FIRST AVENUE PROPERTIES REZONING

Technical Memorandum

CEQR No.: 06DCP039M

Lead Agency:

City Planning Commission
City of New York
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TECHNICAL MEMORANDUM
First Avenue Properties Rezoning
CEQR No. 06DCP039M

A. INTRODUCTION

The following Technical Memorandum regarding the environmental review of the First Avenue Properties Rezoning considers modifications being made by the City Planning Commission (CPC) to the Proposed Actions as well as clarifications and new information regarding construction sequencing since the Final Supplemental Environmental Impacts Statement (FSEIS). After receiving comments made during review of the Draft SEIS (DSEIS) and the Uniform Land Use Review Procedure (ULURP) application for the First Avenue Properties Rezoning, and its subsequent review of the ULURP application and the Final SEIS (FSEIS), CPC is considering modifications to the application that would: reduce the height and/or the floor area of certain buildings; reduce the total amount of publicly accessible open space from 4.84 acres to 4.69 acres; increase the proportion of active open space through the doubling of the size of the proposed playground; refine the building footprint and construction schedule for the school proposed as mitigation in the FSEIS so that it would be constructed and open by September 2012; decrease the number of public parking spaces in the proposed project's garage at 700/708 First Avenue; and modify the design requirements for the proposed project's public open spaces.

This Technical Memorandum describes the proposed modifications and examines whether the Proposed Actions with the proposed modifications would result in any significant adverse environmental impacts not already identified in the FSEIS.

The analysis concludes that the Proposed Actions with the proposed modifications would not result in any significant adverse environmental impacts not already identified in the FSEIS.

B. DESCRIPTION OF MODIFICATIONS

- The FSEIS examines a mixed-use project with four development sites and a total gross floor area of approximately 6.1 million square feet (see Table 1 and Figure 1). The project also includes substantial publicly accessible open space (4.84 acres). As discussed below and shown on Table 2, the proposed modifications would reduce the FSEIS proposed development program to approximately 5.8 million gross square feet, would reduce the amount of publicly accessible open space by an estimated 6,669 square feet (0.15 acres), would decrease the number of public parking spaces, would revise the list of discretionary actions required to implement the plan, and would extend the footprint of, and advance the construction period for, the proposed school.

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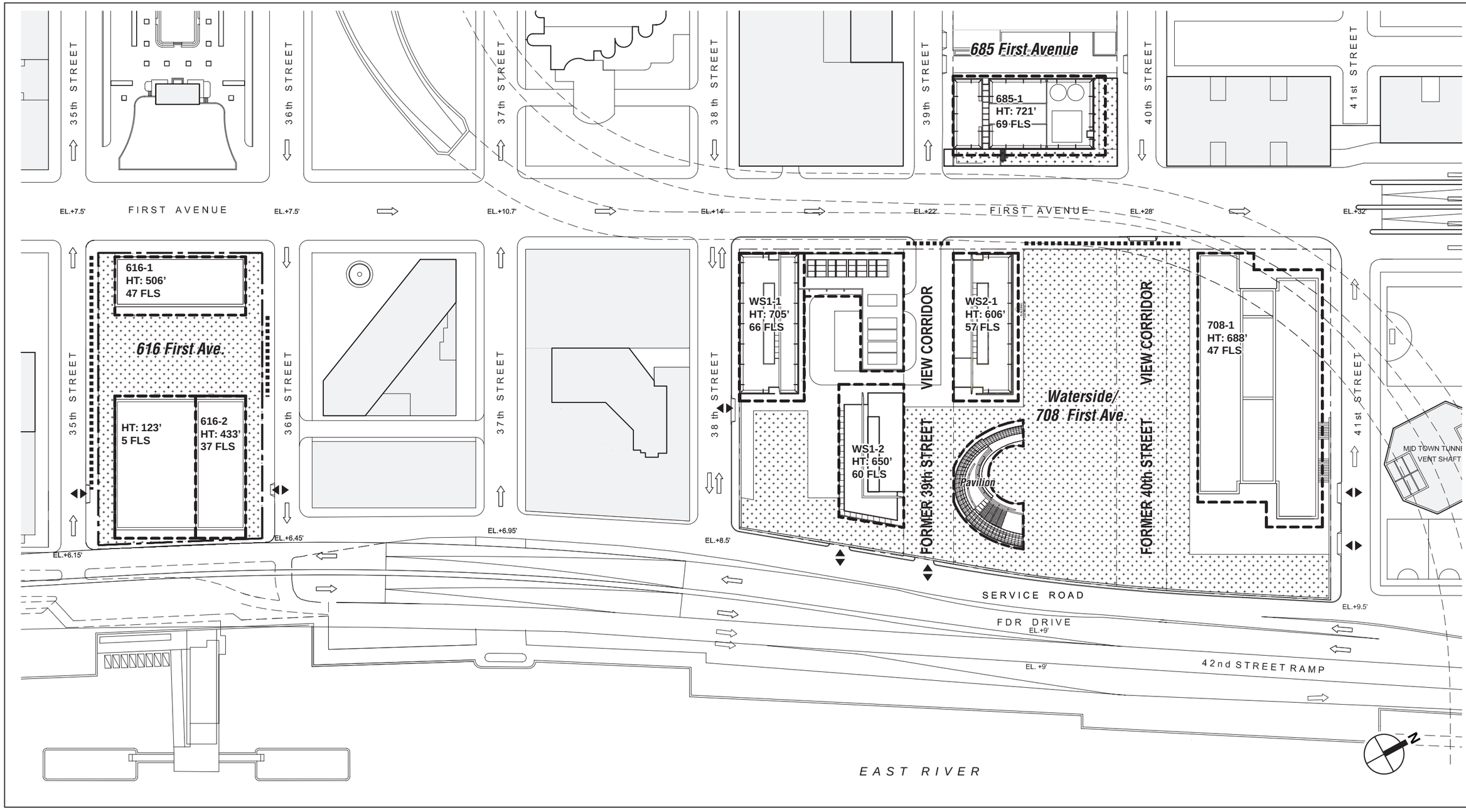

NOT TO SCALE

Publicly Accessible Open Space

Access Points to Publicly Accessible Open Space

Zoning Envelope

Parking/Loading Access

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FSEIS Site Plan
Figure 1

Table 1
Comparison of FEIS Proposed Development Program and the Proposed Development Program with Proposed Modifications

Site	FSEIS	With Modifications	Difference
616 First Avenue			
Residential	748,574 gsf	748,574 gsf	0
Community Facility	119,936	119,936	0
Commercial	—	—	—
Retail	2,071	2,071	0
Below Grade[1]	137,540	137,540	0
Total Gross Floor Area	1,008,121	1,008,121	0
Parking	294 public	294 public	0
Public Open Space	34,507 sf	28,834 sf	-5,673 sf
685 First Avenue			
Residential	967,376 gsf	967,376 gsf	0
Community Facility	—	—	—
Commercial	—	—	—
Retail	6,352	9,798	+3,446 gsf
Below Grade[1]	32,365	32,365	0
Total Gross Floor Area	1,006,093	1,009,539	+3,446 gsf
Parking	110 accessory	110 accessory	0
Public Open Space	7,605 sf	0	-7,605 sf
Waterside			
700 First Avenue			
Residential	2,037,657 gsf	2,037,657 gsf	0
Community Facility	—	—	—
Commercial	—	—	—
Retail	58,074[2]	58,074[2]	0
708 First Avenue			
Residential	—	—	—
Community Facility	—	—	—
Commercial	1,532,437 gsf	1,276,800 gsf	-255,637 gsf
Retail	4,670	4,670	0
700 & 708 First Avenue			
Below Grade[1]	470,125	470,125	0
Total Gross Floor Area	4,102,963	3,847,326	-255,637 gsf
Parking	651 public 499 accessory	400 public 499 accessory	-251 public 0 accessory
Public Open Space	168,659 sf	179,268 sf	+10,609 sf
All Development			
Residential	3,753,607 gsf	3,753,607 gsf	0
Community Facility	119,936	119,936	0
Commercial	1,532,437	1,276,800	-255,637 gsf
Retail	71,1673	74,1633	+3,446
Below Grade[1]	640,030	640,030	0
Total Gross Floor Area	**6,117,177**	**5,864,986**	**-252,191**
Parking	945 public 609 accessory	694 public 609 accessory	-251 public 0 accessory
Public Open Space	210,771 sf	204,102 sf	-6,669 sf

Notes:
1 Below-grade space calculation includes area devoted to parking and other service requirements, but does not include the 36,279 gsf of below-grade retail space associated with 700 First Avenue.
2 Retail at 700 First Avenue (Waterside) includes 36,279 gsf of below-grade space.
Sources: East River Realty Company LLC

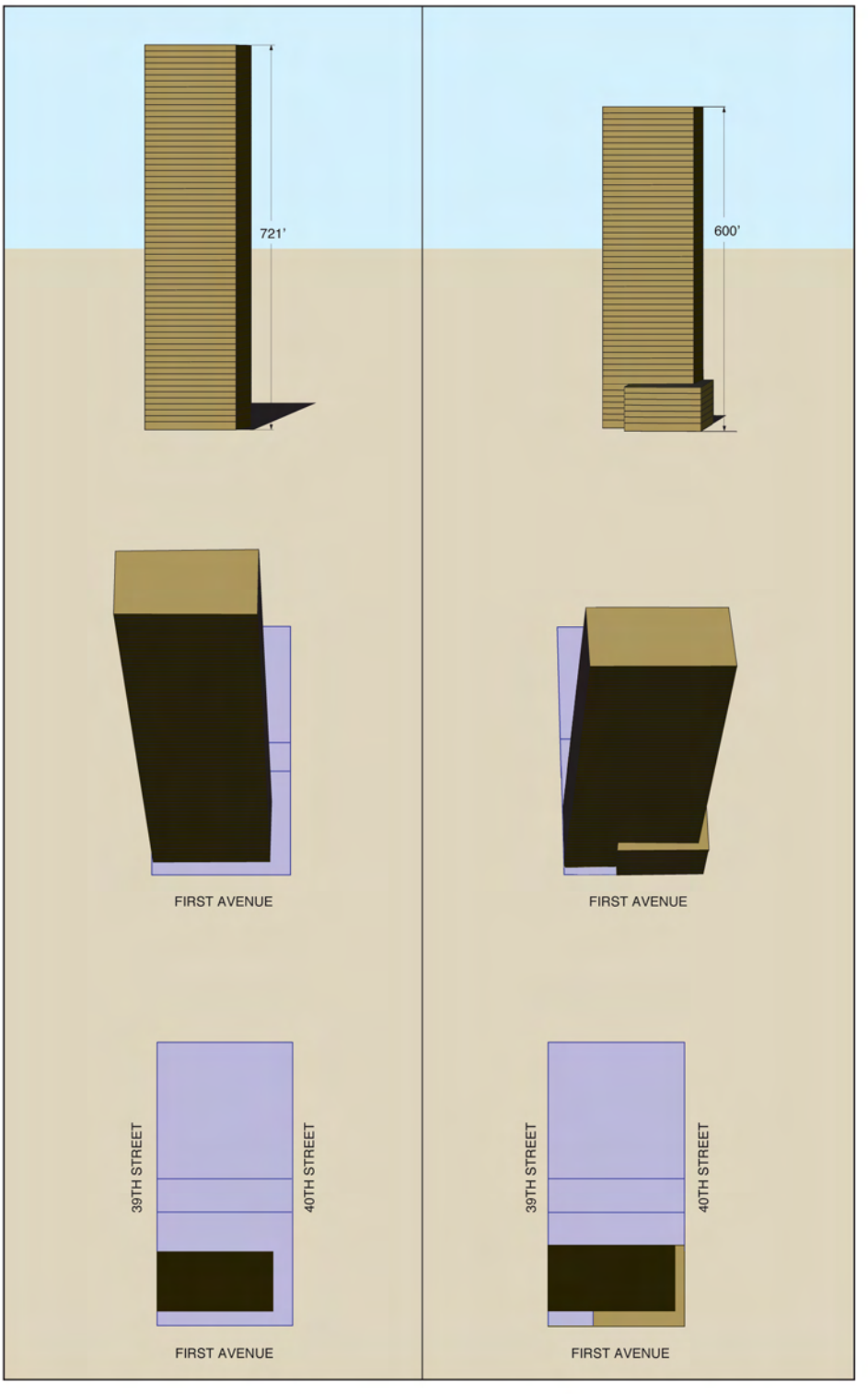
MODIFICATIONS TO THE DEVELOPMENT PLAN

The proposed modifications would reduce the height and alter the shape of the building at 685 First Avenue (see Figures 2, 3, and 4). Specifically, the height would be reduced from a maximum of 721 feet to a maximum of 600 feet. In addition, the modifications would require a lower base portion of the building, 85 feet high, set within 5 feet of the property line on First Avenue and at the property line on the side streets; the tower would rise above this base. This change would create basically a lot line footprint, which would echo a similar footprint and street wall at Tudor City, just north of the site. In keeping with the continuous streetwall, the proposed modifications would require that 50 percent of the 685 building's frontage be occupied by retail establishments; the FSEIS proposal is for 33 percent of the frontage to be occupied by retail use. Under the proposed modifications, the building would have a 20-foot rear setback, but there would be no publicly accessible open space on the site; the FSEIS proposal included 0.17 acres of such open space on site. The setbacks would not provide for publicly accessible open space.

- The proposed modifications would decrease the allowable zoning floor area of the building at 708 First Avenue from 1.37 million square feet to 1.14 million square feet. This change would reduce the floor area ratio (FAR) from 12.0 to 10.0 at this site. In addition, the proposed modifications would reduce the overall length of the building footprint. As shown on Figure 5 the footprint proposed in the FSEIS has a configuration of two rectangles, oriented east-west, that are offset from one another, so that the combinations creates an east-west dimension with an overall length of 320 feet. Under the proposed modifications the building footprint would be a simple rectangle, which would reduce the overall east-west length of the building. The same maximum height of 688 feet shown in the FSEIS would be permitted under the proposed modifications.

  This Technical Memorandum addresses two options for the 708 building; both options would have the same floor area, gross square footage, FAR and use; they would differ only in shape and height. Option 1 would reduce the building's height as well as its floor area by maintaining the same 145-foot building width as shown in the FSEIS (length would be reduced to 280 feet); and Option 2 would maintain the 688-foot height by reducing the building's footprint to 240 feet long (east-west) by 135 feet wide (north-south), as shown on Figures 6 and 7, respectively. The building height under Option 1 would be 594 feet; under Option 2 it would be approximately 688 feet.

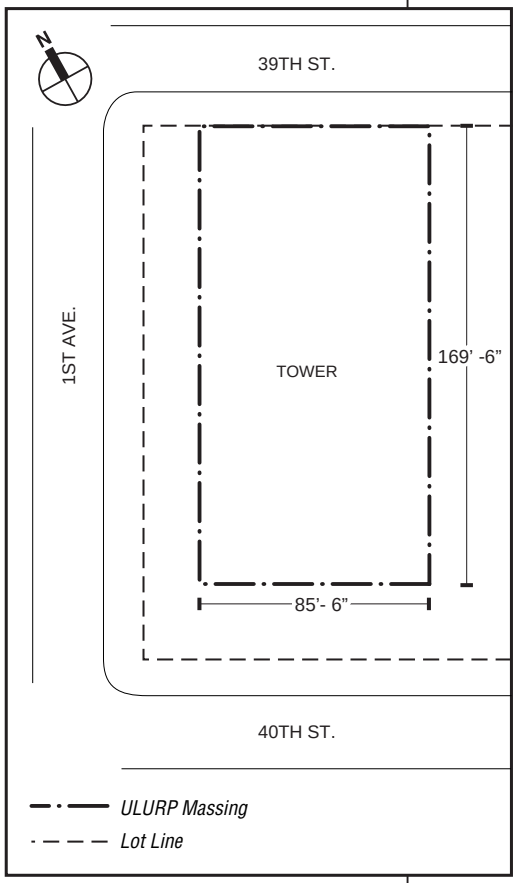
- This Technical Memorandum addresses a revision to the site plan at 616 First Avenue in connection with the new school. The FSEIS accounted for 119,936 square feet of community facility space as part of the eastern 616 First Avenue building (616-2); the mitigation chapter of the FSEIS assessed the construction and use of a portion of that community facility space as a 92,500-square-foot school. The site plan at 616 First Avenue has been revised since the FSEIS to further reflect the possibility that the school would be in a free-standing structure (see Figure 8). With the school housed in its own structure, the school floor area that was incorporated into the base of the tower at 616-2 would be moved outside the tower base. This adjustment of the 616-2 building footprint in conjunction with the revised school programming would require an estimated 6,673-square-foot reduction in the amount of publicly accessible open space (including an approximately 3,600-square-foot reduction in the widths of portions of proposed sidewalks along East 35th and East 36th Streets). In addition, the Early Childhood Center program (serving the youngest school children) may require approximately 3,000 square feet of open space on the ground floor. If so, this space would also come from area assumed to be publicly accessible open space in

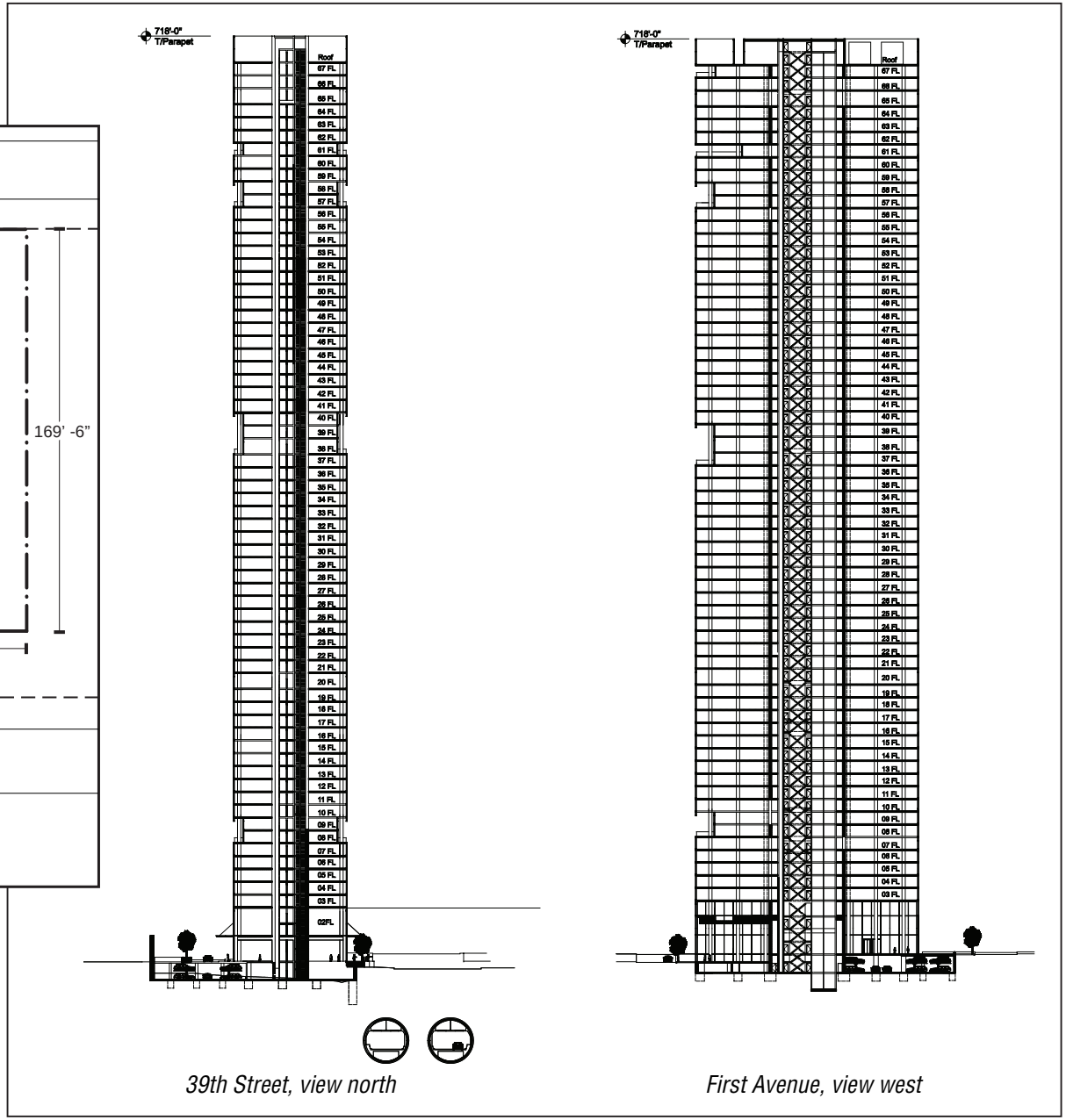


Proposed Actions in SFEIS

Proposed Actions with Proposed Modifications

685 First Avenue
Building Massing
Figure 2

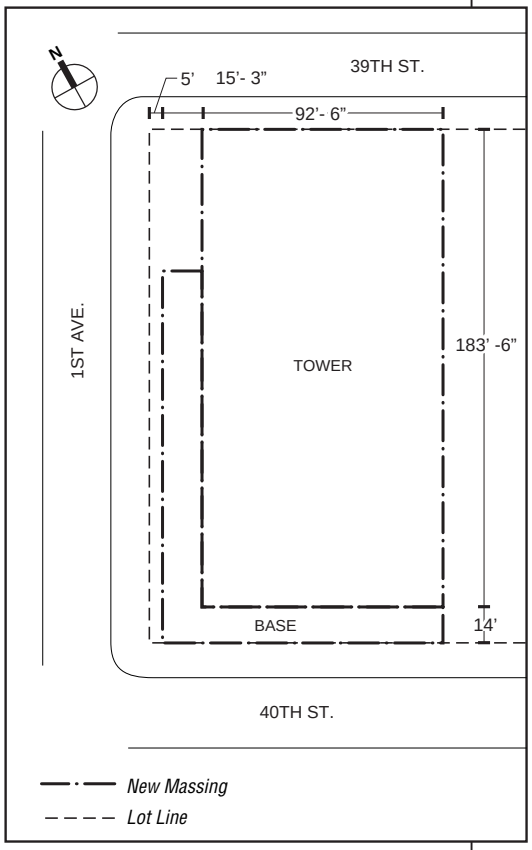




39th Street, view north

First Avenue, view west

685 First Avenue FSEIS Building Section
Figure 3





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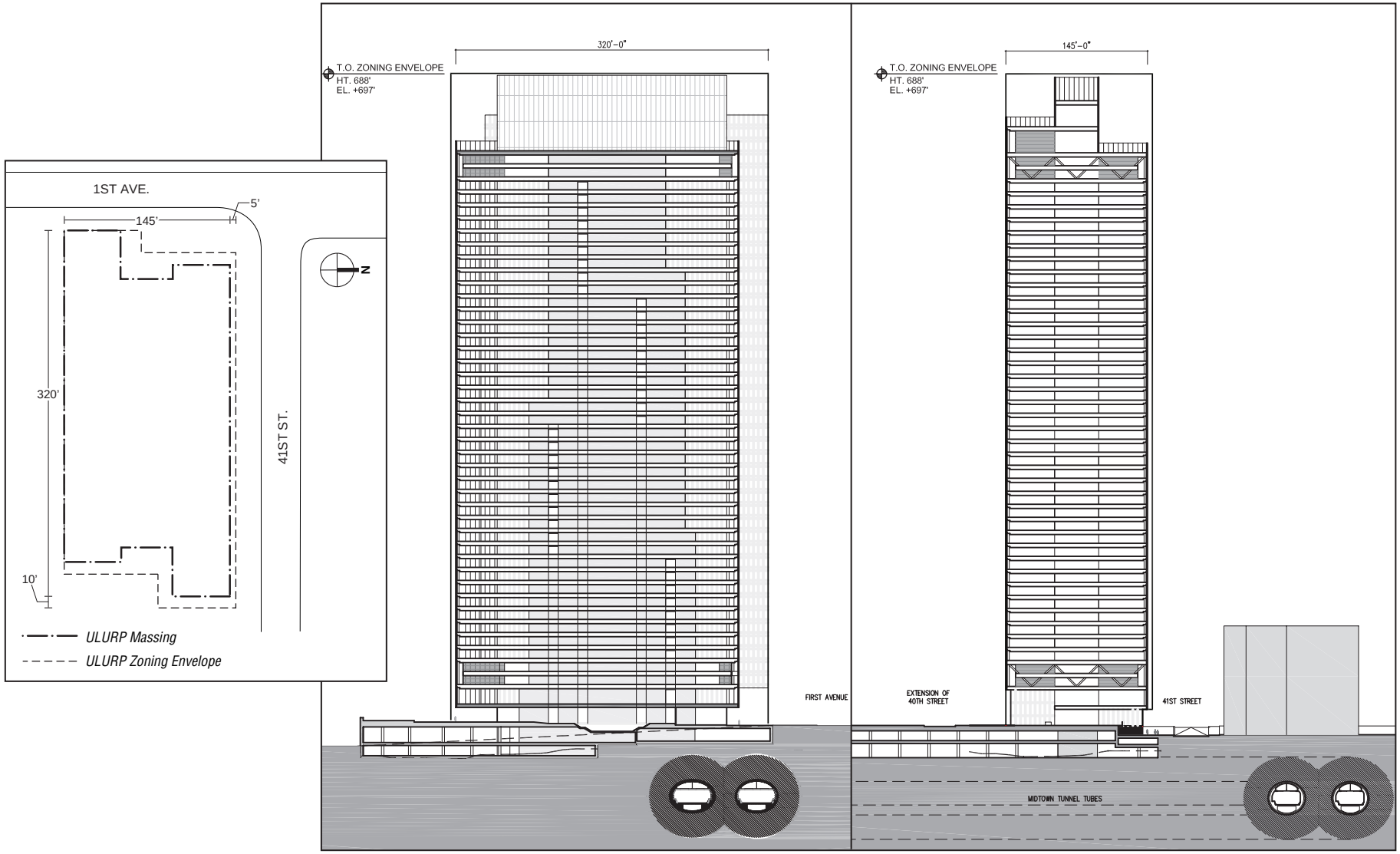
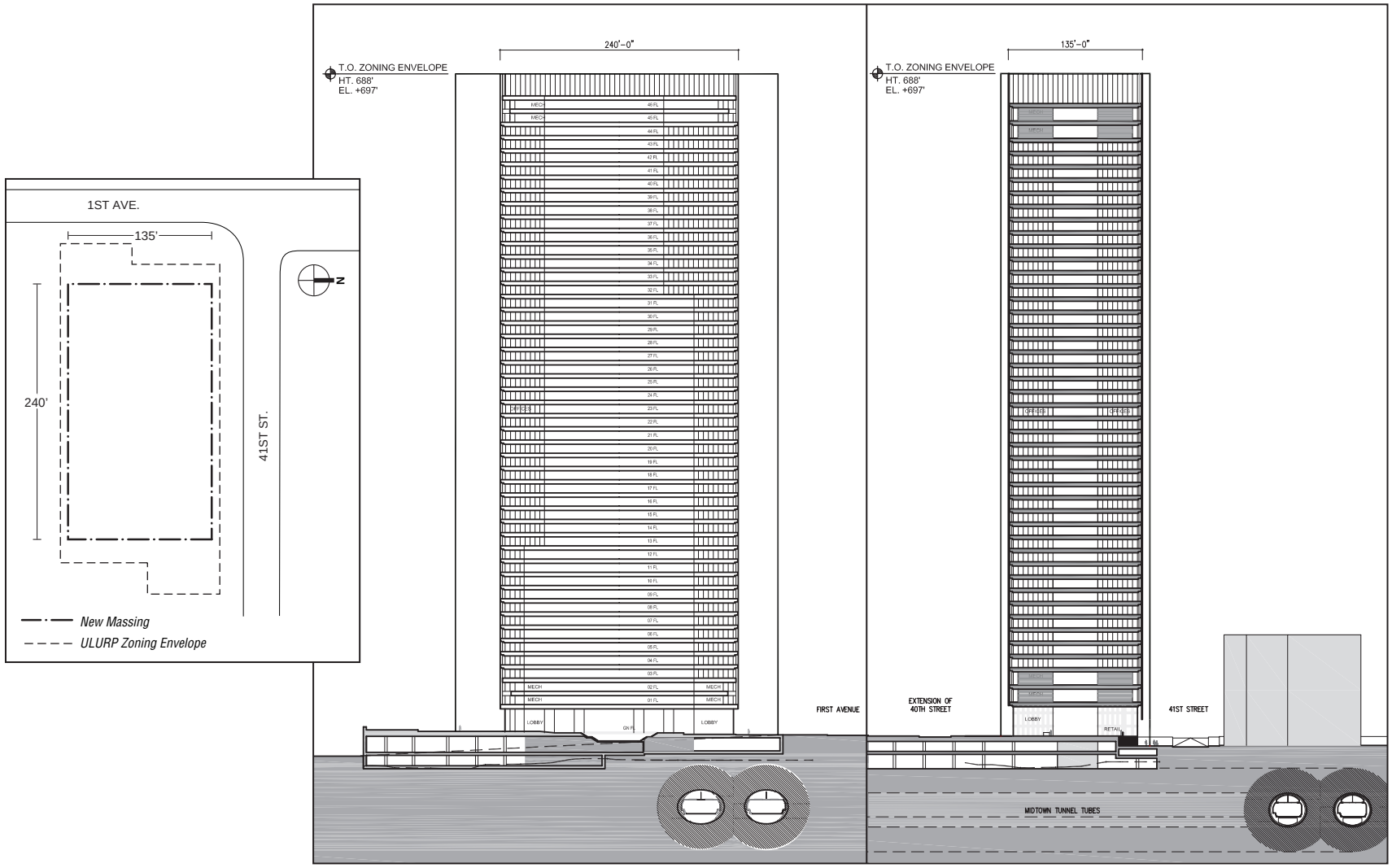
685 First Avenue Modified Building Section
Figure 4



ULURP Design East/West Section Looking South

ULURP Design North/South Section Looking West

FSEIS 708 First Avenue Building Sections
Figure 5

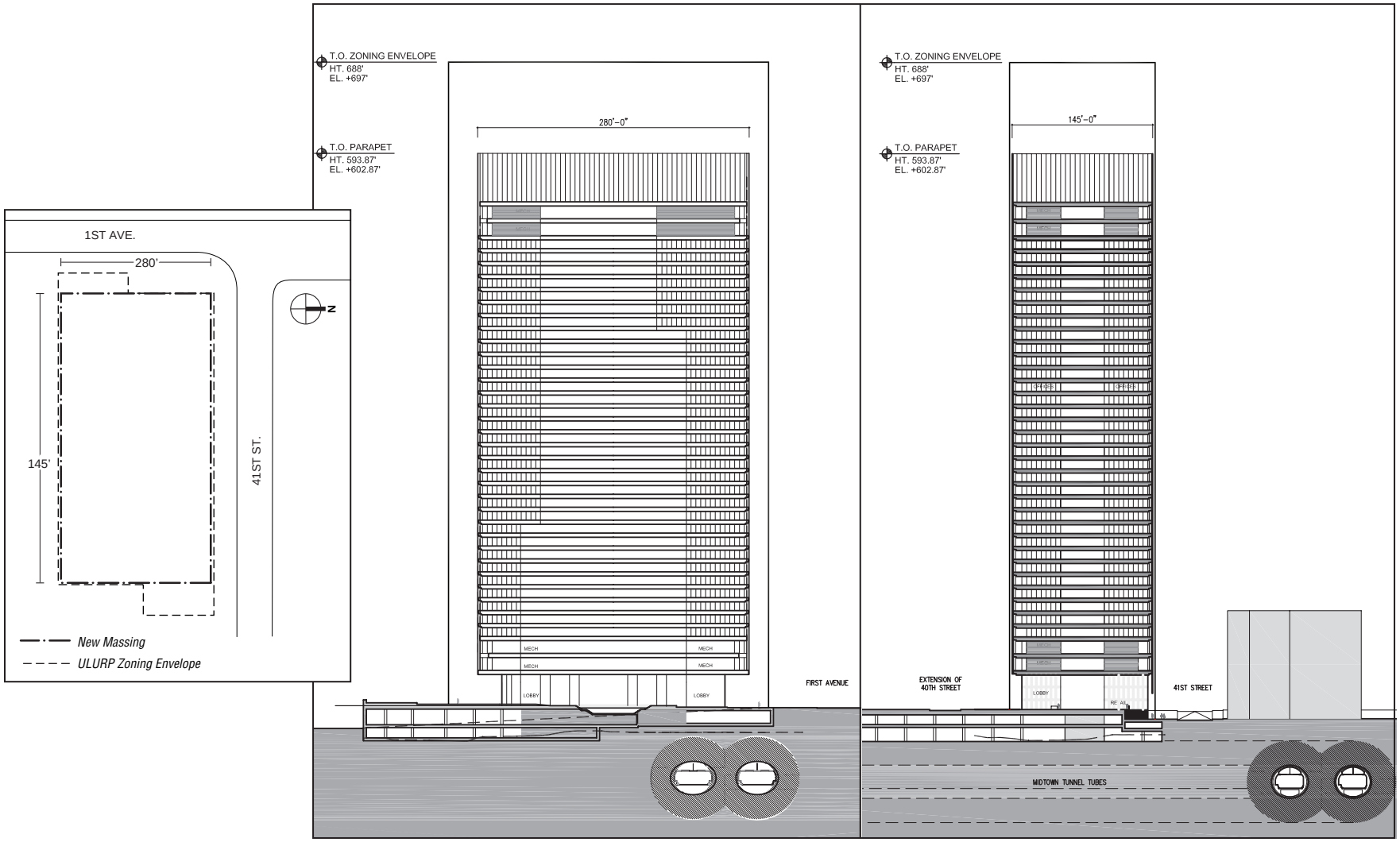


Option 1 Design East/West Section Looking South

Option 1 Design North/South Section Looking West

708 First Avenue Building Sections with Proposed Modifications Option 1

Figure 6



Option 2 Design East/West Section Looking South

Option 2 Design North/South Section Looking West

708 First Avenue Building Sections with Proposed Modifications Option 2

Figure 7

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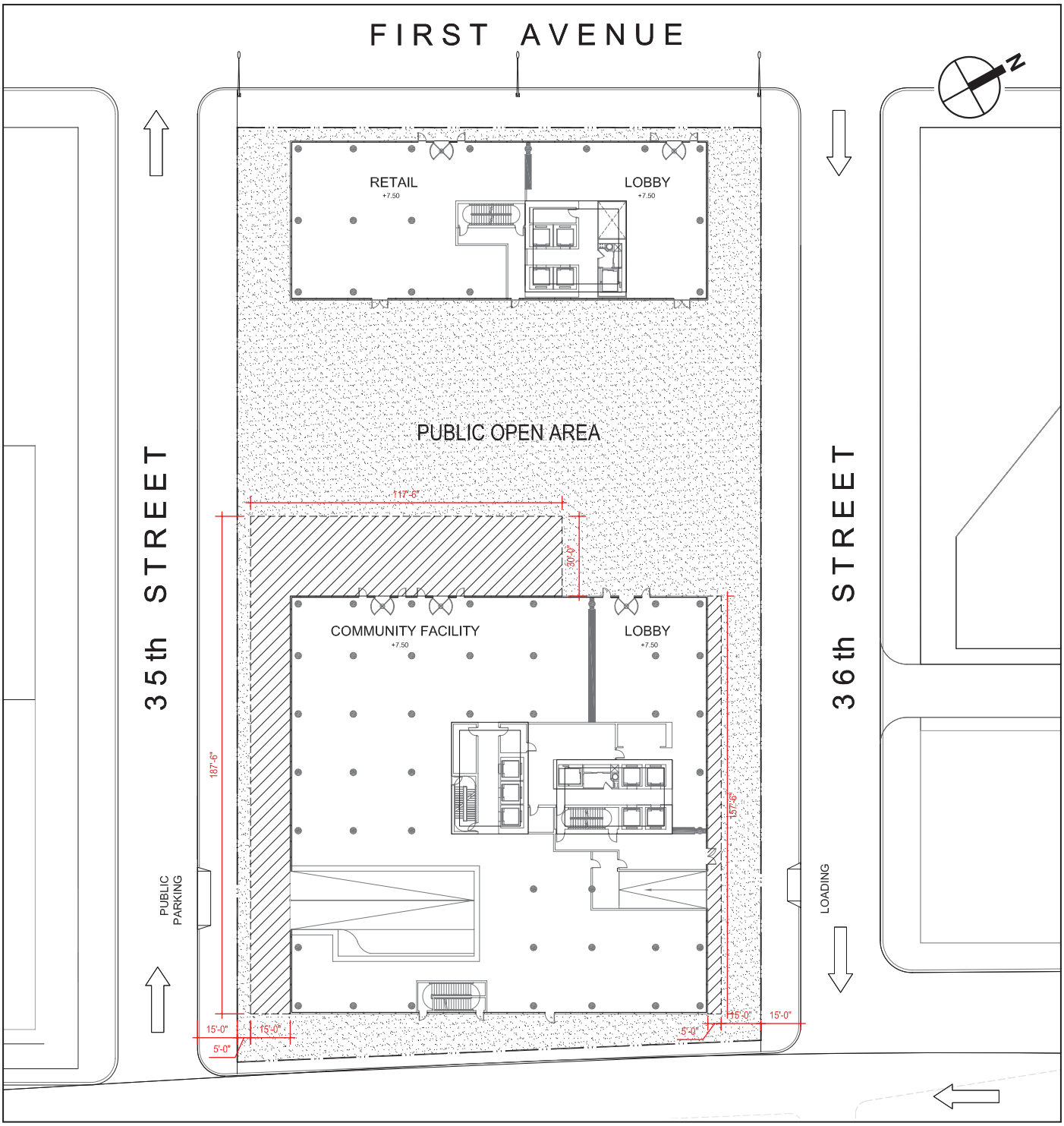


*Foot Print Expansion**

Public Open Area

Property Line

**NOTE: Alternative zoning envelope shall apply and open space improvements in designated area shall be removed in the event that a school use occupies the community facility space. Alternative zoning envelope for 616-2 will comply with tower regulations of zoning resolution 23-65*

616 First Avenue
Revised Site Plan
Figure 8

the FSEIS. Overall, the provision of a school on the site would reduce public open space on the 616 First Avenue parcel from 34,507 square feet (0.79 acres) in the FSEIS to 24,834 square feet (0.57 acres).

MODIFICATIONS TO PROPOSED OPEN SPACE PLAN

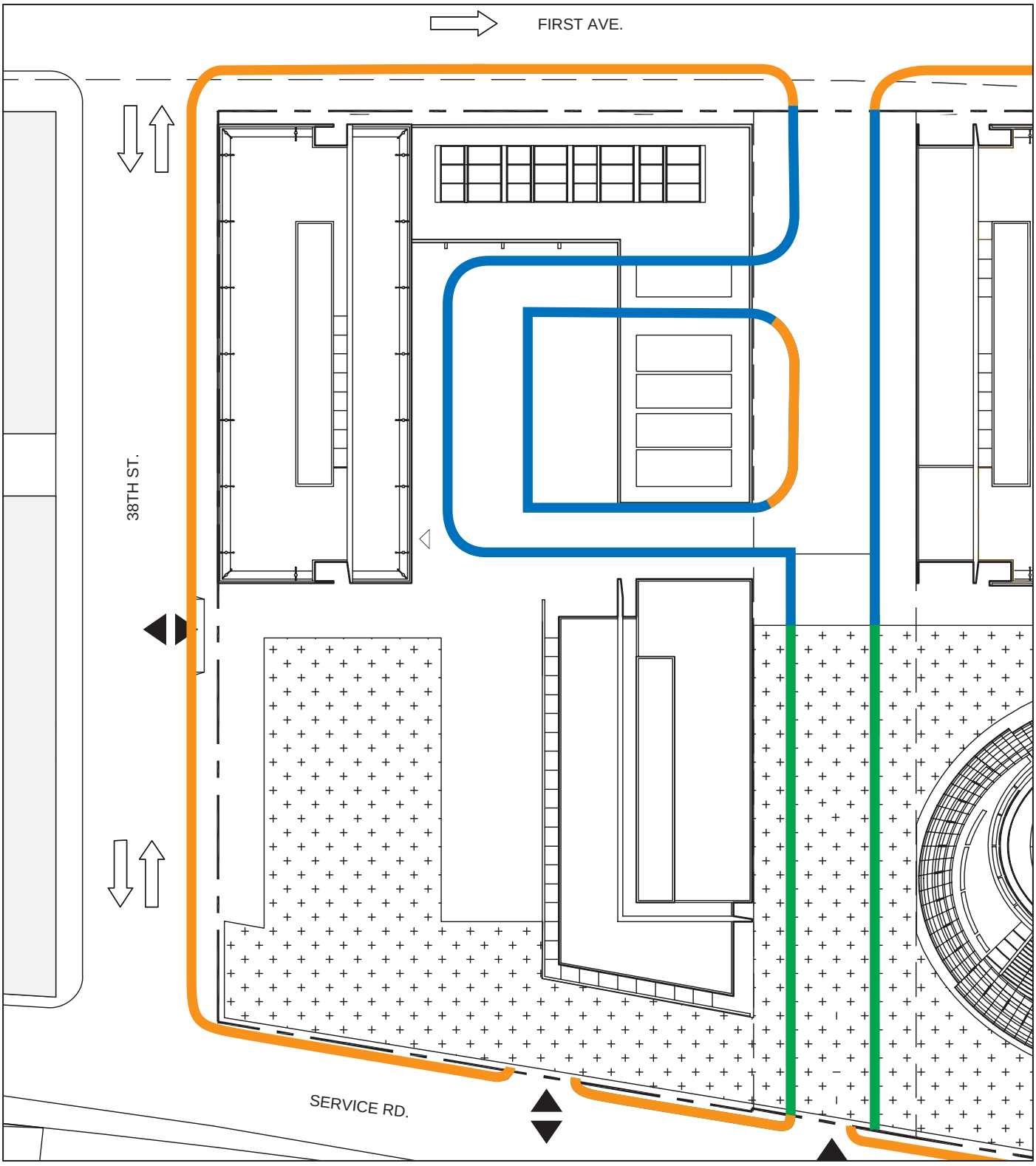
- Under the proposed modifications, the playground proposed on the 700-708 First Avenue site would be increased in size from a usable area of 5,500 square feet to a usable area of approximately 10,000 square feet. This change would require that approximately 2,900 square feet of land proposed as private open space in the FSEIS become part of the playground and thus publicly accessible; the remaining additional playground space would be achieved through land proposed as publicly accessible passive open space in the FSEIS as well as new open space realized through more refined site planning. Overall, the adjustments would result in a total of 179,268 square feet of publicly accessible open space on the 700/708 First Avenue site, 10,609 square feet (0.24 acres) more than assumed in the FSEIS.
- As noted above, there also would be reductions in publicly accessible open space under the proposed modifications, including all of the 0.17 acres of publicly accessible open space on the 685 First Avenue parcel and 0.22 acres of publicly accessible open space on the 616 First Avenue parcel. The total publicly accessible open space under the proposed modifications would be 4.69 acres, compared to 4.84 acres under the Proposed Actions in the FSEIS.
- The proposed modifications would raise curb heights within the plaza/open space area along the extension of East 39th Street on the 700 First Avenue parcel from 5 to 6 inches, as shown on Figure 9. In addition, street trees would be required to be 25 feet apart, rather than the 28 feet as considered in the FSEIS.

MODIFICATIONS TO PARKING AND LOADING FACILITIES

- The proposed modifications would reduce the number of public parking spaces at 700/708 First Avenue from 651 to 400. Accessory parking would remain the same, at 499 spaces. Reservoir space (for 33 cars) would be unchanged.

MODIFICATIONS TO PROPOSED ZONING REGULATIONS

- Under the proposed modifications, the amendment to the text of Zoning Resolution Section 74-743 to allow, by special permit, a public plaza that generates a floor area bonus on one zoning lot within a general large scale development to be located on another zoning lot, would not be included in the Proposed Actions. The Proposed Actions in the FSEIS would have allowed the public plaza located on the 700-708 First Avenue parcel to generate a floor area bonus for the building at 685 First Avenue. Instead, only a bonus for inclusionary housing, pursuant to the existing inclusionary housing program for R10 sites, would be available at 685 First Avenue, as under current zoning.
- The removal of the bonus floor area transfer from the zoning regulations proposal under the proposed modifications would also make moot the request for a special permit pursuant to Zoning Resolution Section 74-743 to allow the transfer of floor area to another zoning lot on an interim basis (from 700-708 to 685). This action would be eliminated under the proposed modifications.



Curb Heights on 700 First Avenue
Parcel with Proposed Modifications
Figure 9

REVISIONS TO CONSTRUCTION SEQUENCING

- The two construction scenarios for the Proposed Actions considered in the FSEIS assume that construction of the proposed school would begin in January 2011, so that the school could be operational by September 2012. After further and more detailed discussions with the School Construction Authority (SCA), it has become clear that the length of time required to build and program a new school is longer than anticipated in the FSEIS schedule. Therefore, this Technical Memorandum addresses a revised construction schedule, with work on the school beginning nine months earlier, in April 2010, as shown on Figure 10. The opening date of September 2012 would be unchanged.

C. ANALYSES

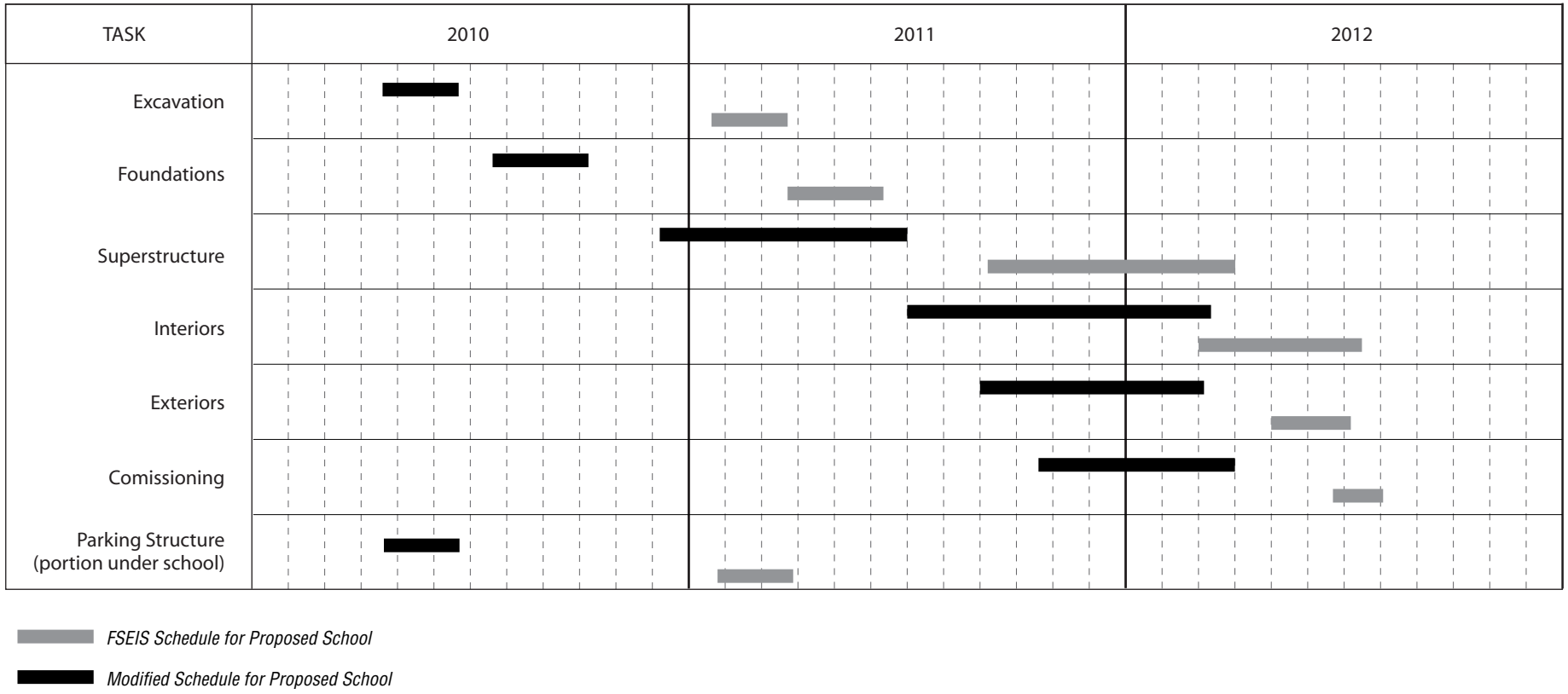
As described above, the proposed CPC modifications would decrease the total amount of development associated with the Proposed Actions analyzed in the FSEIS. The proposed modifications would reduce overall floor area by approximately 230,000 zoning square feet of commercial office space, reducing the trip generation for the project compared to the FSEIS. With the modification, the FAR bonus at 685 First Avenue would be acquired through an affordable housing bonus, rather than the plaza bonus assumed in the FSEIS. Because the FSEIS considers an Affordable Housing Scenario that accounts for the low- to moderate-income population that would be generated, it need not be studied again in this Technical Memorandum.

Specifically, the Proposed Actions with proposed modifications would not result in any significant impacts not identified in the FSEIS with respect to the following impact areas and do not require further explanation or any analysis in this Technical Memorandum: socioeconomic conditions, community facilities, natural resources, waterfront revitalization, hazardous materials, infrastructure, solid waste, energy, noise, and alternatives. This Technical Memorandum addresses the following impact analysis areas due to the proposed modifications: shadows (change in building heights and shapes), historic resources, urban design and visual resources and neighborhood character (proposed changes in height and shape for two buildings), traffic, parking (and reduction in parking) and transit (reduction in trip generation from smaller building at 708 First Avenue), air quality (effect of height changes on stationary sources of air pollution), construction (change in schedule of school construction). Mitigation is discussed, as appropriate, in the text for each impact area.

LAND USE, ZONING AND PUBLIC POLICY

The proposed modifications to the Proposed Actions would not change the overall mix of land uses, although they would reduce the size of the office building at 708 First Avenue. Therefore, the conclusions of the FSEIS, that the Proposed Actions would have no significant adverse impact on land use, would be the same for the Proposed Actions with the proposed modifications.

The proposed modifications to the amendments to the Zoning Resolution proposed under the FSEIS Proposed Actions would actually reduce the number of land use actions required to implement the project. The proposed modifications would remove the provision for a special permit to allow a floor area bonus for a plaza built on a different zoning lot in a large scale development. Without this provision, there would also be no need to establish a temporary special permit to allow the transfer of floor area to another zoning lot on an interim basis. Thus, the FSEIS conclusion that there would be no significant adverse impact on zoning from the Proposed Actions would be the same for the Proposed Actions with the proposed modifications.



Modified School Construction Schedule
Figure 10

OPEN SPACE

The arrangement of publicly accessible open space would be adjusted with the proposed modifications: there would no longer be 0.17 acres of publicly accessible open space on the 685 First Avenue site; acreage on the 700-708 sites would increase from approximately 3.87 acres to 4.12 acres; and acreage on the 616 site would decrease from 0.79 acres to 0.57 acres. The overall change (a reduction of approximately 0.15 acres) would not alter the conclusions of the FSEIS regarding open space; the project would continue to provide passive and active open space of an amount well in excess of demand generated by the project's residential and worker population, would continue to improve all open space ratios compared to the future without the Proposed Actions (see Table 2), and therefore would not result in significant adverse open space impacts. In addition, with the increase in the size of the public playground, active open space conditions would improve compared to future conditions described in the FSEIS.

Table 2
Comparison of Open Space Impacts between Proposed Actions in FSEIS and Proposed Actions with Proposed Modifications

Population	Existing Condition Open Space Ratio	No Action Condition Open Space Ratio	Proposed Actions Open Space Ratio	Proposed Actions with Proposed Modifications Open Space Ratio
¼-Mile Study Area				
Passive Open Space, Workers Only	0.214	0.207	0.262	0.262
Passive Open Space, Combined Workers and Residents	0.120	0.116	0.144	0.143
½-Mile Study Area				
Total Open Space Ratio, Residents Only	0.339	0.339	0.373	0.371
Active Open Space, Residents Only	0.080	0.076	0.081	0.083
Passive Open Space, Residents Only	0.259	0.263	0.292	0.288
Passive Open Space, Combined Residents and Workers	0.062	0.064	0.074	0.074

SHADOWS

Under the proposed modifications, there would be no additional significant adverse shadow impacts not identified in the FSEIS. The 685 and 708 First Avenue buildings would still be substantially taller than the heights necessary to mitigate the significant adverse shadow impact on Tudor City open spaces identified in the FSEIS. Therefore, the significant adverse shadow impact on Tudor City open spaces would remain under the proposed modifications and the FSEIS mitigation would still be appropriate.

HISTORIC RESOURCES, URBAN DESIGN AND VISUAL RESOURCES, AND NEIGHBORHOOD CHARACTER

Under the proposed modifications, the building on the 685 First Avenue development parcel would be built to the lot lines on East 40th Street and First Avenue and, as described above, it would have a tower-on-a-base form. As compared to the FSEIS building, this configuration would block more of the northward view of Windsor Tower (5 Tudor City), a historic resource, from First Avenue and East 40th Street. Since, as concluded in both the FSEIS and the FGEIS, Windsor Tower is the only Tudor City building that would be blocked in northward views along

First Avenue, the proposed modified building on the 685 First Avenue parcel, like the FSEIS building at 685 First Avenue, would not result in any significant adverse visual or historic contextual impacts on Tudor City. Under the Proposed Actions with proposed modifications, the lot line building at 685 First Avenue, with 50 percent of its avenue frontage devoted to retail use, would continue the streetwall and streetscape created by the Tudor City buildings to the north on First Avenue. This change would improve the relationship of the 685 First Avenue building to the Tudor City buildings at street level. Like the form of the 685 First Avenue building analyzed in the FSEIS, the tower-on-base form would be in keeping with the urban design of the study area, where there are some other buildings with this massing. Thus the Proposed Actions with the proposed modifications, like the Proposed Actions in the FSEIS, would not create any significant adverse urban design impact.

Under the proposed modifications, the office building on the 708 First Avenue development parcel would be set back from First Avenue by either approximately 25 feet (with Option 1) or approximately 44 feet (with Option 2). In comparison, the office building analyzed in the FSEIS was set back only 5 feet from First Avenue. The two options for the proposed modified building would open views north on First Avenue in the vicinity of East 40th Street; however, neither would increase views of the United Nations Secretariat building (which is set well back from First Avenue) as compared to the FSEIS Proposed Actions. In addition, the buildings under both Options would still be taller than the Secretariat and other study area buildings. Therefore, the proposed modifications would improve, but would not substantially change, the contextual and visual relationship of the office building on the 708 First Avenue parcel to the Secretariat and other study area buildings. Like the Proposed Actions assessed in the FSEIS, the Proposed Actions with the proposed modifications would not have any significant adverse contextual or visual impacts on the Secretariat building or on other buildings in the study area.

With no significant adverse impacts on historic resources, urban design or visual resources, the Proposed Actions with the proposed modifications would, like the Proposed Actions in the FSEIS, also have no significant adverse impact on neighborhood character.

TRANSPORTATION

TRAFFIC AND PARKING

As shown in Table 3, the proposed modifications would decrease weekday AM peak hour vehicle trips by 315 (21 percent), weekday midday peak hour vehicle trips by 78 (10 percent), weekday PM peak hour trips by 208 (15 percent), and Saturday midday peak hour trips by 125 (11 percent). These are all very sizable traffic volume reductions.

Table 3
Traffic Generation Comparison (Vehicle Trips)—Total Development

Peak Period	Proposed Actions	Proposed Modifications	Percent Reduction
AM	1,494	1,179	21%
Midday	772	694	10%
PM	1,356	1,148	15%
Saturday	1,097	972	11%

Based on a comparison of the volume of traffic that would be generated by the proposed modifications versus traffic generated under the Proposed Actions without the proposed

modifications, the All-Residential Alternative and the Community Board 6 Alternative, and the number of significantly impacted intersections identified in the FSEIS for the Proposed Actions and the two Alternatives, the number of significant traffic impacts that would be generated by the proposed modifications could be estimated, as shown in Table 4.

Table 4
Significant Traffic Impact Comparison—Manhattan

Peak Hour	Proposed Actions (Vehicle Trips & Sig Impacts)	All-Residential Alternative (Vehicle Trips & Sig Impacts)	Comm. Board 6 Alternative (Vehicle Trips & Sig Impacts)	Proposed Modifications (Vehicle Trips & Estimated Sig Impacts)
Weekday AM	1,494 / 55	1,291 / 53	665 / 45	1,179 / 52
Weekday Midday	772 / 35	658 / 34	432 / 30	694 / 34
Weekday PM	1,356 / 57	1,073 / 55	670 / 46	1,148 / 55
Saturday Midday	1,097 / 22	1,201 / 23	855 / 22	972 / 22

Note: The number of projected significant traffic impacts under the Proposed Actions with proposed modifications was estimated based on an interpolation of traffic generation and significant impacts for the Proposed Actions and the two EIS Alternatives.

It is projected that the Proposed Actions with proposed modifications would generate approximately three fewer significantly impacted traffic locations in Manhattan in the weekday AM peak hour, one fewer location in the weekday midday peak hour, two fewer in the weekday PM peak hour, and the same number of significant impacts in the Saturday midday peak hour.

For intersections analyzed in the Queens Plaza area on the Queens side of the Queensboro Bridge, the volume of vehicular traffic generated through each is only a fraction of the volumes generated within Manhattan. As shown in Table 5, a relatively modest traffic reduction is projected for the Queens Plaza area. Given the level of traffic congestion prevalent there, this traffic volume reduction, distributed amongst several intersections, would not significantly change the number of significant impacts in that area.

Table 5
Traffic Generation Comparison (Vehicle Trips) – Queens Plaza Area

Peak Hour	Proposed Actions	% Reduction	Vehicle Trip Reduction
Weekday AM	256	21%	54
Weekday Midday	96	10%	10
Weekday PM	215	15%	32
Saturday Midday	136	11%	15

Because the proposed modifications would reduce trips generated by the Proposed Actions, the Proposed Actions with the proposed modifications would not result in any significant traffic impacts not identified in the FSEIS.

Parking

The proposed modifications would reduce the amount of office space by less than the percentage of the public parking spaces at 700/708 First Avenue (about a 17 percent reduction in office space compared to about a 39 percent reduction in public parking). Because—as a percentage—more parking spaces would be reduced than office space, the parking facility would still be fully occupied and there would be additional vehicle trips destined to nearby off-street parking facilities (approximately 330 vehicles would park off-site under the proposed modifications as compared to 220 vehicles according to the FSEIS). The additional demand for off-site parking could be accommodated within nearby parking facilities so there would be no significant issue created by the proposed modifications. Because most motorists who drive daily would learn to proceed directly to available off-street parking facilities, the proposed reduction in public parking at 700/708 First Avenue should not create additional significant adverse traffic impacts.

Also, because a school at 616 First Avenue would not create as much of a demand for public parking as the community facility (medical office) use studied in the FSEIS, approximately 140 spaces could become available for 708 First Avenue office space vehicles, thus reducing the amount of parking that would need to be accommodated off-site from 330 spaces to 190 spaces, nearly identical to the amount projected in the FSEIS.

TRANSIT AND PEDESTRIANS

The proposed actions with the proposed modifications would result in a reduction in transit trips as compared to analysis presented in the FSEIS. Under the Proposed Actions with proposed modifications, there would be 24 percent fewer subway trips and 17 percent fewer bus trips during the AM peak hour. In the PM peak hour, there would be 21 percent fewer subway trips and 15 percent fewer bus trips.

The FSEIS identified impacts on the PL9 stairway at Grand Central Station in the AM and PM peak periods. Likewise, the Proposed Actions with proposed modifications would result in impacts at the PL9 stairway. The FSEIS identified that a 15-inch widening of the PL9 stairway would be required to technically mitigate the project's impacts. But with the reduced program, a smaller widening of approximately 12 inches could technically mitigate this impact. However, as indicated in the FSEIS, a 24-inch widening is required to add a pedestrian lane and provide a meaningful increase in capacity. Therefore, significant adverse impacts of the Proposed Actions both with and without the proposed modifications would be mitigated by the same mitigation measure.

The FSEIS identified impacts on the M16/M34 and M42 bus routes, which would be mitigated with the provision of additional runs during the AM and PM peak hours. Since the modified plan would result in fewer bus trips, it is likely that a reduced number of additional runs would be needed compared to the Proposed Actions in the FSEIS.

The reduced development density and change in the community facility use would also result in a decrease in weekday pedestrian trips and therefore would not result in new significant impacts.

The analysis of transit and pedestrians concludes that the Proposed Actions with proposed modifications would not result in significant adverse transit or pedestrian impact not identified in the FSEIS.

AIR QUALITY

The Proposed Actions with the proposed modifications would result in overall lower traffic volumes as compared to the reasonable worst-case development scenario analyzed in the FSEIS. Therefore, for the mobile source analysis presented in Chapter 17, "Air Quality," of the FSEIS, the Proposed Actions with the proposed modifications would not change any of the conclusions, and no additional analysis would be necessary. Possible construction of a free standing school was addressed in the FSEIS; therefore, no further analysis of the proposed school's HVAC emissions is necessary in this Technical Memorandum. In addition, the Proposed Actions with the proposed modifications would not result in any new sensitive uses that would require an assessment for impacts from existing industrial sources. Therefore, no additional industrial source analysis is necessary.

However, since the proposed development at 685 First Avenue would be lower in height under the Proposed Actions with the proposed modifications, and 708 First Avenue would have a lower FAR and, potentially, a lower building height, additional air quality impact analyses were conducted to determine the effect of these changes with respect to off-site and on-site receptors. The analysis of stationary sources, including the analysis of fossil fuel-fired heating, ventilation and air conditioning (HVAC) equipment (such as boilers and hot water heaters) is further examined below. The analyses account for the following additional restrictions at the 685 and 708 First Avenue parcels:

- *Block 945, Lot 33 (685 First Avenue):* HVAC systems must utilize natural gas. HVAC stacks on this property must have a minimum exhaust height of 668 feet above Manhattan Datum, to avoid significant adverse impacts.
- *Block 970 Lot 1 (708 First Avenue):* HVAC system(s) utilize either No. 2 fuel oil or natural gas. HVAC stacks must have a minimum exhaust height of 691.5 feet above Manhattan Datum, to avoid significant adverse impacts.
- Based on the conceptual building designs shown in Figures 2, 3, 4, and 6, the boiler stack(s) would need to be at least 40 feet above the roof of 685 First Avenue, and at least 67 feet above the roof of 708 First Avenue Option 1, respectively. Based on the building concept shown in Figure 5, the height of 708 First Avenue Option 2 would be slightly greater than the minimum required stack height.

Additional air quality analyses were performed which determined that the Proposed Actions with the proposed modifications would not result in any exceedances of the NAAQS for PM_{10}, SO_2, NO_2 or CO impacts from the operation of boiler sources. The air quality modeling analysis also determined the highest predicted increase in 24-hour and annual average $PM_{2.5}$ concentrations from the Proposed Actions. The maximum 24-hour incremental impacts at any discrete receptor location would be less than the applicable interim guidance criterion of 5 $\mu g/m^3$. On an annual basis, the projected $PM_{2.5}$ impacts would be less than the applicable interim guidance criterion of 0.3 $\mu g/m^3$ for local impacts, and the DEP interim guidance criterion of 0.1 $\mu g/m^3$ for neighborhood scale impacts.

$PM_{2.5}$ impacts were also compared with the DEP interim guideline criterion of 2 $\mu g/m^3$. The assessment examined the magnitude, duration, frequency, and extent of the increments at

locations where exposure above the 2 µg/m3 threshold averaged over a 24-hour period could occur. The receptor location with the maximum continual 24-hour exposure would be at the proposed development at WS1-1, at an elevation of 636 feet. At this location, maximum 24-hour $PM_{2.5}$ impacts would be 2.36 µg/m^3. Concentrations exceeding 2 µg/m^3 on this building were predicted at four discrete locations. At each of these receptors, 24-hour average concentrations were predicted to exceed 2 µg/m^3 at a maximum frequency of only two times per year, and with an annual average frequency of less than once per year. In addition, a total of four discrete locations (on two floors, two at an elevation of 443 feet and two at 452 feet) on the proposed development of 616-1 had maximum predicted concentrations exceeding 2 µg/m^3. At each of these receptors, the 24-hour average concentrations were predicted to exceed 2 µg/m^3 at a maximum frequency of only once per year and with an average frequency of less than once per year. At other locations on the proposed developments and within the community, maximum 24-hour average concentrations of $PM_{2.5}$ would be less than the updated $PM_{2.5}$ interim guidance criterion of 2 µg/m^3. The magnitude, frequency, location, and size of the area of $PM_{2.5}$ concentrations above 2 µg/m^3 are very low, and overall these results are very similar to those presented in the FSEIS.

With the above-described restrictions, the Proposed Actions with the proposed modifications, like the Proposed Actions in the FSEIS, would not result in any significant adverse impacts on air quality.

CONSTRUCTION

As described above, further discussions with the SCA have resulted in a construction time for the school that is five months longer than that assumed for the two construction scenarios in the FSEIS. Under the revised construction schedule, the school construction would begin in April 2010, nine months earlier than in both of the FSEIS schedules, and would be completed in April 2012, four months earlier than assumed in the FSEIS schedules (see Figure 10). The interior, exterior, and commissioning tasks would be longer than in the FSEIS schedules. The following assesses this revised construction schedule to determine if any new or different significant adverse environmental impacts not already identified in the FSEIS would result during construction. The assessment in this Technical Memorandum assumes the same air quality and noise control measures for construction as committed to through the restrictive declaration for the project and assumed in the FSEIS.

TRAFFIC

While the revisions to the construction schedule for the proposed school would result in some additional construction worker and truck traffic approximately nine months earlier, the overall projected peak construction period analyzed in the FSEIS would not change; the latter part of 2009 would continue to be the highest peak in terms of construction vehicle activities. Therefore, the same transportation-related conclusions made in the FSEIS would be applicable for this school construction schedule.

AIR QUALITY

The revisions to the construction schedule for the proposed school would not change the peak emissions identified in the FSEIS or the conclusions presented there. The revision would result in a longer period of interior, exterior, and commissioning work at the school. These work tasks would have no significant adverse impact on air quality. The construction of the school in

general would begin nine months earlier, resulting in a somewhat different overlap with construction at other sites, but this would not result in higher peak emissions than those analyzed in the FSEIS.

Predicted air quality at the school, once operational, would not be affected by the schedule modification. As presented in the FSEIS, the construction would not result in potential significant adverse impact on air quality at the school.

NOISE

The revisions to the construction schedule for the proposed school would not change the conclusions presented in the FSEIS. The construction of the school would begin earlier and would result in increased noise levels during earlier, instead of later time periods (see Figure 10) at locations immediately adjacent to the construction site, principally at the Rivergate, a residential building directly south of the school site, at an earlier time. However, the Rivergate contains double-glazed windows and central air conditioning (i.e., alternative ventilation). Consequently, construction activities due to the school building, while noisy and intrusive at times, would not be expected to increase interior noise levels above the 45 dBA L_{10} CEQR noise standard at that location.

Therefore, construction with the proposed modifications would not result in any new significant adverse noise impacts. ✷