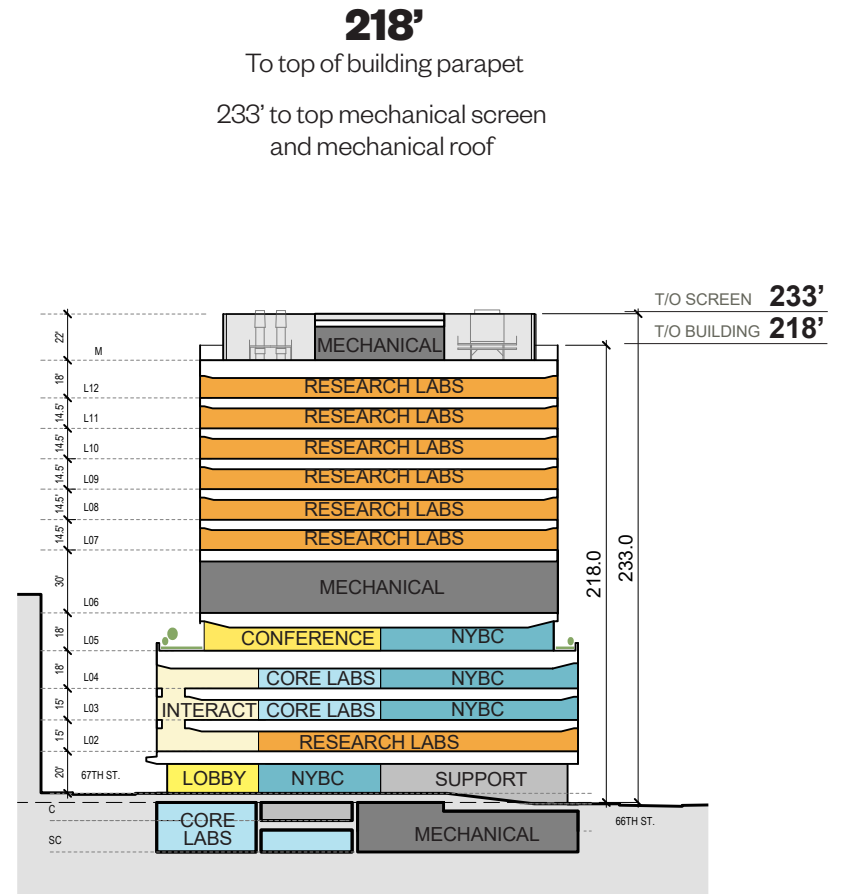
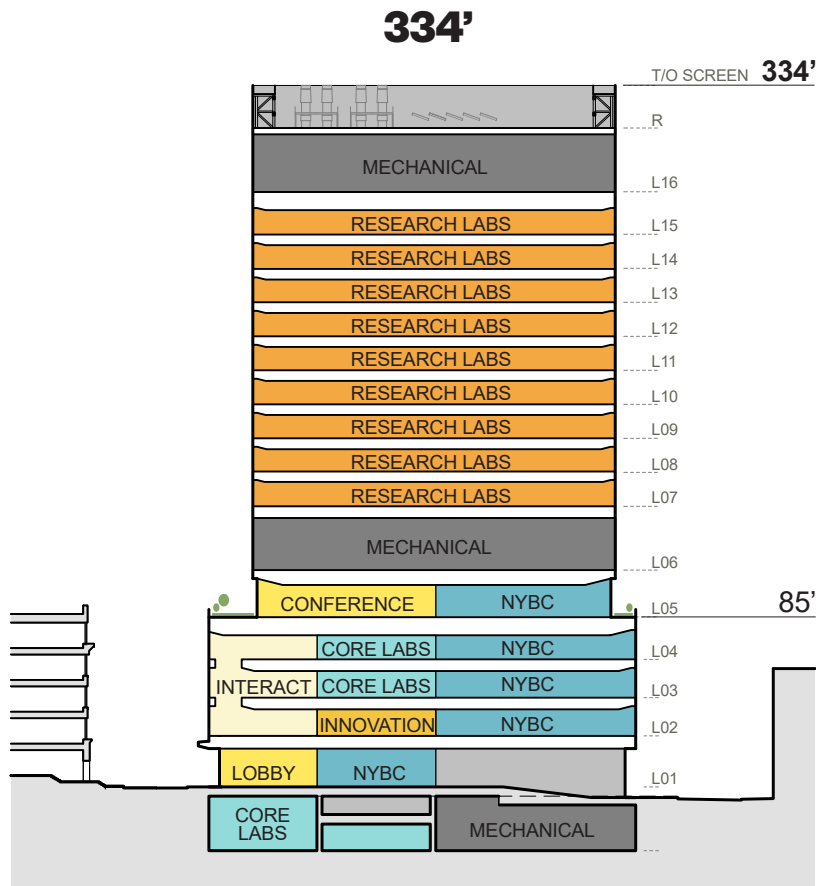
Based on the analyses presented in the FEIS, the Proposed Project would result in a significant adverse shadow impact to St. Catherine’s Park, and in significant adverse impacts related to construction noise. A Restrictive Declaration in connection with the Proposed Actions will be recorded against the property. The Restrictive Declaration will:

- Provide for the implementation of “Project Components Related to the Environment” (PCREs) (i.e., certain project components which were material to the environmental analysis); and
- Provide for measures necessary to partially mitigate any significant adverse impacts to shadows and construction noise.

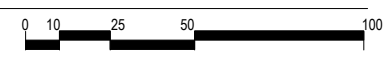
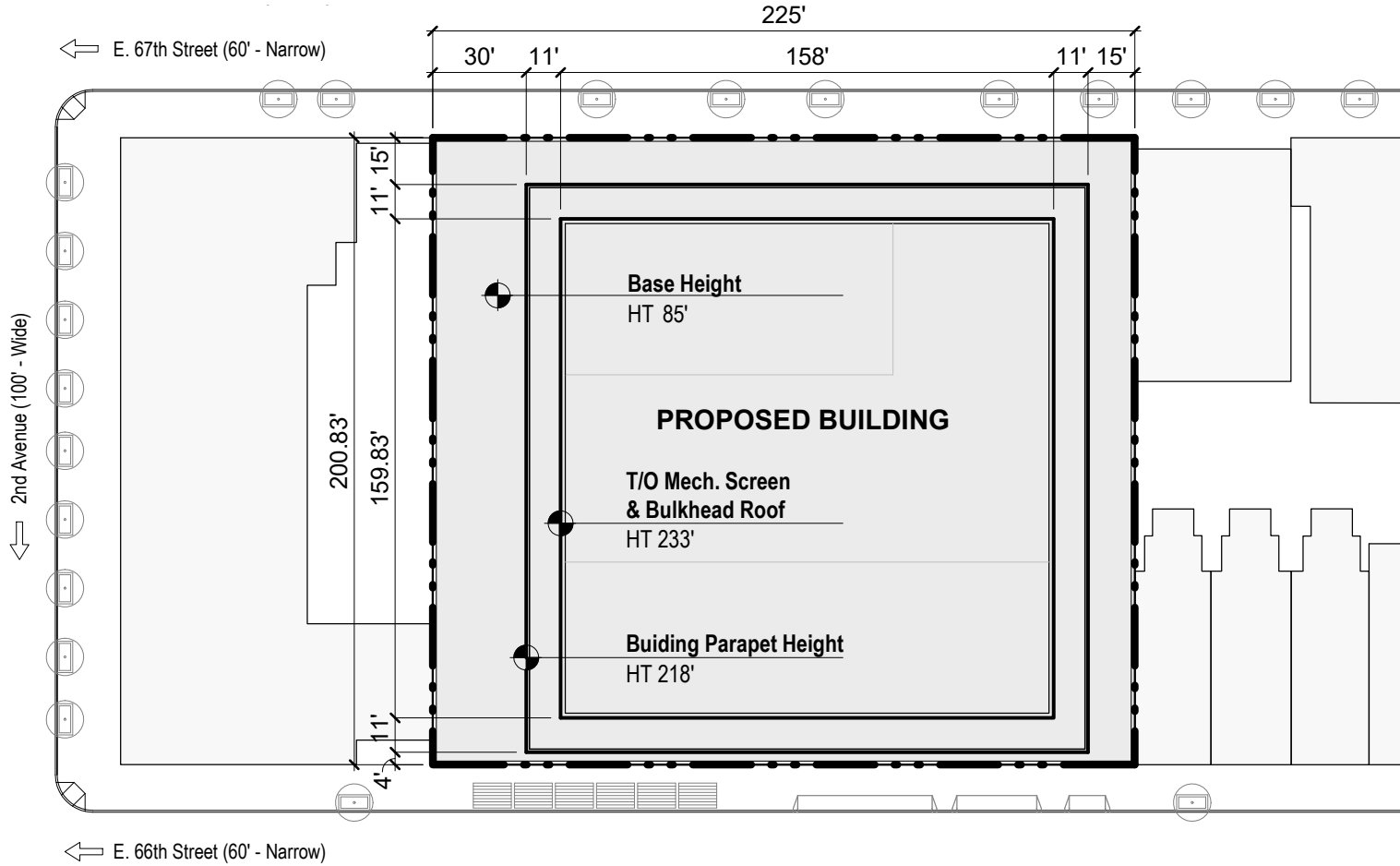
C. DESCRIPTION OF PROJECT REVISIONS

Revisions to the Proposed Project to create the Reduced Height Building and incorporated in the revised ULURP drawings include the following (see **Figures 1 and 2** and Table 2):

- A reduction in the maximum height of the building from approximately 334 feet to the top of the screen wall to approximately 233 feet to the top of the screen wall.
- A reduction in the gross floor area from 596,200 gsf to 527,122 gsf.
- A restrictive declaration will be imposed that will limit the height of an as-of-right building on the site, built pursuant to the C2-7 zoning regulations, to a maximum of 80 feet, not including exterior, enclosed, or screened mechanical equipment, stair, and elevator bulkheads, house tanks, generators, skylights, energy conservation equipment, green roof treatments, and similar rooftop features which may extend an additional 35 feet in height.



Reduced Height Building — Illustrative Sections
Figure 1



Note: All heights are measured from 66th Street Ave. Curb Level EL. 53.635' above NAVD 88 = 0.00'



Source: Ennead Architects

Reduced Height Building — Roof Plan

The Reduced Height Building would have the same characteristics as those described for the Proposed Building analyzed in the FEIS, except that the Reduced Height Building would have lower floor-to-floor heights and a consolidated mechanical footprint at the top of the building. Typical floor-to-floor heights would be reduced from 16 feet to 14.5 feet with similar reductions on atypical floors, which was achieved through refinements in the mechanical systems design and planning. Additional height reduction was achieved by eliminating usable building area: a reduction of approximately 20,000 to 69,000 community facility gsf and of approximately 0 to 51,000 commercial gsf, as compared to the Proposed Building shown in Table 2. The Reduced Height Building includes a range of potential community facility and commercial gsf because the Applicant is still determining how best to allocate the reduced building square footage between the building’s uses. Compared to the Proposed Building analyzed in the FEIS, the Reduced Height Building would result in a reduction in the number of employees from 2,630 to between 2,280 and 2,514.

**Table 2
Floor Area and Population Comparisons for Analysis**

Program	No Action Condition	FEIS With Action Condition	Reduced Height Building	Incremental Difference – FEIS with Action compared to Reduced Height Building
Community Facility (gsf)	229,092 (Applicant=188,931/ Medical Office=40,161)	206,400 (Applicant)	137,322- 188,208	(69,078) - (20,212)
Commercial (gsf)	-	389,800 (Commercial Labs)-	338,914- 389,800	(50,886) – 0
Workers	670	2,630	2,280-2,514	(350) – (116)
Total	229,092 gsf 670 workers	596,200 gsf 2,630 workers	527,122 gsf 2,280-2,514 workers	(69,078) gsf (350) – (116) workers

Source: RWCDs Memorandum and information provided by the Applicant.

As with the Proposed Project analyzed in the FEIS, the Build Year for the Reduced Height Building would be 2026.

PROPOSED ACTIONS

No changes to the Proposed Actions described in the FEIS are anticipated.

D. POTENTIAL ENVIRONMENTAL EFFECTS OF THE REDUCED HEIGHT BUILDING

The FEIS examined a full range of potential environmental impacts. As summarized in the “Executive Summary” of the FEIS, the Proposed Project would result in a significant adverse shadow impact to St. Catherine’s Park, and in significant adverse impacts related to construction noise. No other significant adverse impacts were identified in the FEIS. The Reduced Height Building would not affect the conclusions of the previously completed City Environmental Quality Review (CEQR) analyses that rely on projected population and the resulting conclusions of no

significant adverse impacts for each.¹ The areas of analysis where the effects from the Reduced Height Building would be less than those from the Proposed Building analyzed in the FEIS include the following: Socioeconomic Conditions; Open Space; Water and Sewer Infrastructure; and Transportation. In addition, the Reduced Height Building would not have the potential to change the conclusions of the FEIS for several other technical areas, including the following: Land Use, Zoning, and Public Policy; Historic and Cultural Resources; Urban Design and Visual Resources; Natural Resources; Greenhouse Gas Emissions and Climate Change; Noise; Public Health; and Neighborhood Character.

As noted above, at 233 feet to the top of the screen wall, the Reduced Height Building would be 101 feet shorter than the Proposed Project analyzed in the FEIS. Further, the screen wall would be set back from the parapet, further reducing its shadow on the park. This would considerably reduce the presence of the proposed building in views from many locations, including views from across St. Catherine’s Park at First Avenue and East 68th Street (see **Figures 3 and 4**). This would have a substantial beneficial reduction in shadows on St. Catherine’s Park as shown in the diagrams below and would also result in a shorter construction duration than the Proposed Project analyzed in the FEIS. As with the Proposed Project, to ensure that there are no potential significant adverse air quality impacts, certain restrictions would be required for the Reduced Height Building through an Air Quality (E) Designation. The effects of the Reduced Height Building on shadows, air quality, and construction are summarized below.

SHADOWS

The FEIS concluded that the Proposed Project would cast new (or incremental) shadows on St. Catherine’s Park during the afternoon, covering large areas of the park at times, causing a significant adverse impact to the use of the park in the late afternoons in the spring, summer, and fall seasons. The Reduced Height Building would be 101 feet shorter than the Proposed Project, 233 feet tall to the top of the roof screenwall compared with 334 feet, and the screen wall would be set back from the parapet. This considerable reduction in height would result in less incremental shadow on the park in the spring, summer, and fall afternoons, in terms of both duration and size, as described in detail below for each analysis date. However, the reductions in extent and duration of new shadow resulting from the Reduced Height Building would not be substantial enough to eliminate the significant adverse impact on the use of the park in these seasons.

DECEMBER 21

The extent and duration of incremental shadow on St. Catherine’s Park resulting from the Reduced Height Building would be virtually identical to that of the Proposed Project. Winter shadows are long and even the 101-foot height decrease would not result in any reduction of incremental shadow. However, similar to the Proposed Project, the 31-minute total duration would not cause a significant adverse impact to the use of the park in winter.

MARCH 21/SEPTEMBER 21

With the Reduced Height Building, incremental shadow would enter the western edge of the park (i.e., the western edge of the paved ball courts) at 2:00 PM (3:00 PM EDT), 15 minutes later than the Proposed Project analyzed in the FEIS. At any given time throughout the afternoon, the

¹ As with the Proposed Building, in accordance with CEQR guidelines, the Reduced Height Building would not warrant detailed analyses of Community Facilities and Services, Natural Resources, Solid Waste and Sanitation Services, and Energy, and no significant adverse impacts would occur to these analysis areas.



Source: Ermead Architects

NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

Reduced Height Building — View East on East 67th Street from Second Avenue

Figure 3



NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

Reduced Height Building — View Across St. Catherine’s Park
from First Avenue and 68th Street

incremental shadow would cover a smaller proportion of the park compared to the Proposed Project, as shown in **Figure 5**, until about 4:00 PM (5:00 PM EDT), after which the incremental shadow would be the same as with the Proposed Project until the end of the analysis day about 30 minutes later. With the Reduced Height Building there would be no incremental shadow on the eastern half of the park (containing playgrounds and seating areas) until 3:20 PM (4:20 PM EDT), whereas with the Proposed Project, shadow would enter the eastern half approximately 35 minutes earlier at 2:45 PM (3:45 PM EDT).

MAY 6/AUGUST 6

With the Reduced Height Building, incremental shadow would enter the western half of the park (the paved ball courts) at 1:35 PM (2:35 PM EDT), 15 minutes later than the Proposed Project analyzed in the FEIS. At any given time throughout the afternoon, the incremental shadow would cover a smaller proportion of the park to the Proposed Project, as shown in **Figure 6**, until about 5:00 PM (6:00 PM EDT), after which the incremental shadow would be the same as with the Proposed Project until the end of the analysis day about 20 minutes later. At times, such as 3:30 PM (4:30 PM EDT), the size of the incremental shadow would be substantially smaller. With the Reduced Height Building there would be no incremental shadow on the eastern half of the park (containing playgrounds and seating areas) until 3:20 PM (4:20 PM EDT), whereas with the Proposed Project shadow would enter the eastern half approximately 45 minutes earlier at 2:35 PM (3:35 PM EDT).

JUNE 21

With the Reduced Height Building, incremental shadow would enter the western half of the park (the paved ball courts) at 1:35 PM (2:35 PM EDT), 20 minutes later than the Proposed Project, and would cover a smaller proportion of the park throughout the afternoon compared with the FEIS, as shown in **Figure 7**, until about 5:00 PM (6:00 PM EDT), after which the incremental shadow would be the same as with the Proposed Project until it would exit the park about 20 minutes later. At times, such as 3:30 PM (4:30 PM EDT), the size of the incremental shadow would be substantially smaller compared to the Proposed Project. With the Reduced Height Building there would be no incremental shadow on the eastern half of the park (containing playgrounds and seating areas) until 3:30 PM (4:30 PM EDT), whereas with the FEIS shadow would enter the eastern half approximately 45 minutes earlier at 2:45 PM (3:45 PM EDT).

In summary, on the analysis dates representing the spring, summer, and fall, with the Reduced Height Building, incremental shadow would enter the park 15 to 20 minutes later compared to the Proposed Project and would cover a comparatively smaller area of the park, at times substantially smaller, throughout most of the afternoon. In the late afternoons, incremental shadow from the Reduced Height Building would enter the eastern half of the park (containing playgrounds and seating areas) 30 to 45 minutes later compared with the Proposed Project.

In conclusion, the Reduced Height Building would result in a decrease in the size and duration of incremental shadows on St. Catherine's Park in the afternoons of the spring, summer, and fall, compared to the Proposed Project. The decrease in incremental shadows would reduce the severity of the significant adverse impact, and at times substantially so, but would not eliminate it. The partial mitigation measures for the significant adverse shadows impacts identified for the Proposed Project described in the FEIS would also be applicable to the Reduced Height Building.



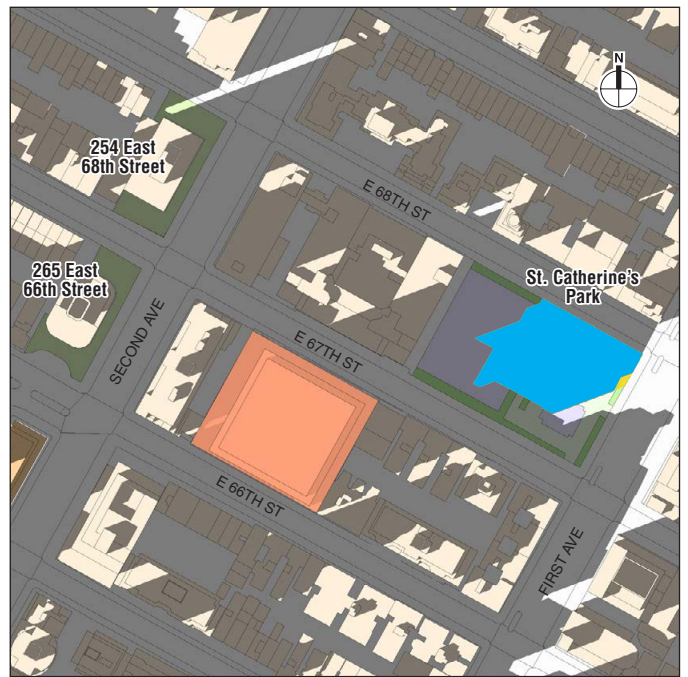
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3:00 PM EST (4:00 PM EDT)



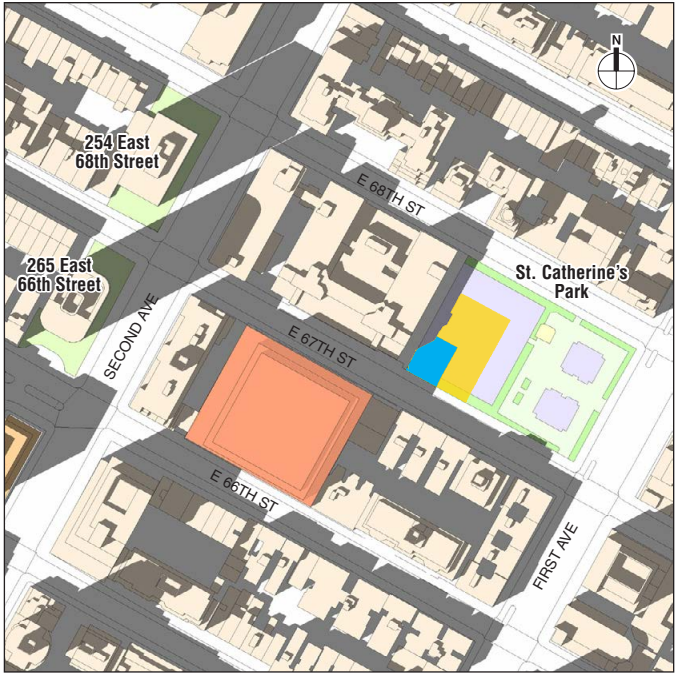
3:30 PM EST (4:30 PM EDT)



4:00 PM EST (5:00 PM EDT)

- Reduced Height Building*
- Incremental shadow on St. Catherine's Park cast by 233' Reduced Height Building*
- Additional park area receiving sunlight with reduction from 334' Proposed Project to 233' Reduced Height Building*

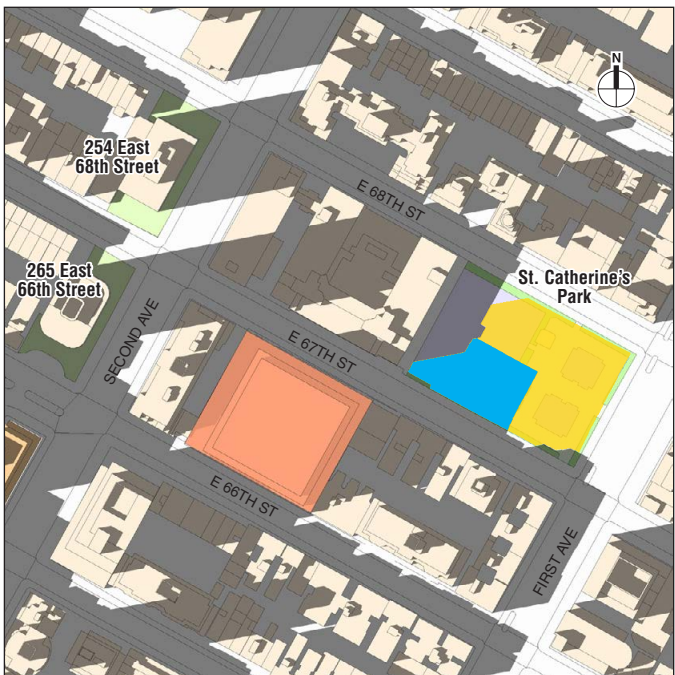
Reduced Height Building — Shadows
March 21/September 21



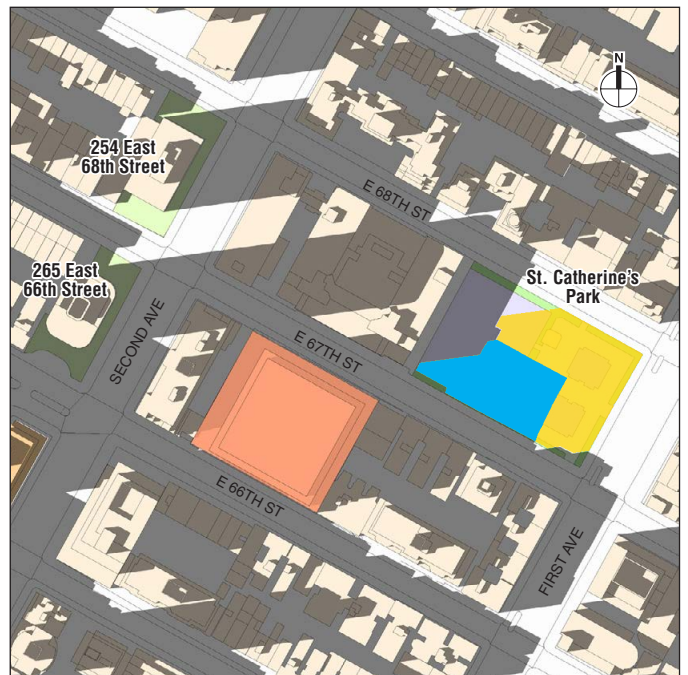
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3:00 PM EST (4:00 PM EDT)



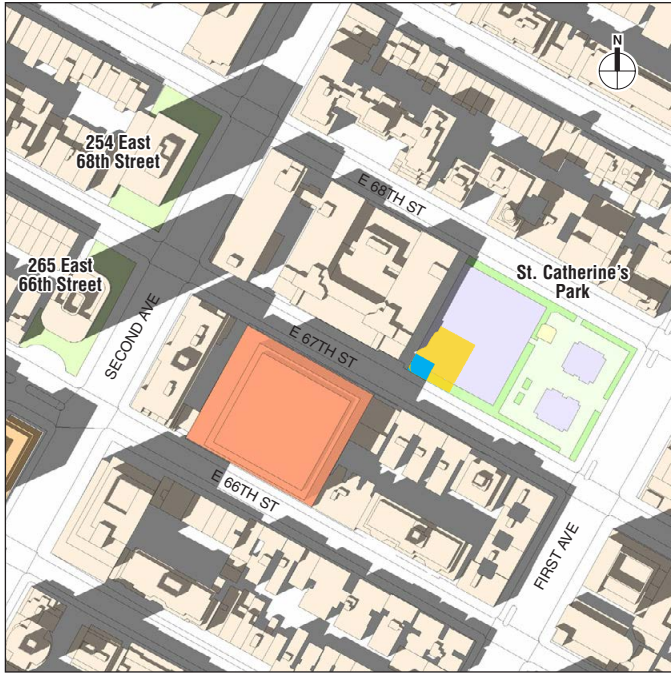
3:30 PM EST (4:30 PM EDT)



3:45 PM EST (4:45 PM EDT)

- Reduced Height Building*
- Incremental shadow on St. Catherine's Park cast by 233' Reduced Height Building*
- Additional park area receiving sunlight with reduction from 334' Proposed Project to 233' Reduced Height Building*

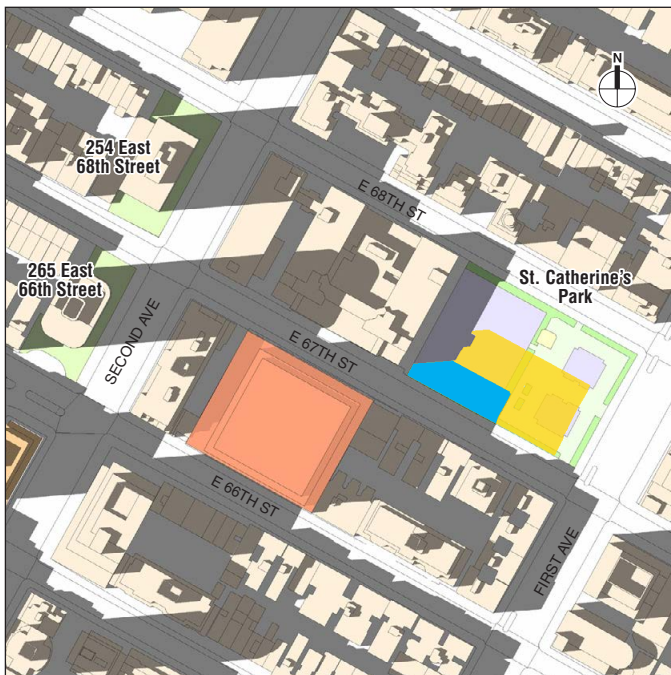
Reduced Height Building — Shadows
May 6 / August 6



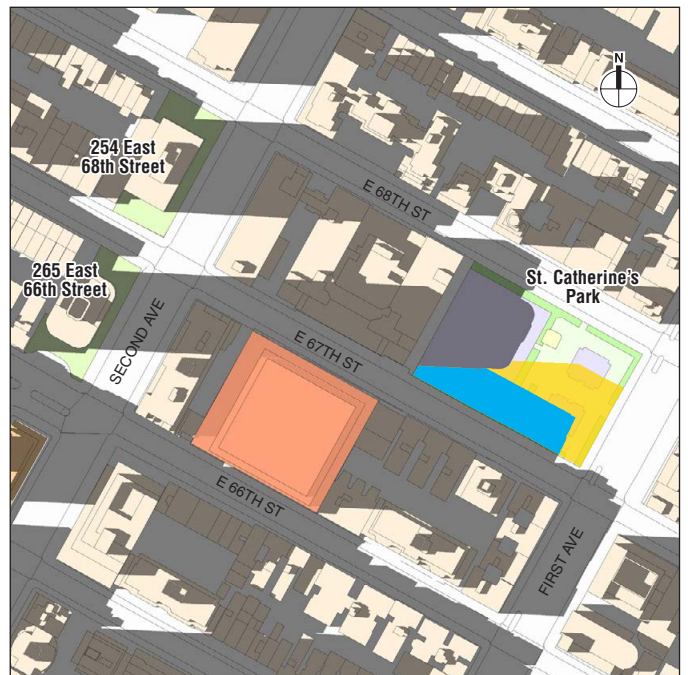
2:00 PM EST (3:00 PM EDT)



2:45 PM EST (3:45 PM EDT)



3:30 PM EST (4:30 PM EDT)



4:15 PM EST (5:15 PM EDT)

- Reduced Height Building*
- Incremental shadow on St. Catherine's Park cast by 233' Reduced Height Building*
- Additional park area receiving sunlight with reduction from 334' Proposed Project to 233' Reduced Height Building*

AIR QUALITY

MOBILE SOURCES

Compared to the Proposed Project, the Reduced Height Building would result in slightly fewer vehicle trips. Like the Proposed Project, the Reduced Height Building would not exceed the 2020 *CEQR Technical Manual* screening thresholds for conducting a mobile source analysis and would therefore not result in significant adverse air quality impacts from mobile sources.

STATIONARY SOURCES

The Reduced Height Building would be 101 feet shorter than the Proposed Project analyzed in the FEIS. Therefore, potential air quality impacts associated with stationary sources were evaluated.

Heating and Hot Water Systems

As described in the FEIS, natural gas-fired heating and hot water systems would be utilized for the Proposed Project. Short-term emissions of the primary pollutants of concern (nitrogen dioxide [NO₂] and fine particulate matter [PM_{2.5}]) from the Reduced Height Building were estimated based on the ratio of the maximum gross floor area (gsf) of the Reduced Height Building (approximately 527,122 gsf) and the Proposed Project (approximately 596,200 gsf). Annual emission rates for heating and hot water systems were calculated based on fuel consumption estimates, using energy intensity estimates referenced in the *CEQR Technical Manual*, assuming a commercial building type, the maximum size of the Reduced Height Building (527,122 gsf), and applying emission factors for natural gas-fired boilers. The exhausts from the heating and hot water systems were assumed to be vented through a single stack located at the screen wall height of approximately 233 feet above grade.

The results of the AERMOD analysis for the Reduced Height Building's heating and hot water systems are presented in **Table 3**. As shown in the table, no exceedance of the NO₂ National Ambient Air Quality Standards (NAAQS) were predicted, and incremental concentrations of PM_{2.5} were predicted to be less than the *CEQR de minimis* criteria. Therefore, as with the Proposed Project, no significant adverse air quality impacts from the Reduced Height Building's heating and hot water systems are predicted.

Table 3
Reduced Height Building’s Heating and Hot Water Systems
Maximum Modeled Pollutant Concentrations (µg/m³)

Pollutant	Averaging Period	Maximum Modeled Impact	Background	Total Concentration	NAAQS / De Minimis Criteria
NO ₂	1-hour	159 ⁽¹⁾	N/A	159	188 ⁽²⁾
	Annual	0.14 ⁽³⁾	37.9	38.0	100 ⁽²⁾
PM _{2.5}	24-hour	6.9	N/A	6.9	8.4 ⁽⁴⁾
	Annual	0.04	N/A	0.04	0.3 ⁽⁵⁾

Notes:

N/A – Not Applicable

⁽¹⁾ Reported concentration is the maximum total 98th percentile concentration at any receptor using seasonal-hourly background concentrations.

⁽²⁾ NAAQS.

⁽³⁾ Annual NO₂ concentrations from heating and hot water sources were estimated using a NO₂ to NO_x ratio of 0.75, based on EPA modeling guidance.

⁽⁴⁾ PM_{2.5} *de minimis* criteria—24-hour average, not to exceed more than half the difference between the background concentration and the 24-hour standard of 35 µg/m³.

⁽⁵⁾ PM_{2.5} *de minimis* criteria—annual (discrete receptor).

As with the Proposed Project, to ensure that there are no potential significant adverse air quality impacts, certain restrictions would be required for the Reduced Height Building through an Air Quality (E) Designation (E-612). These restrictions were assumed in the analysis results presented in **Table 3**, and would avoid the potential for significant air quality impacts from stationary sources based on the conservative assumptions used in the analysis. The restrictions are outlined below.

BLOCK 1441, LOT 40 (DEVELOPMENT SITE)

Any new development on the above-referenced property must ensure that only natural gas be used for fossil fuel-fired heating and hot water systems fitted with low NO_x (30 ppm) burners, and ensure that the heating and hot water systems stack are located at least 233 feet above grade,² and at least 40 feet away from the lot line facing Second Avenue, to avoid any potential significant air quality impacts.

Additional Sources

In the FEIS, emissions from the Regency Towers building at 245 East 63rd Street were analyzed to evaluate potential impacts on the Proposed Project. The boiler exhaust stack for that development is approximately 356 feet above grade, which is greater than the height of the Proposed Project. Since the Reduced Height Building would be well below the height of the Regency Towers’ building exhaust stack, no additional analysis is necessary. As with the Proposed Project, no significant adverse air quality impacts would occur with the Reduced Height Building.

Chemical Spill Analysis

An analysis of the laboratory exhaust system for the Reduced Height Building was performed. The same assumptions regarding the number of exhausts, stack parameters and chemicals to be used in the Applicant and its research partners. Quantitative analyses were performed to determine potential impacts at operable windows and air intakes in nearby buildings and at nearby places of

² Compared with 317.4 feet above grade for the Proposed Project analyzed in the FEIS.

public access, and at the proposed building itself due to recirculation into air intake systems, windows, and open air terraces.

The recirculation analysis indicates that the minimum potential dilution factor between the fan exhausts and the nearest sensitive receptor is over 2,494 (i.e., pollutant concentrations at the nearest intake to the exhaust fan would be 2,494 times less than the concentration at the fan exhaust). The results of the recirculation analysis are presented in **Table 4**.

Table 4
Fume Hood Recirculation Analysis
Maximum Predicted Concentrations (ppm)

Chemical	STEL/OSHA Ceiling	15-Minute Average
Acetic Acid, Glacial	10	0.001
Acetonitrile	40	0.503
Acrolein	0.3	0.021
Benzene	1	0.007
Carbon Tetrachloride	2	0.008
Dichloromethane	125	0.039
Glutaraldehyde	0.2	0.002
Hydrochloric Acid	5	0.002
Hydrogen Peroxide	1	0.004
Nitric Acid	2	0.006
Triethylamine	25	0.009

Note: * 15-Minute Average emission rate.

The results indicate that a spill in a fume hood as described above would produce a maximum concentration at the nearest intake location below the corresponding STELs or ceiling values set by OSHA and/or NIOSH for each of the chemicals analyzed. Therefore, as with the Proposed Project, no significant impact would be expected due to recirculation of fume hood emissions back into the Reduced Height Building’s air intakes in the event of a chemical spill.

DISPERSION IN SURROUNDING AREA

The results of the analysis of potential emissions from the fume hood exhaust system in the surrounding area are shown in **Table 5**. As shown in the table, for the Reduced Height Building, the maximum predicted concentrations at elevated receptors downwind of the fume hood exhausts were determined to be below the STEL/OSHA levels. Like with the Proposed Project, the results of the dispersion analysis demonstrate that would be no significant adverse impacts from the exhaust system of the Reduced Height Building on the surrounding community.

Table 5
Maximum Predicted Concentrations (ppm)

Chemical	STEL/OSHA Ceiling	15-Minute Average
Acetic Acid, Glacial	10	0.03
Acetonitrile	40	0.21
Acrolein	0.3	0.24
Benzene	1	0.15
Carbon Tetrachloride	2	0.17
Dichloromethane	125	0.87
Glutaraldehyde	0.2	0.04
Hydrochloric Acid	5	0.05
Hydrogen Peroxide	1	0.09
Nitric Acid	2	0.14
Triethylamine	25	0.19

Note: * 15-Minute Average emission rate.

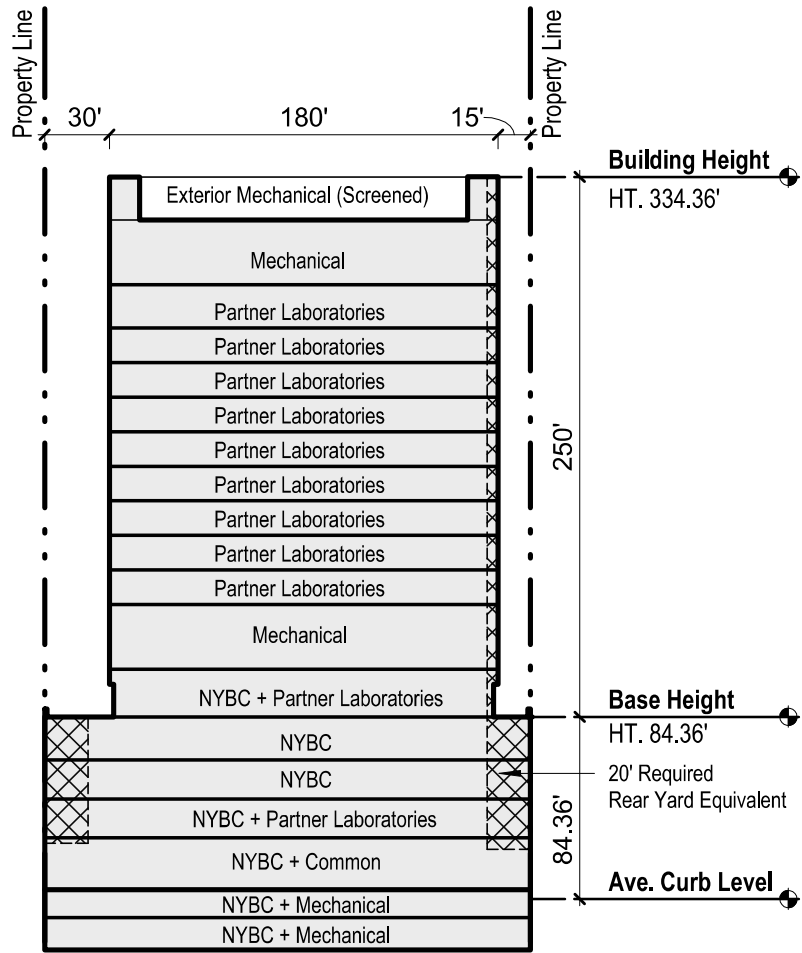
CONSTRUCTION

With the Reduced Height Building, it is anticipated that construction would be smaller in scale and of a shorter duration than what would be undertaken for the Proposed Project. Therefore, the Reduced Height Building would not generate as much temporary construction disruption as compared to the Proposed Project.

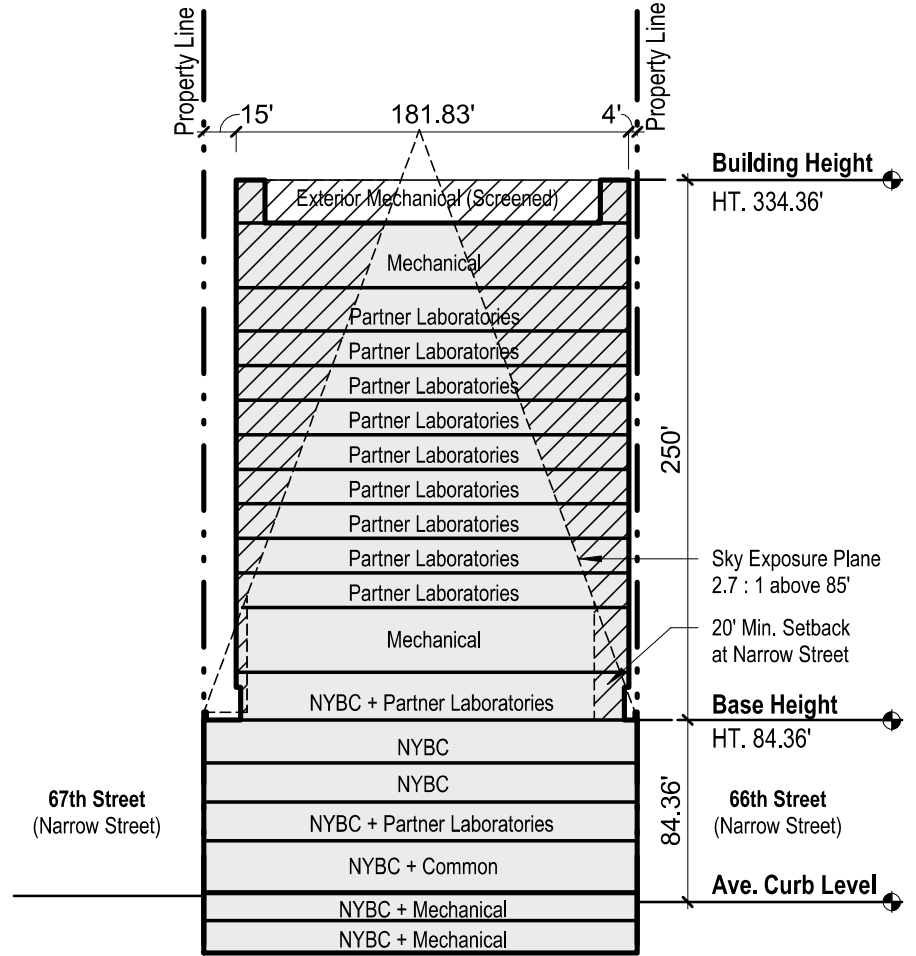
While the initial activities such as demolition of the existing structure, excavation for the basement and cellar levels, foundation construction for the proposed structure would be similar, superstructure and interiors construction of the Reduced Height Building is expected to be completed in a shorter period. Therefore, similar to the Proposed Project analyzed in the FEIS, the Reduced Height Building would not result in significant adverse construction impacts with respect to transportation, air quality, vibration, and land use and neighborhood character, socioeconomic conditions, community facilities, open space, historic and cultural resources, hazardous materials, and water and sewer infrastructure.

However, the most noise-intensive construction activity (i.e., use of impact equipment such as excavators with hydraulic break rams, as well as the tower crane and movements of trucks) would occur with either the Proposed Building or the Reduced Height Building. Consequently, maximum interior noise levels at the receptors analyzed in the FEIS would be comparable to those predicted for the Proposed Project, i.e., up to approximately 19 dBA greater than the level considered acceptable according to *CEQR Technical Manual* noise exposure guidelines. Therefore, similar to the Proposed Project, the Reduced Height Building would have the potential to result in significant adverse impacts with respect to construction noise. Potential mitigation measures for the significant adverse construction noise impacts identified for the Proposed Project described in the FEIS would also be applicable to the Reduced Height Building. *

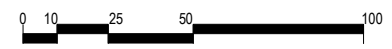
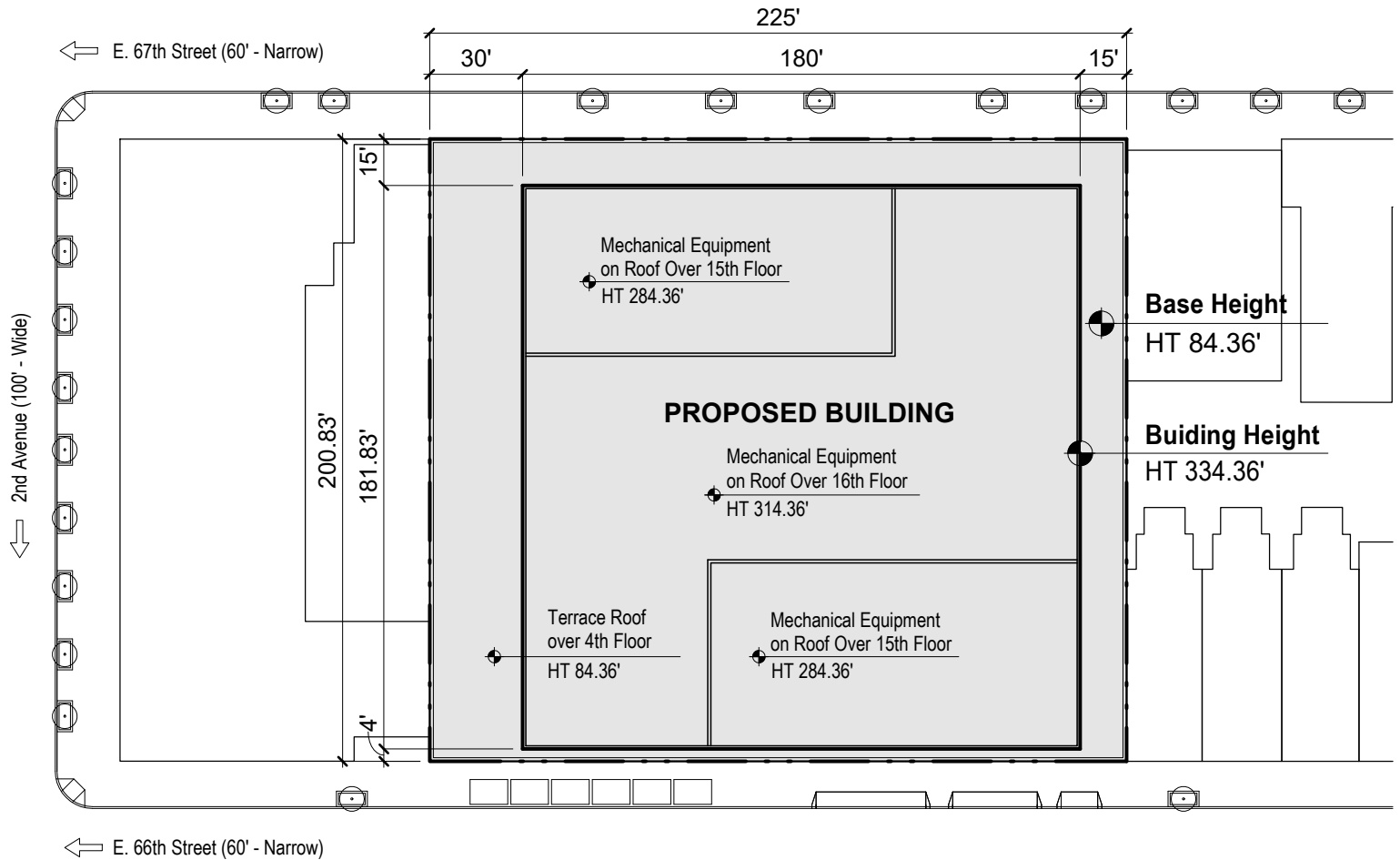
ATTACHMENT A
FEIS FIGURES



EAST-WEST SECTION



NORTH-SOUTH SECTION



Source: Ennead Architects



4.13.21

Source: Ennead Architects



FOR ILLUSTRATIVE PURPOSES ONLY

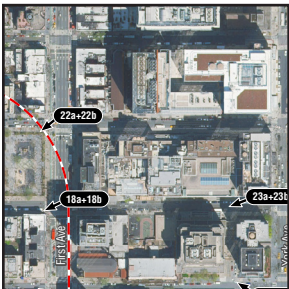
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Source: Ennead Architects

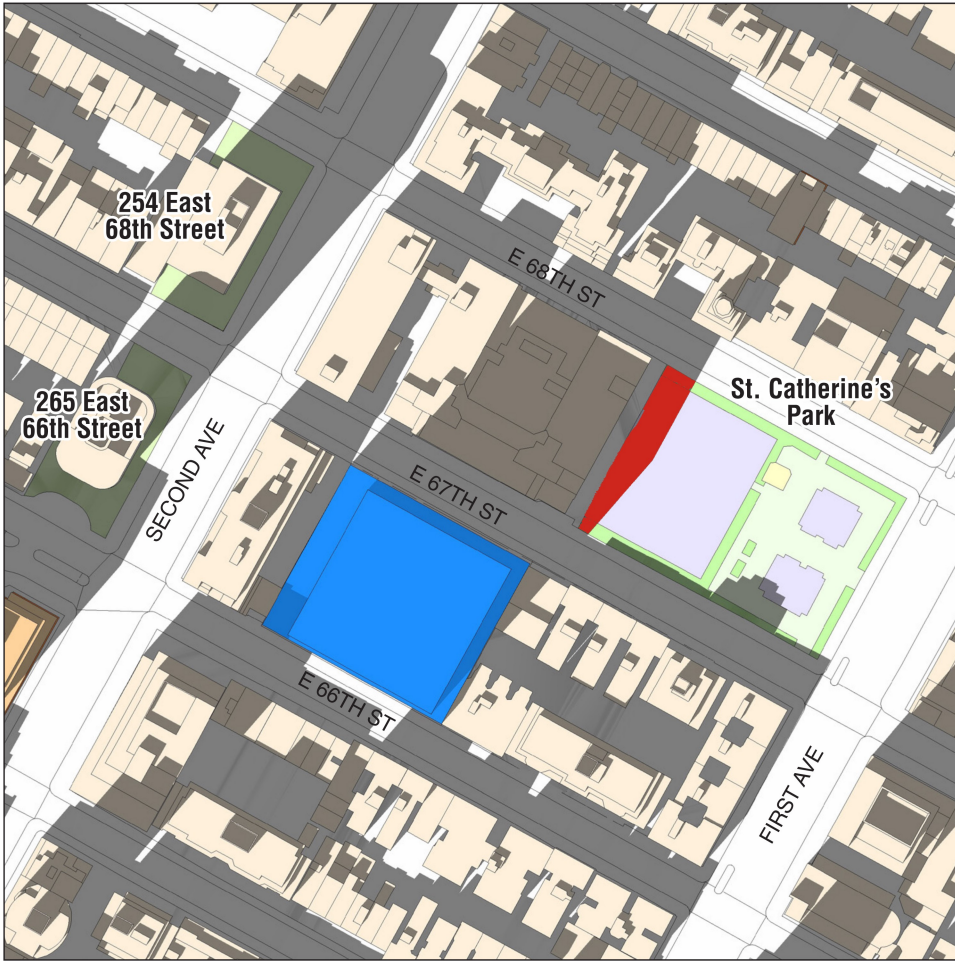


FOR ILLUSTRATIVE PURPOSES ONLY

With Action 22b



No Action/With Action Comparison:
View southwest from First Avenue and East 68th
Street across Saint Catherine's Park toward the
Development Site



St. Catherine's Park - March 21 / September 21 - 2:00 PM



St. Catherine's Park - March 21 / September 21 - 2:30 PM

- Proposed Project
- Publicly Accessible Open Space
- Incremental Shadow

NOTES: Only the areas of shadow highlighted in red represent incremental shadow resulting from the Proposed Project. All other shadow is future No Action shadow, i.e., baseline shadow from existing and future No Action buildings. Daylight Saving Time not used, per CEQR Technical Manual guidelines



St. Catherine's Park - March 21 / September 21 - 3:00 PM



St. Catherine's Park - March 21 / September 21 - 3:30 PM

- Proposed Project
- Publicly Accessible Open Space
- Incremental Shadow

NOTES: Only the areas of shadow highlighted in red represent incremental shadow resulting from the Proposed Project. All other shadow is future No Action shadow, i.e., baseline shadow from existing and future No Action buildings. Daylight Saving Time not used, per CEQR Technical Manual guidelines



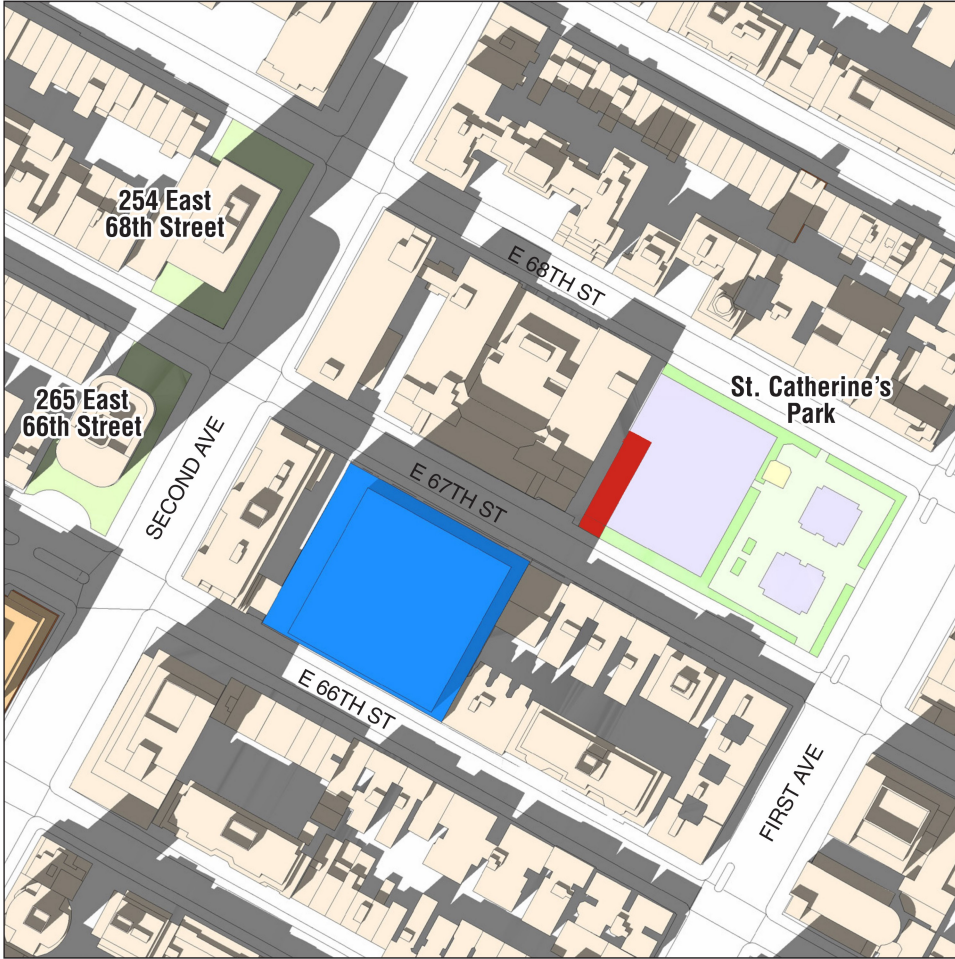
St. Catherine's Park - March 21 / September 21 - 4:00 PM



St. Catherine's Park - March 21 / September 21 - 4:29 PM

- Proposed Project
- Publicly Accessible Open Space
- Incremental Shadow

NOTES: Only the areas of shadow highlighted in red represent incremental shadow resulting from the Proposed Project. All other shadow is future No Action shadow, i.e., baseline shadow from existing and future No Action buildings. Daylight Saving Time not used, per CEQR Technical Manual guidelines



St. Catherine's Park - May 6 / August 6 - 1:30 PM



St. Catherine's Park - May 6 / August 6 - 2:15 PM

- Proposed Project
- Publicly Accessible Open Space
- Incremental Shadow

NOTES: Only the areas of shadow highlighted in red represent incremental shadow resulting from the Proposed Project. All other shadow is future No Action shadow, i.e., baseline shadow from existing and future No Action buildings. Daylight Saving Time not used, per CEQR Technical Manual guidelines



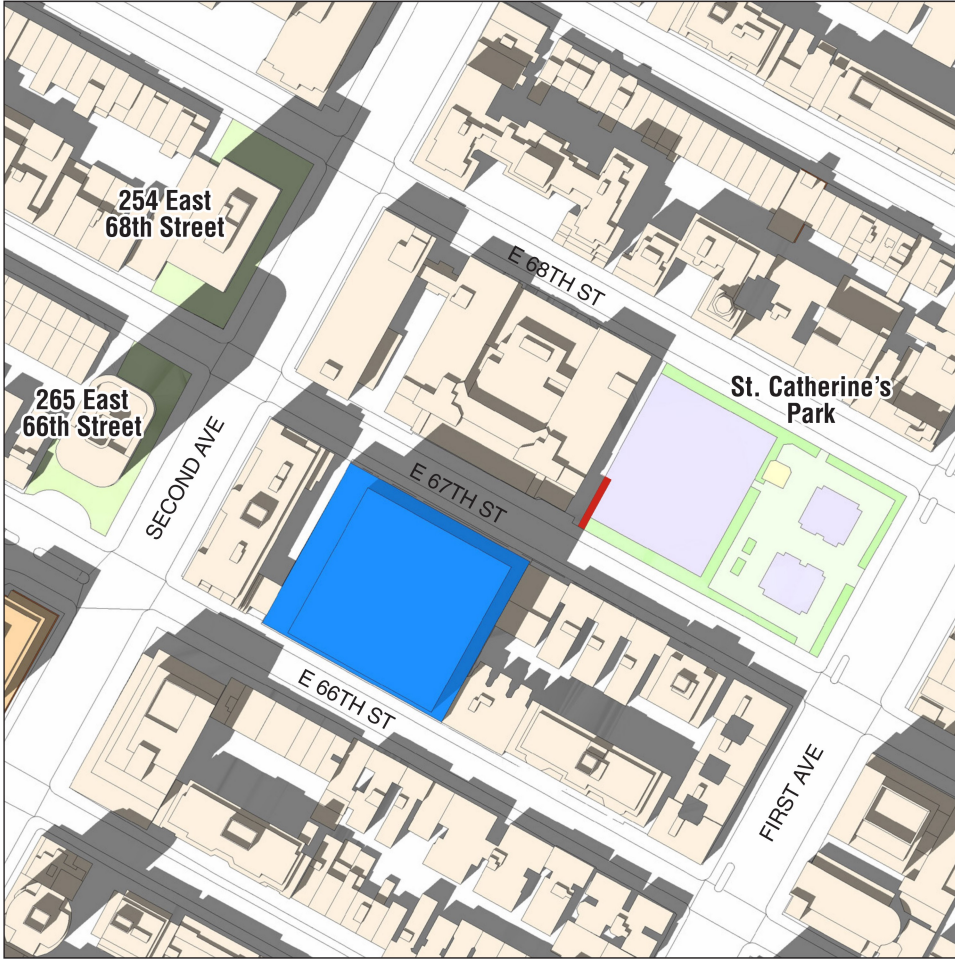
St. Catherine's Park - May 6 / August 6 - 3:00 PM



St. Catherine's Park - May 6 / August 6 - 3:45 PM

- Proposed Project
- Publicly Accessible Open Space
- Incremental Shadow

NOTES: Only the areas of shadow highlighted in red represent incremental shadow resulting from the Proposed Project. All other shadow is future No Action shadow, i.e., baseline shadow from existing and future No Action buildings. Daylight Saving Time not used, per CEQR Technical Manual guidelines



St. Catherine's Park - June 21 - 1:15 PM



St. Catherine's Park - June 21 - 2:00 PM

- Proposed Project
- Publicly Accessible Open Space
- Incremental Shadow

NOTES: Only the areas of shadow highlighted in red represent incremental shadow resulting from the Proposed Project. All other shadow is future No Action shadow, i.e., baseline shadow from existing and future No Action buildings. Daylight Saving Time not used, per CEQR Technical Manual guidelines



St. Catherine's Park - June 21 - 2:45 PM



St. Catherine's Park - June 21 - 3:30 PM

- Proposed Project
- Publicly Accessible Open Space
- Incremental Shadow

NOTES: Only the areas of shadow highlighted in red represent incremental shadow resulting from the Proposed Project. All other shadow is future No Action shadow, i.e., baseline shadow from existing and future No Action buildings. Daylight Saving Time not used, per CEQR Technical Manual guidelines



St. Catherine's Park - June 21 - 4:15 PM



St. Catherine's Park - June 21 - 5:00 PM

- Proposed Project
- Publicly Accessible Open Space
- Incremental Shadow

NOTES: Only the areas of shadow highlighted in red represent incremental shadow resulting from the Proposed Project. All other shadow is future No Action shadow, i.e., baseline shadow from existing and future No Action buildings. Daylight Saving Time not used, per CEQR Technical Manual guidelines