

Technical Memorandum for 505-513 West 43rd Street
CEQR No. 14DCP183M
ULURP Nos. N140407ZRM, 140408ZSM, 140409ZSM
April 16, 2015

Introduction

The project located at 505-513 West 43rd Street (CEQR No. 14DCP183M) was certified by the City Planning Commission (CPC) and issued a revised Negative Declaration on March 2, 2015. Modifications are being proposed for the project and this Technical Memorandum specifically describes the proposed changes and that the modifications would not result in any significant adverse impacts, and would not affect the analysis in the February 17, 2015 Revised EAS or alter the conclusions of the March 2, 2015 Revised Negative Declaration.

Project History

Original Project

This memorandum addresses recent changes to the proposed project at 505-513 West 43rd Street (CEQR 14DCP183M). A Negative Declaration was originally issued for the proposed project on September 26, 2014 based on the analysis of a Reasonable Worst-Case Development Scenario (RWCDs) comprised of a residential building totaling 199 residential units (of which approximately 20 percent, or 40 units would be permanently affordable) containing two 16-story segments each totaling approximately 164 feet (189 feet including the mechanical bulkhead), an accessory parking area containing 35 spaces, and a 6,083 gross square foot (gsf) open area (between the building segments) for residents which would also contain an emergency ventilation for the Amtrak rail line located below the project site. The proposed Amtrak vent in the open area would serve as an emergency or "passive" vent and measure 22 feet wide, 17 feet deep and have a height of eight feet. The original project resulted in a total floor area ratio (FAR) of approximately 8.0.

Revised Project

Since certification, the proposed project was subsequently reduced in size by the applicant and a revised EAS reflecting the changed building design, dated February 17, 2015 was issued a Revised Negative Declaration on March 2, 2015. The approved project consisted of 107 residential units but, for conservative analysis purposes, the With-Action RWCDs consisted of 188 residential units (of which 28 units would be permanently affordable) containing two 15-story segments each totaling approximately 154 feet (179 feet including the mechanical bulkhead) an accessory parking area containing 23 spaces and a 6,083 gsf open area (between the building segments) for residents which would also contain an emergency passive ventilation for the Amtrak rail line located below the project site. The reduced project resulted in a total FAR of approximately 7.4.

City Council Modifications

Based on review of the project by the City Council and design modeling subsequently required by Amtrak (see attached correspondence for more detail), the following modifications to the project are currently proposed (see also Figure 1):

- Increase the size of the passive emergency Amtrak vent from approximately 375 square feet (22 feet wide by 17 feet deep) to 630 square feet (17 feet wide by 37 deep)¹.
- Remove the parking (curb cut on West 43rd Street) and replace with approximately 1,458 square feet of residential floor area, approximately two dwelling units including one on-site affordable unit, resulting in an slight residential FAR increase (from 7.4 to 7.47)

The heights of the building segments would remain and the overall building envelope would not be expected to change. The active rail ventilation would be located at the roof level of both segments (154 feet). A full description of the modifications is included in the filing letter from the Land Use Committee of the City Council to the City Planning Commission dated April 16, 2015 (attached to this memo). A detailed site plan and building section and elevation drawings for the modified plan are also attached to this memo (See Drawings Z-9 through Z-11).

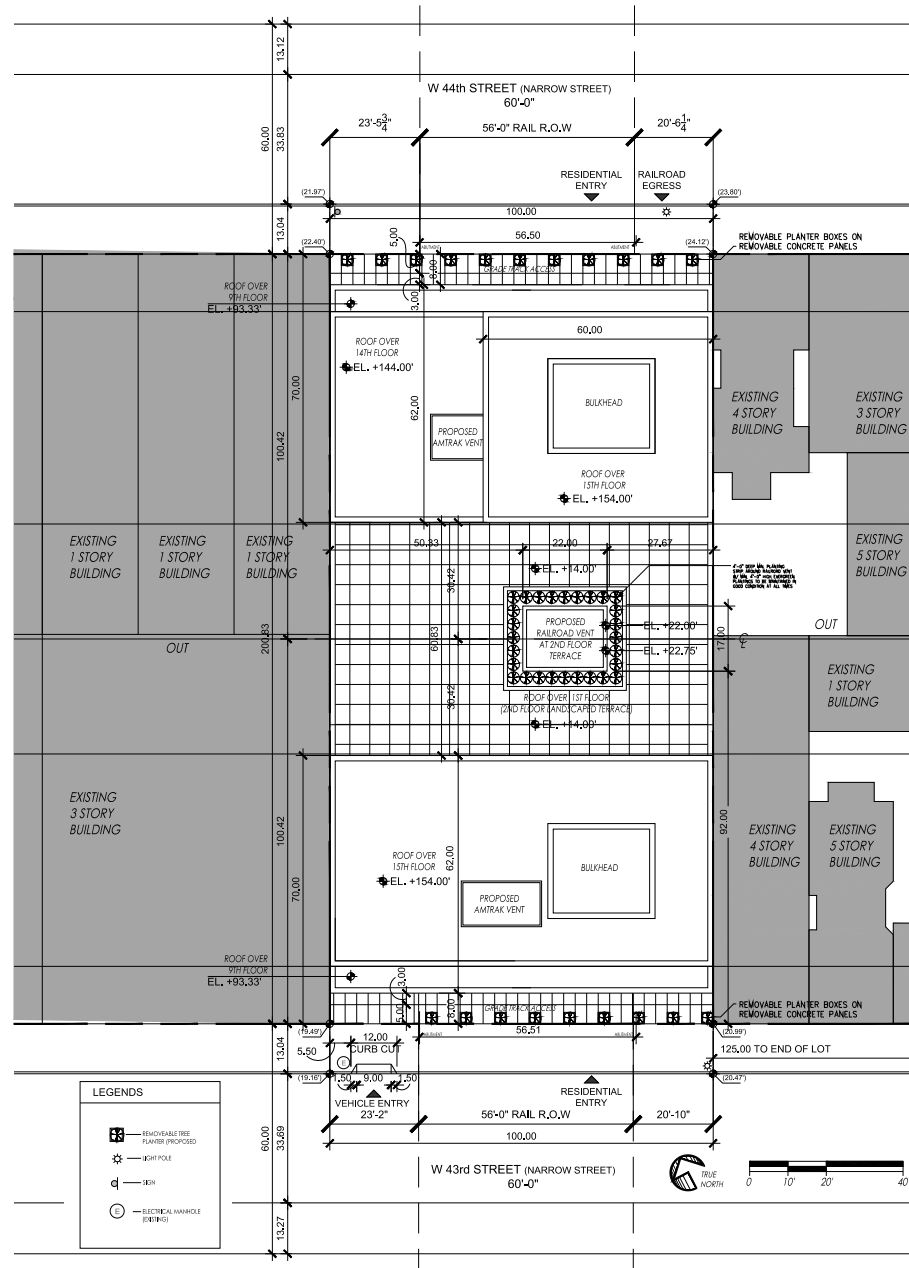
Table 1 provides a comparison of the proposed project components in the original EAS, the revised EAS and the proposed modifications.

Table 1: Comparison of Proposed Project

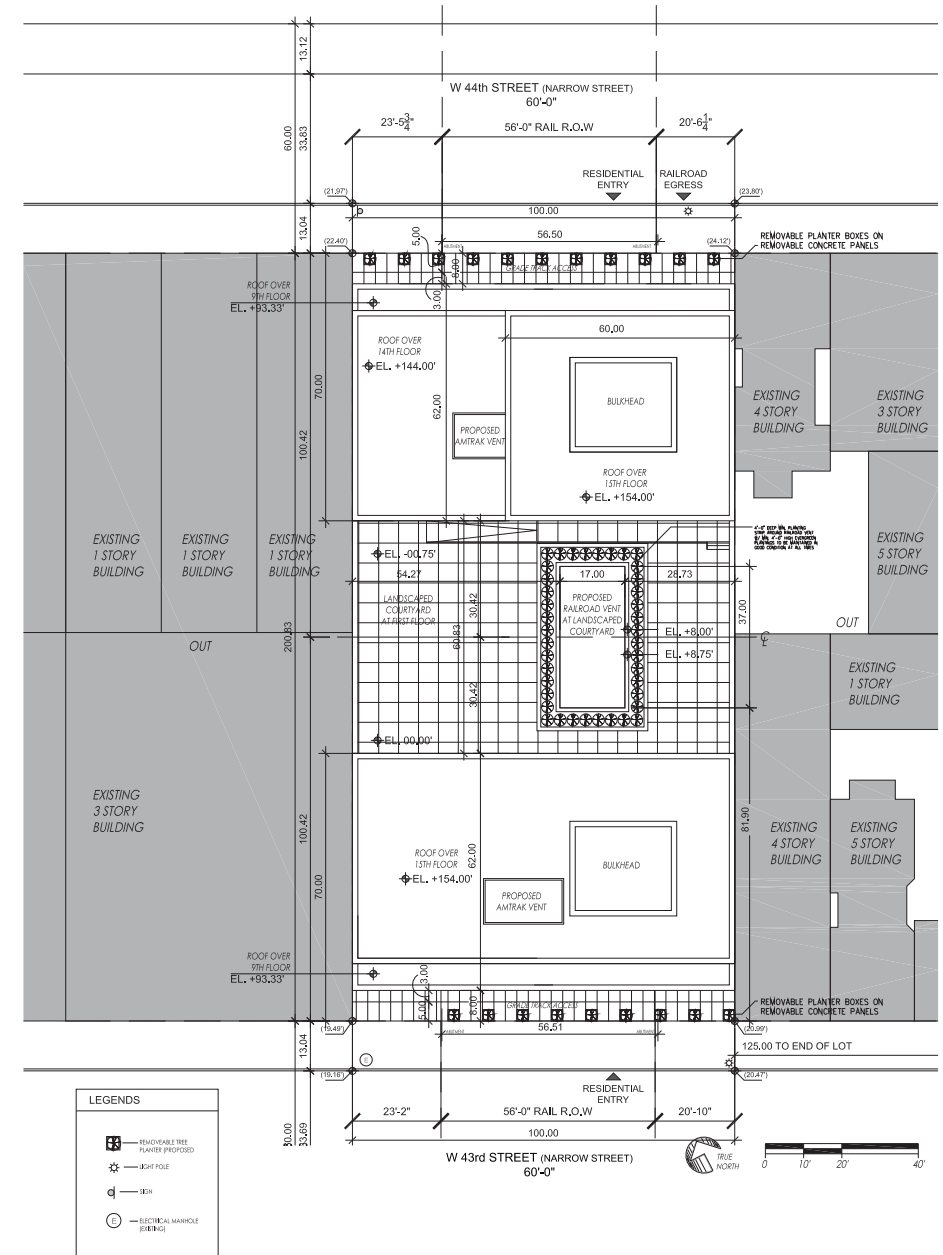
	EAS (September 2014)	Revised EAS (February 2015)	Proposed Modifications (April 2015)
Building Design			
Height			
Feet (roofline/including bulkhead)	164'/ 189'	154'/ 179'	154'/ 179'
Number of stories	16	15	15
Open Area (sf)	6,083	6,083	6,083
Amtrak Passive Rail Ventilation	22' wide x 17' long (approx. 375 sf)	22' wide x 17' long (approx. 375 sf)	17' wide x 37' long (approx. 630 sf)
With-Action RWCDs			
Residential			
Total Units	199	188	190
Affordable Units (On-site/Off-site)	40 (40/0)	28 (8/20)	29 (9/20)
Floor Area (sf)	160,664	148,614	150,072
FAR	8.0	7.4	7.47
Parking (number of spaces)	35	23	0

¹ See attached *Change in Courtyard Shaft Size for Amtrak Empire Line Overbuild – 43rd Street to 44th Street Memorandum* (Parsons Brinkerhoff, March 19, 2015).

Revised EAS Project Site Plan (February 2015)



Proposed Modified Project Site Plan (April 2015)



505-513 West 43rd Street
New York, New York 10036

Revised EAS and Proposed Modified
Project Site Plans

Figure
1

Assessment

The original EAS (September 2014) and revised EAS (February 2015) included analyses for the following technical areas: land use, zoning and public policy; open space; urban design and visual resources, shadow, hazardous materials, air quality, noise and construction. The potential effect of the proposed modifications is described below.

Land Use, Zoning and Public Policy

The proposed changes to the approved project would not alter the proposed uses (other than the removal of parking) or zoning as compared the approved plan. The FAR would increase slightly from 7.4 to 7.47 but both would less the maximum allowable FAR (8.0) which was analyzed in the original EAS. Therefore, the proposed modifications would not result in any significant adverse impacts related to land use, zoning, and public policy and would not change the conclusions of the land use, zoning and public policy section of the revised EAS.

Open Space

The proposed modifications would increase the number of dwelling units by two units (from 188 to 190) as compared to the latest approved plan. However, the original EAS analyzed a RWCDs of 199 units. Since the proposed modification would be less than what was analyzed in the original EAS, and since both the original EAS and revised EAS had the same findings (no significant adverse impact to open space) there would be no change to the project's effect on open space. Therefore, the proposed modifications would not result in any significant adverse impacts related to open space and would not change the conclusions of the open space section of the revised EAS.

Urban Design and Visual Resources / Shadows / Hazardous Materials / Noise / Construction

The proposed modifications to the approved project are not altering the overall building envelope as analyzed in the revised EAS, there would be no change in the project's effect on urban design and visual resources, shadows, hazardous materials, noise and construction as compared to the latest approved plan. Additionally, the (E) designations for hazardous materials testing and remediation and for interior noise environment (E-352) would still apply. Therefore, the proposed modifications would not result in any significant adverse impacts related to these technical areas and it would not change the conclusions related to these technical areas of the revised EAS.

Air Quality

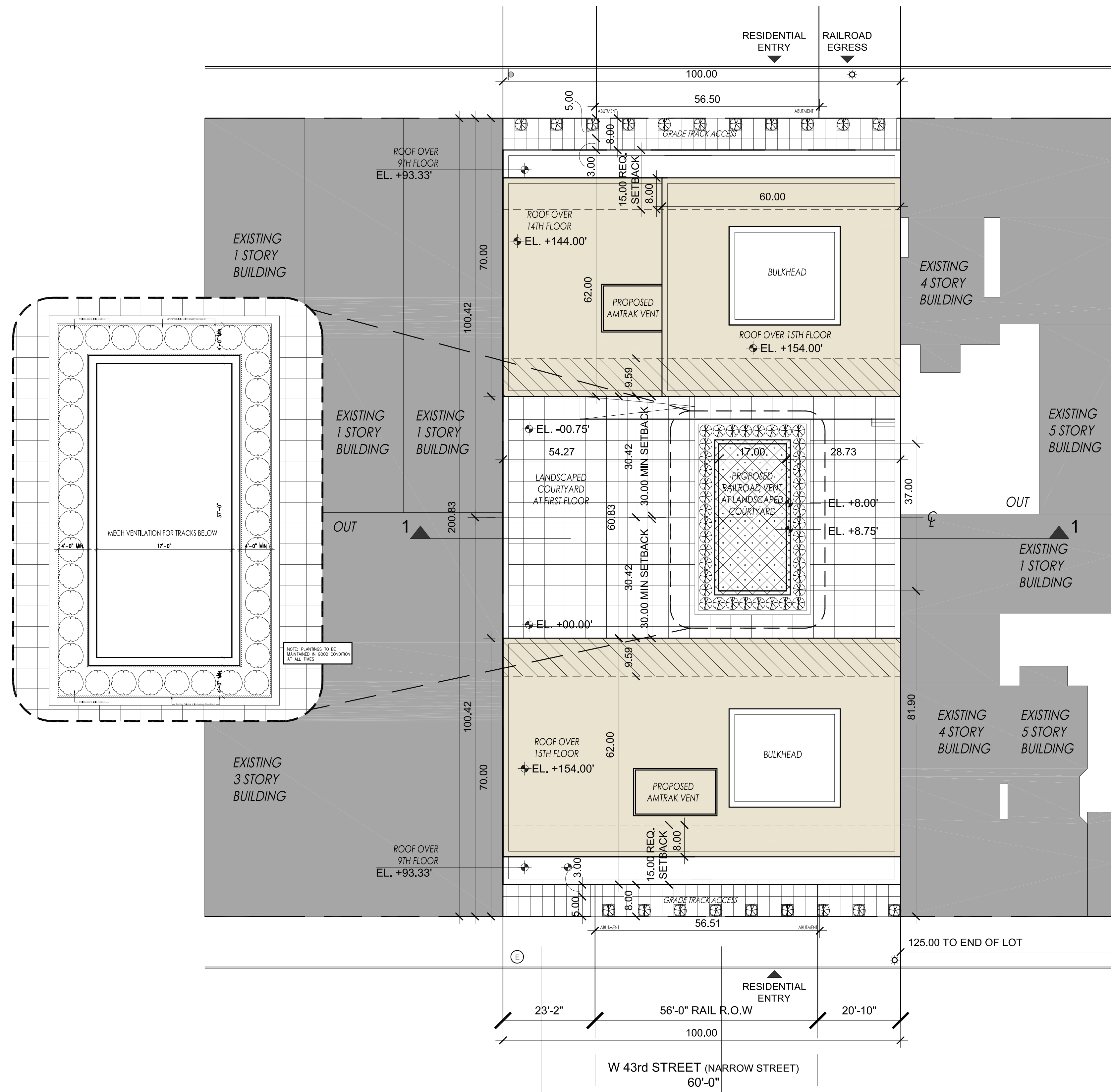
The proposed modifications to the approved project would not change the building height and the (E) designation relating to the building's HVAC system (E-352) would still apply. Therefore, there would be no change to proposed project's HVAC system's effect on air quality as analyzed in the revised EAS. Additionally, as detailed in the attached *Revisions to Amtrak Rail Ventilation System Memorandum*, the proposed project modifications would not alter the conclusions of the rail ventilation air quality

505-513 West 43rd Street
CEQR # 14DCP183M

analysis presented in the revised EAS. Therefore, the proposed modifications would not result in any significant adverse impacts related to air quality would not change the conclusions of the air quality of the revised EAS.

Conclusion

As described above, the proposed modifications would not result in any significant adverse impacts, and would not affect the analysis in the February 17, 2015 Revised EAS or alter the conclusions of the March 2, 2015 Revised Negative Declaration.

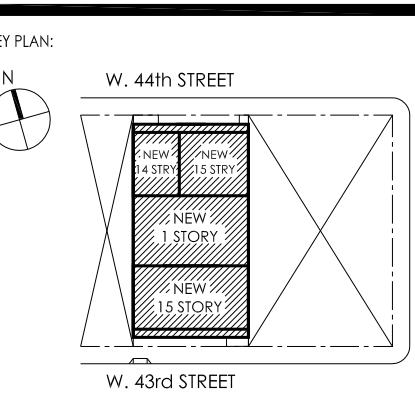


LEGENDS

- REMOVABLE TREE PLANTER (PROPOSED)
- LIGHT POLE
- SIGN
- ELECTRICAL MANHOLE (EXISTING)

No.	Date	Revisions
1	09-14-13	ULURP Revised Submission
1	02-09-13	ULURP Revised Submission
1	12-26-14	ULURP Revised Submission
1	09-26-14	ULURP Submission
1	05-28-14	CPC Draft 2 Submission
1	01-17-14	CPC Submission

SCALE:
 1/16" = 1'-0"



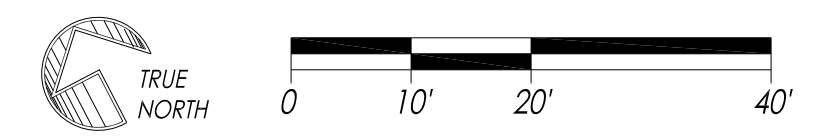
PROJECT:
505 - 513 West 43rd Street
 New York, NY

TITLE:
 ULURP ZONING

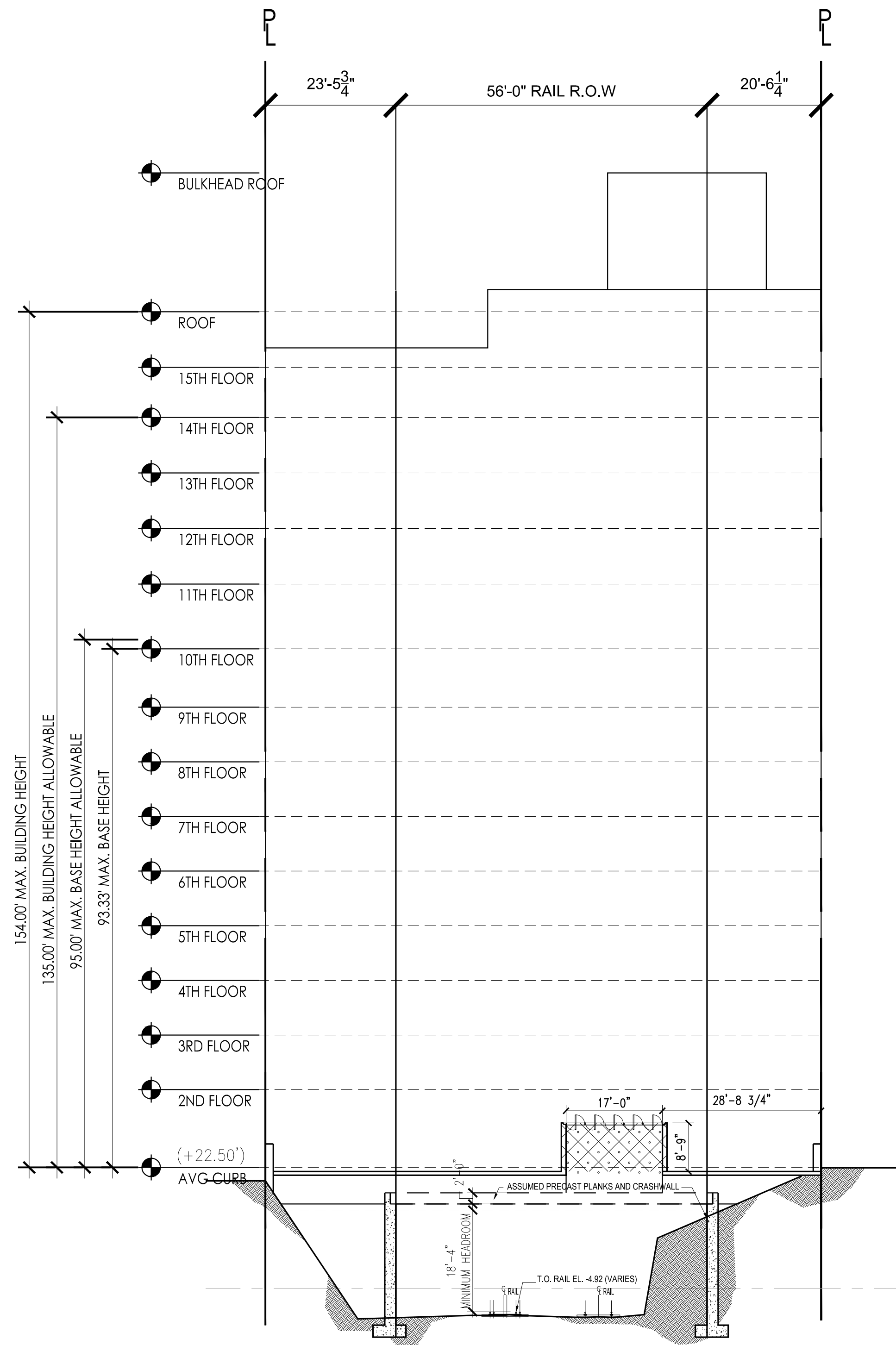
WAIVER PLAN

SCALE & SIGNATURE	SCALE	DATE
_____	2015-01	2015-01
_____	PROJECT NO.	2011-58
_____	FILE NO.	
_____	DRAWN BY:	
_____	CHECKED BY:	
_____	DATE:	

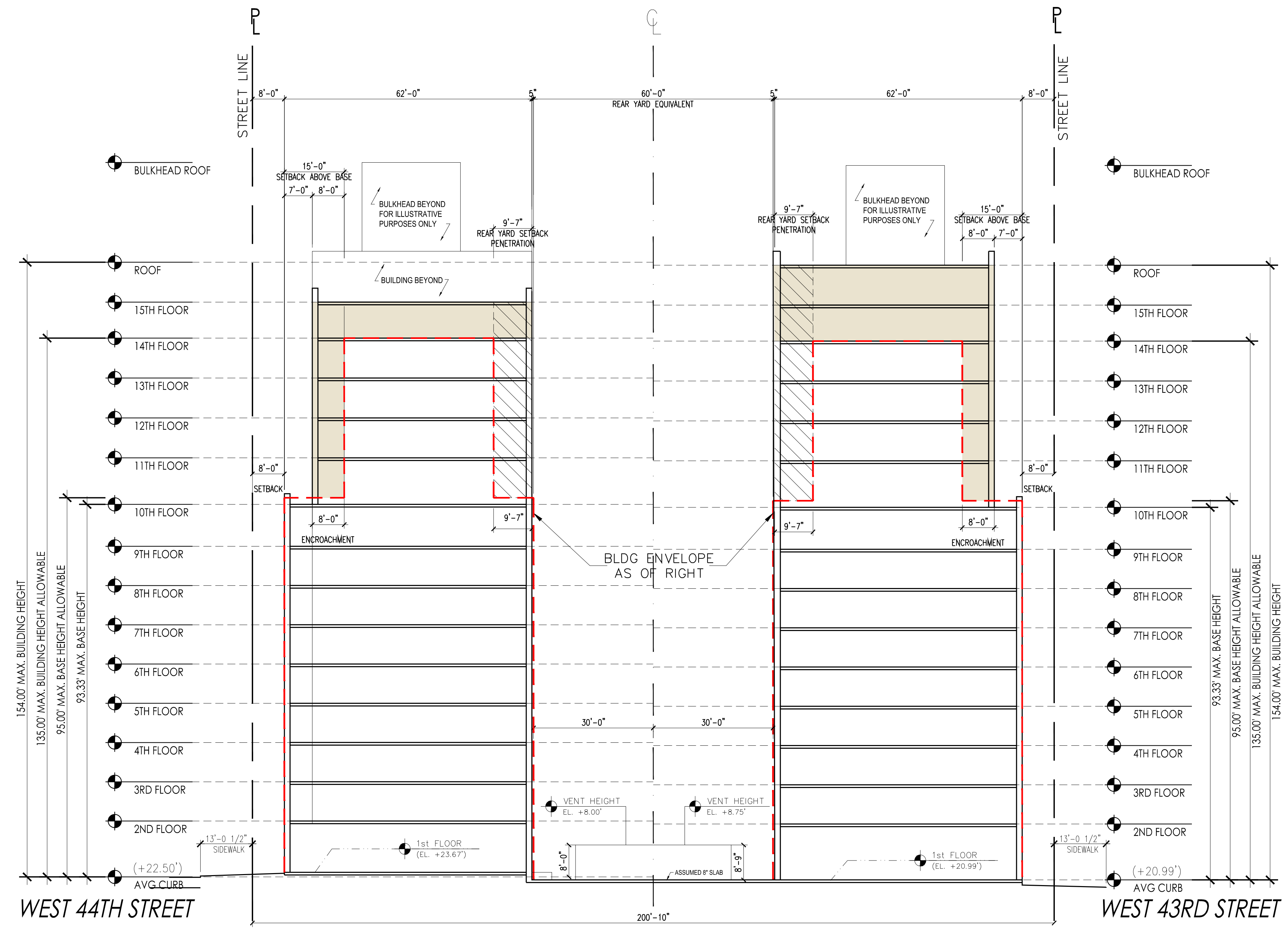
	REGULATION	PERMITTED / REQUIRED	NON COMPLIANCE
96-32/23-633(b)	Setback Above Street Wall	15 Feet (Narrow Street)	
96-32/23-633(c)	Building Height Regulation	135 Feet Maximum	
23-663 (b)	Rear Setback	10 Feet from Rear Yard Setback above Max Base Height	
23-44	Permitted Obstructions		



BULKHEAD ILLUSTRATIVE. LOCATION AND SIZE TBD.

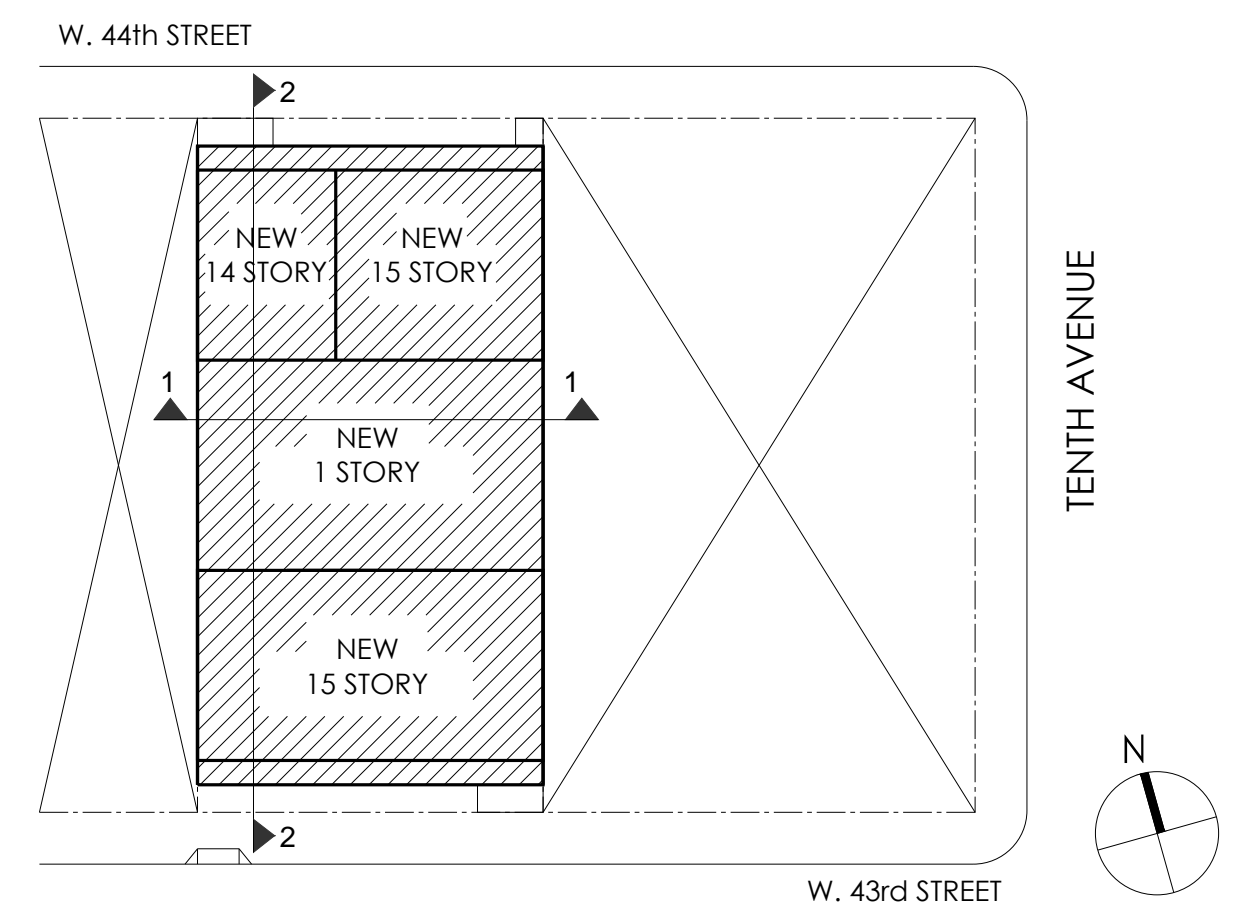


1 East-West Section Through Amtrak Vent
 1/16" = 1' - 0"



2 North-South Section
 1/16" = 1' - 0"

	REGULATION	PERMITTED / REQUIRED	NON COMPLIANCE
96-32/23-633(b)	Setback Above 95' Max Base Ht	15 Feet (Narrow Street)	
96-32/23-633(c)	Building Height Regulation	135 Feet Maximum	
23-663 (b)	Rear Setback	10 Feet from Rear Yard Setback above Max Base Height	
23-44	Permitted Obstructions		

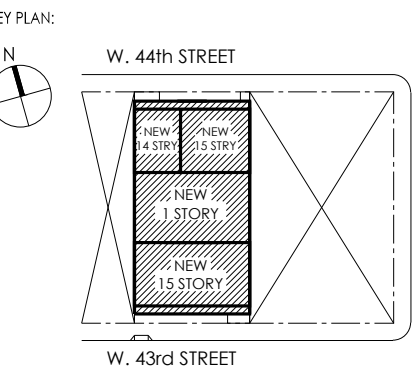


ALL ELEVATIONS ABOVE MANHATTAN DATUM 0.0'

1/16" = 1' - 0"

1	03-14-15	ULURP Revised Submission
1	02-09-15	ULURP Revised Submission
1	12-30-14	ULURP Revised Submission
1	10-28-14	ULURP Submission
1	05-28-14	CPC Draft 2 Submission
1	01-17-14	CPC Submission

No. Date Revision



PROJECT:
505 - 513 West 43rd Street
 New York, NY

TITLE: **ULURP ZONING**
BUILDING SECTIONS

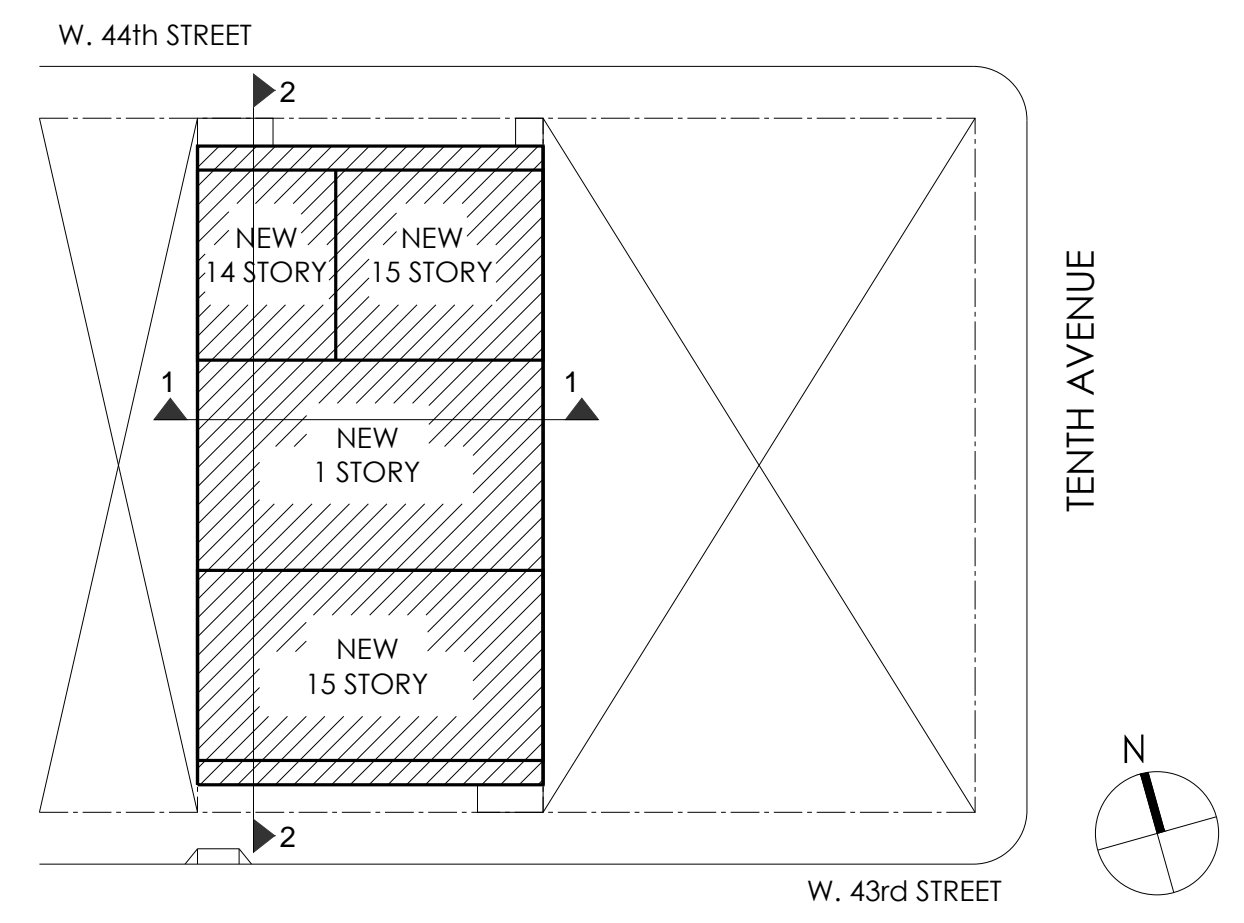
SCALE & SIGNATURE:

SCALE:	DATE:
PROJECT No.:	2013-01
DRAWN BY:	2011-08
CHECKED BY:	
DATE:	

Z-10



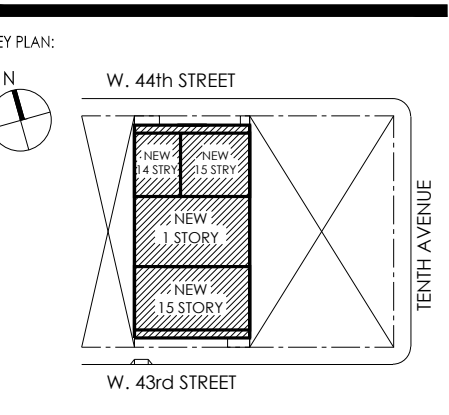
3 North-South Section Through 10th Floor and Amtrak Vent
 1/16" = 1' - 0"



	REGULATION	PERMITTED / REQUIRED	NON COMPLIANCE
96-32/23-633(b)	Setback Above 95' Max Base Ht	15 Feet (Narrow Street)	
96-32/23-633(c)	Building Height Regulation	135 Feet Maximum	
23-663 (b)	Rear Setback	10 Feet from Rear Yard Setback above Max Base Height	
23-44	Permitted Obstructions		

ALL ELEVATIONS ABOVE MANHATTAN DATUM 0.0'

No.	Date	Revision
1	03-14-15	ULURP Revised Submission
1	02-09-15	ULURP Revised Submission
1	12-30-14	ULURP Revised Submission
1	10-28-14	ULURP Submission
1	05-28-14	CPC Draft 2 Submission
1	01-17-14	CPC Submission



PROJECT:
505 - 513 West 43rd Street
 New York, NY

TITLE:
ULURP ZONING
BUILDING SECTION

SCALE & SIGNATURE	SCALE	DATE
_____	1/16" = 1'-0"	2015-01
_____		2011-08



THE COUNCIL
THE CITY OF NEW YORK
LAND USE DIVISION
250 BROADWAY, ROOM 1602
NEW YORK, NEW YORK 10007

RAJU MANN
DIRECTOR

PHONE: 212-788-7335
RMann@council.nyc.gov

April 16, 2015

BY HAND

Honorable Carl Weisbrod, Chairman
City Planning Commission
22 Reade Street, 2W
New York, New York 10007-1216

**RE: Applications Nos.: C 140408 ZSM and C 140409 ZSM
Related Application: N 140407 ZRM
(505/513 West 43rd Street)**

Dear Chairman Weisbrod:

On April 15, 2015, the Land Use Committee of the City Council, by a vote of 18-0-1 recommended modifications of the City Planning Commission's decisions in the above-referenced matters. Pursuant to Section 197-d(d) of the City Charter and Section 11.70 of the Rules of the Council, I hereby file the proposed modifications with the Commission.

The recommended modifications consist of (1) elimination of the ground floor parking spaces in the proposed building, to be replaced, in part, by residential ground floor uses; and (2) increasing the size of the emergency vent in the rear yard of the development to satisfy Amtrak specifications which became known subsequent to the Commission's approval of these actions. Specifically, the modifications are as follows:

Matter in ~~double-strikeout~~ is old, deleted by the Council;
Matter in **bold double-underlined** in new, added by the Council.

C 140408 ZSM

1. The property that is the subject of this application (C 140408 ZSM) shall be developed in size and arrangement substantially in accordance with the dimensions, specifications and

zoning computations indicated on the following plans, prepared by SLCE Architects, filed with this application and incorporated in this resolution:

<u>Drawing</u>	<u>Title</u>	<u>Last Date Revised</u>
Z-4	ULURP Zoning - Zoning Calculations	Feb. 9, 2015 <u>04/ /2015</u>
Z-5	ULURP Zoning - Site Plan	Feb. 9, 2015 <u>04/ /2015</u>
Z-6	ULURP Zoning - Ground Floor Plan	Feb. 9, 2015 <u>04/ /2015</u>
Z-9	ULURP Zoning - Waiver Plan	Feb. 9, 2015 <u>04/ /2015</u>
Z-10	ULURP Zoning - Building Sections	Feb. 9, 2015 <u>04/ /2015</u>
Z-11	ULURP Zoning - Building Section	Feb. 9, 2015 <u>04/ /2015</u>

2. Such development shall conform to all applicable provisions of the Zoning Resolution, except for the modifications specifically granted in this resolution and shown on the plans listed above which have been filed with this application. All zoning computations are subject to verification and approval by the New York City Department of Buildings.
3. Such development shall conform to all applicable laws and regulations relating to its construction, operation and maintenance.
4. In the event the property that is the subject of the application is developed as, sold as, or converted to condominium units, a homeowners' association, or cooperative ownership, a copy of this report and resolution and any subsequent modifications shall be provided to the Attorney General of the State of New York at the time of application for any such condominium, homeowners' or cooperative offering plan and, if the Attorney General so directs, shall be incorporated in full in any offering documents relating to the property.
5. All leases, subleases, or other agreements for use or occupancy of space at the subject property shall give actual notice of this special permit to the lessee, sub-lessee or occupant.
6. Upon the failure of any party having any right, title or interest in the property that is the subject of this application, or the failure of any heir, successor, assign, or legal representative of such party, to observe any of the covenants, restrictions, agreements, terms or conditions of this resolution, the City Planning Commission may, without the consent of any other party, revoke any portion of or all of said special permit. Such power of revocation shall be in addition to and not limited to any other powers of the City Planning Commission, or of any

other agency of government, or any private person or entity. Any such failure as stated above, or any alteration in the development that is the subject of this application that departs from any of the conditions listed above, is grounds for the City Planning Commission or the City Council, as applicable, to disapprove any application for modification, cancellation or amendment of the special permit hereby granted or of the restrictive declaration.

7. Neither the City of New York nor its employees or agents shall have any liability for money damages by reason of the city or such employees or agents failure to act in accordance with the provisions of this special permit.

C 140409 ZSM

1. The property that is the subject of this application (C 140409 ZSM) shall be developed in size and arrangement substantially in accordance with the dimensions, specifications and zoning computations indicated on the following plans, prepared by SLCE Architects, filed with this application and incorporated in this resolution:

<u>Drawing</u>	<u>Title</u>	<u>Last Date Revised</u>
Z-4	ULURP Zoning - Zoning Calculations	Feb. 9, 2015 <u>04/ /2015</u>
Z-5	ULURP Zoning - Site Plan	Feb. 9, 2015 <u>04/ /2015</u>
Z-6	ULURP Zoning - Ground Floor Plan	Feb. 9, 2015 <u>04/ /2015</u>
Z-9	ULURP Zoning - Waiver Plan	Feb. 9, 2015 <u>04/ /2015</u>
Z-10	ULURP Zoning - Building Sections	Feb. 9, 2015 <u>04/ /2015</u>
Z-11	ULURP Zoning - Building Section	Feb. 9, 2015 <u>04/ /2015</u>

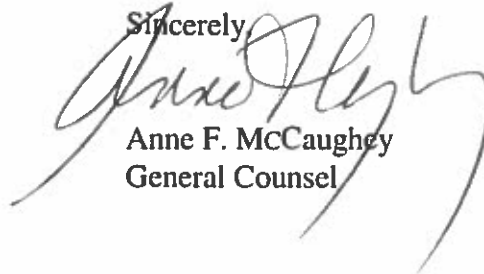
2. Such development shall conform to all applicable provisions of the Zoning Resolution, except for the modifications specifically granted in this resolution and shown on the plans listed above which have been filed with this application. All zoning computations are subject to verification and approval by the New York City Department of Buildings.
3. Such development shall conform to all applicable laws and regulations relating to its construction, operation and maintenance.

Honorable Carl Weisbrod, Chairman
C 140408 ZSM, C 140409 ZSM and N 140407 ZRM
April 16, 2015
Page 4 of 5

4. In the event the property that is the subject of the application is developed as, sold as, or converted to condominium units, a homeowners' association, or cooperative ownership, a copy of this report and resolution and any subsequent modifications shall be provided to the Attorney General of the State of New York at the time of application for any such condominium, homeowners' or cooperative offering plan and, if the Attorney General so directs, shall be incorporated in full in any offering documents relating to the property.
5. All leases, subleases, or other agreements for use or occupancy of space at the subject property shall give actual notice of this special permit to the lessee, sub-lessee or occupant.
6. Upon the failure of any party having any right, title or interest in the property that is the subject of this application, or the failure of any heir, successor, assign, or legal representative of such party, to observe any of the covenants, restrictions, agreements, terms or conditions of this resolution, the City Planning Commission may, without the consent of any other party, revoke any portion of or all of said special permit. Such power of revocation shall be in addition to and not limited to any other powers of the City Planning Commission, or of any other agency of government, or any private person or entity. Any such failure as stated above, or any alteration in the development that is the subject of this application that departs from any of the conditions listed above, is grounds for the City Planning Commission or the City Council, as applicable, to disapprove any application for modification, cancellation or amendment of the special permit hereby granted or of the restrictive declaration.
7. Neither the City of New York nor its employees or agents shall have any liability for money damages by reason of the city or such employees or agents failure to act in accordance with the provisions of this special permit.

Please feel free to contact me at (212) 788-7312 if you or your staff has any questions regarding these matters.

Sincerely,



Anne F. McCaughey
General Counsel

Honorable Carl Weisbrod, Chairman
C 140408 ZSM, C 140409 ZSM and N 140407 ZRM
April 16, 2015
Page 5 of 5

RECEIVED BY: _____

DATE: _____

TIME: _____

Encl.

- c: Members, City Planning Commission
- Raju Mann, Director, Land Use Division
- Brian Paul, Project Manager
- Anita Laremont, Esq., DCP
- Danielle J. DeCerbo, DCP
- File



Memorandum

To: Mauricio Garcia and Ingrid Young,
New York City Department of City
Planning, Environmental Assessment
Review Division (DCP - EARD)

Date: April 13, 2015

Cc: Olga Abinader and Robert
Dobruskin, DCP-EARD

Project #: 28684.01

From: Nancy Doon, VHB
Hillel Hammer, AKRF

Re: 505-513 West 43rd Street (CEQR No. 14DCP183M) -
Revisions to Amtrak rail ventilation system

Introduction

This memorandum assess proposed changes associated with the Amtrak ventilation system for the project located at 505-513 West 43rd Street (CEQR No. 14DCP183M). Specifically, this assessment addresses: 1) how the proposed changes affect the Amtrak vent analysis methodology as described in the "Response to Comments on Air Quality Methodology Memorandum dated October 4, 201," and 2) how the proposed changes would affect the analysis and conclusions of the rail ventilation analysis in the February 17, 2015 EAS.

Project History

Original Project

This memorandum addresses recent changes to the AMTRAK ventilation system associated with the proposed project at 505-513 West 43rd Street (CEQR 14DCP183M). A Negative Declaration was issued for the proposed project on September 26, 2014 based on the analysis in the EAS of a project comprised of a residential building totaling 199 residential units (of which approximately 20 percent, or 40 units would be permanently affordable) containing two 16-story segments (totaling approximately 164 feet -189 feet including the mechanical bulkhead) an accessory parking area containing 35 spaces, and a 6,083 gsf open area (between the building segments) for residents which would also contain an emergency ventilation for the Amtrak rail line located below the project site. The proposed Amtrak vent in the open area would serve as a an emergency or "passive" vent and measure 22 feet wide, 17 feet deep and have a height of eight feet. The original project resulted in a total floor area ratio (FAR) of approximately 8.0.

Revised Project

The proposed project was subsequently reduced in size and a Revised EAS was issued on February 17, 2015 and Revised Negative Declaration was issued March 2, 2015. The approved project consisted of 107 residential units but, for conservative purposes, the With-Action RWCDs was comprised of 188 residential units (of which 28 units would be permanently affordable) containing two 15-story segments (totaling approximately 154 feet [179 feet including the mechanical bulkhead]) an accessory parking area containing 23 spaces and a 6,083 gsf open area (between the building segments) for residents which would also contain an emergency passive ventilation for the Amtrak rail line located below the project site. The reduced project resulted in a total FAR of approximately 7.4.

As described in the EAS and the revised EAS, the proposed Amtrak rail ventilation system would include two active vents on the building segment rooftops, which would vent air from the rail tunnel when the fan system is triggered by the pollutant sensor system within the rail tunnel. A passive vent would also be provided on the second floor terrace open area directly above the tracks, which would be completely sealed under normal operating conditions, and would automatically open in the event of a fire and/or smoke condition in the tunnel requiring smoke evacuation. This vent would not be open under normal operating conditions.

Two Penn Plaza
Suite 2602
New York, NY 10121
P 212.857.7350

City Council Modifications

Based on review of the project by the City Council and revised design modeling required by Amtrak¹, the following modifications to the project are currently proposed:

- Increase the size of the passive emergency Amtrak vent from approximately 375 square feet (22 feet wide by 17 feet deep) to 630 square feet (17 feet wide by 37 feet deep).
- Remove the parking (and curb cut on West 43rd Street) and replace with approximately 1,458 square feet of residential floor area, approximately two dwelling units (including one affordable unit on-site), resulting in a slight residential FAR increase (from 7.4 to 7.47)

The heights of the building segments would remain and the overall building envelope would not be expected to change. The active rail ventilation would be located at the roof level of both segments (154 feet).

Assessment

October 4, 2013 Memo

The purpose of the October 4, 2013 memo (attached)² was to respond to comments provided by the Department of City Planning (DCP) on August 23, 2013, in reference to AKRF's memo, Proposed Methodology for Analysis of Potential Air Quality Impacts from Amtrak Ventilation, dated July 8, 2013. The following assessment describes how the currently proposed changes would affect the responses in the October 4, 2013 memo.

All of the responses in the October 4, 2013 memo are still valid with the proposed project modifications. The passive vent would still operate as a sealed vent opening only in case of emergency and for very brief maintenance, as described in detail in the memo and the EAS, and would, therefore, not require quantified air quality analysis. The design criteria and ventilation activation requirements have not changed and the assumptions regarding NO₂ therefore are also still applicable.

EAS Rail Ventilation Analysis

The proposed project modifications would result in some changes relative to the conditions analyzed in the EAS, but would not result in conditions which might cause higher concentration increments or total concentrations than those reported in the EAS. Specifically:

- Active Vent Height: The EAS assumed an exhaust height at the top of the mechanical space (at a height of 189 feet), and the current plan includes reduced building height with the vent at the roof level (at a height of 154 feet)—approximately 35 feet lower. However, the reasonable worst case analysis in the EAS projected the highest impacts at the neighboring building to the north of the proposed project, with maximum impacts at a level similar to the height of exhaust. That building

¹ The original emergency ventilation design was preliminary and based on a previous model for the 39th Street to 43rd Street overbuild. The modified version is based on a more complete model that incorporates information from detailed as-built and design drawings that have become available and on an Amtrak-supervised field visit in February 2015. See attached *Change in Courtyard Shaft Size for Amtrak Empire Line Overbuild – 43rd Street to 44th Street Memorandum* (Parsons Brinkerhoff, March 19, 2015) and related correspondence.

² See attached *505-513 West 43rd Street Response to comments on Air Quality Methodology* (VHB, October 4, 2013).

was substantially taller than the proposed project. Therefore, the highest increments would be essentially the same but would occur lower down on the building. Since both project buildings would be reduced in height equally, there would be no change in potential project-on-project impact. Therefore, the change in vent height would not alter the conclusions of the EAS analysis.

The proposed project modifications would not alter the conclusions of the rail ventilation air quality analysis presented in the September 2014 EAS, and no significant adverse impacts on air quality would result from operating the railway ventilation system.

March 19, 2015

Mr. Alex Olsen
Project Manager
1818 Nadlan LLC, c/o El Ad Group
575 Madison Avenue
New York, NY 10022

Subject: Change in Courtyard Shaft Size for
Amtrak Empire Line Overbuild – 43rd St. to 44th St.

Dear Mr. Olsen:

Structures built over the Amtrak Empire Line must meet the requirements of the latest version of Amtrak Engineering Practice (EP) 4006, last revised February 15, 2007, including provisions for an emergency ventilation system to maintain a tenable evacuation path for passengers to egress from the overbuild in the event of a train car fire. EP 4006 allows for either mechanical or natural, buoyancy-driven ventilation systems. It requires three-dimensional computational fluid dynamics (CFD) computer software to be used to analyze proposed ventilation systems for a train car fire with a peak heat release rate of 106.2 MBtu/hour. EP 4006 includes a heat release rate versus time curve for the fire to allow transient (time dependent) ventilation simulations to be performed so that egress conditions can be evaluated at track level for various stages of passenger evacuation.

Parsons Brinckerhoff, Inc. was retained by 1818 Nadlan LLC to perform the emergency ventilation analysis required by Amtrak for the construction of two high-rise towers and an intermediate courtyard over the Empire Line between 43rd St. and 44th St. in Manhattan. Because the Empire Line is already overbuilt between 39th St. and 43rd St. and between 44th St. and 45th St., Parsons Brinckerhoff developed a three-dimensional model extending from 39th St. to 45th St. to evaluate egress conditions for a train car fire beneath the 43rd St. to 44th St. overbuild. Based on discussions with 1818 Nadlan LLC and the 43rd St. overbuild design team, as well as past experience performing three-dimensional fluid flow analysis of train car fires on the Empire Line, Parsons Brinckerhoff incorporated a 375 square ft natural ventilation shaft in the courtyard between the two towers and a 68 square ft shaft in the south tower.

The acceptance criteria established and approved by Amtrak for previous studies of emergency ventilation systems for Empire Line overbuilds required a tenable environment to be provided for a height of at least 6 ft above the passenger car floor (10 ft above the top-of-rail) at the far exit door of the car(s) adjacent to the burning car to prevent smoke from entering the cars while passengers exit the train to the track bed. The location of the far exit doors in the passenger cars on each side of the fire car are approximately 75 ft from the end of the fire car. Egress calculations performed by Parsons Brinckerhoff predicted that all passengers from a standing room only seven-car Empire train would exit to track level in approximately 17.3 minutes and walk out the north portal in approximately 19.7 minutes and the south portal in approximately 25 minutes. While the initial CFD simulations show acceptable smoke layer heights at the far exit door in the car to the south of the fire car for exiting the train and acceptable smoke layer heights for walking out to the 39th St. portal, smoke layer heights at the far exit door in the car north of the fire car drop below 10 ft above top of rail at approximately 15 minutes after the start of the fire.

Since the simulation of the train fire for the initial shaft configuration showed that the smoke height begins dipping below 10 ft above top-of-rail before all passengers can evacuate the train, allowing smoke to enter the train with passengers still inside, additional simulations were performed based on enlarged shafts—630 square ft in the courtyard and 116 square ft in the south tower. Results from these simulations indicate that acceptable egress conditions would still be maintained to the south of the fire car, while the height of the smoke layer would remain more than 10 ft above top-of-rail for at least 25 minutes at the far exit door in the passenger car north of the fire car, which is after all passengers have exited the train and after passengers walking north reach the north portal.

In summary, the shaft sizes originally assumed for the courtyard and south tower will not exhaust sufficient smoke from an Amtrak passenger car fire to allow passengers to exit the train from the far exit door in the passenger car immediately north of the fire car before smoke would enter the train. The increase in size to 116 square ft in the south tower and 630 square ft in the courtyard would enable sufficient quantities of smoke to be exhausted from track level to exit the train from either side of the fire before smoke enters the train and walk out towards either the south or north portal in a tenable environment.

If you have questions about any aspect of the proposal, please contact us.
Sincerely,

Parsons Brinckerhoff, Inc.



Richard Ray
Project Manager, P.E.

April 10, 2015

Mr. Alex Olsen
Project Manager
1818 Nadlan LLC, c/o El Ad Group
575 Madison Avenue
New York, NY 10022

Dear Mr. Olsen:

Please note that the location and cross-sectional areas of the emergency ventilation shafts in the south tower and courtyard originally proposed for the Amtrak overbuild between 43rd St. and 44th St. in Manhattan were based on discussions with 1818 Nadlan LLC and the 43rd St. overbuild design team and Parsons Brinckerhoff's past experience performing three-dimensional fluid flow analysis of train car fires on the Empire Line. To determine the effectiveness of the proposed shafts in meeting Amtrak's requirements for providing a tenable evacuation path for passengers to egress from the overbuild in the event of a train car fire, computer simulations of a train car fire beneath the overbuild needed to be performed using computational fluid dynamics software (CFD).

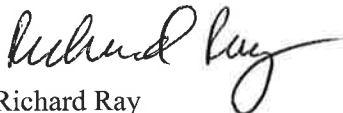
Since the Empire Line is already overbuilt between 39th St. and 43rd St. and between 44th St. and 45th St., a three-dimensional model extending from 39th St. to 45th St. had to be created to perform the ventilation simulations. In addition to compiling available as built drawings for this area and design drawings for the 43rd Street to 44th St. overbuild, field survey measurements of physical dimensions of portions of the existing overbuild between 39th St. and 43rd St. were needed to complete the model. Amtrak was not able to schedule a supervised site visit for obtaining the field measurements until February 5, 2015. Creation of the model required approximately two weeks time after conducting the field survey, and a series of time dependent computer simulations of train car fires were then performed to determine if the proposed shaft sizes met Amtrak's tenability requirements.

Results of the initial CFD simulations indicated that the sizes of the shafts originally proposed needed to be increased to provide environmental conditions in the overbuild that met Amtrak's tenability requirements for passenger evacuation for a train car. Additional simulations were performed using larger shaft sizes, and we have now concluded that the revised shaft sizes – 116 ft² in the south tower and 632 ft² in the courtyard – should meet Amtrak's requirements.

If you have any additional questions regarding this matter, please do not hesitate to contact me.

Sincerely,

Parsons Brinckerhoff, Inc.



Richard Ray
Project Manager, P.E.



Memorandum

To: Olga Abinader and Mauricio Garcia, DCP

Date: October 4, 2013

Project No.: 28684.00

From: Nancy Doon, VHB
Hillel Hammer, AKRF

Re: 505-513 West 43rd Street
Response to comments on Air Quality
Methodology

The purpose of this memo is to respond to comments provide by DCP on August 23, in reference to AKRF's memo, *Proposed Methodology for Analysis of Potential Air Quality Impacts from Amtrak Ventilation*, dated July 8, 2013.

1. The July 8, 2013 memo identifies three vents to be located at the following locations:
 - a. one vent located at the 2nd floor terrace ("passive system"); and
 - b. one vent located at each of the two building tower rooftops.

According to the July 8, 2013 memo, an analysis would not be prepared for the "passive" vent system located at the second floor building terrace.

Please explain how the "passive" vent system will operate in detail, including how often it's likely for the louvers to open, whether they can open during non-emergency situations, what triggers the opening of the louvers, and so forth.

- Response: The louvers would be controlled by an automated control system, which would trigger the opening of the louvers only when emergency conditions occur in the tunnel requiring the passive vent to be open. The opening of the louvers would occur if emergency conditions are detected in the tunnel (i.e., fire condition) by the control system and would be closed when emergency conditions subside and passive ventilation is no longer required. During non-emergency situations, the louvers would be actuated once per week for 30 seconds when temperatures are below freezing to ensure proper operation when ice and snow may accumulate during winter months, and a maintenance contractor would also actuate the louvers for testing and confirmation of system operation once per month for up to 30 seconds.

Overall, other than the very brief actuation required for maintenance, louvers would only open when smoke conditions require the passive vent to be open, and, therefore, this vent would have a negligible contribution, if any, to locomotives emissions on site.

2. Please address the following questions regarding the louvers in the “passive” vent system: If the louvers are opened and there is no mechanical ventilation until NO_x levels reach 3 or 5 ppm, what is the effect of this at nearby sensitive receptors, mainly second floor windows located near the louvers? Please explain whether or not an air quality analysis is warranted for non-emergency conditions.
 - Response: The louvers would be designed so as not to open other than in the event of fire in the track area or very briefly for maintenance, as described in response to Comment #1 above; therefore, non-emergency events would not require analysis.

3. Please provide backup materials indicating why the initial concentrations of 5 ppm of nitrogen dioxide (NO₂) at the vent were assumed in the July 8, 2013 memo. As indicated by the attached report prepared for a similar project, a 3 ppm threshold was utilized for analysis purposes (Pg. 3 of the attachment): *NO₂ concentration levels are limited to 50 ppm discharge from the shafts by EPA regulations, and as stated previously to 3 ppm for 8-hour time weighted exposure in the tunnels (OSHA).*
 - Response: As stated in the AKRF methodology memo, “*the projected emissions would conservatively be estimated to have an initial concentration of 5 ppm of nitrogen dioxide (NO₂) at the vent, which is the upper limit which the system would be designed to maintain as per Amtrak design guidance*”. The previous study referenced in the comment cited 3 ppm as the concentration at which the system begins operation (see pg. 6 of 8 in attached Amtrak design guidance cited in the methodology and in the example provided with the comment). The system would be designed so that concentrations do not exceed 5 ppm at any time under non-emergency conditions; therefore it is appropriate to utilize this concentration in the analysis. This assumption may be refined if necessary based on emissions data.

4. Regarding the ventilation systems located on the two towers, please explain the following.
 - a. Whether mechanical ventilation is expected to run all the time under normal operations;
 - b. The type of equipment expected to be utilized;
 - c. How the ventilation systems are activated;
 - d. Who the building would report to regarding the system;
 - e. Maintenance requirements for the system;
 - f. Whether the system is automatic;
 - g. Where the probe and instrument would be located. (e.g., 100 feet from the vent?);
 - h. Whether the following statement applies to this project, and why: *For the overbuild analysis, total NO_x emitted by the diesel locomotive engine exhaust was conservatively assumed to be comprised of 25% (by weight) NO₂ and 75% NO.*
 - Response:
 - a. Mechanical systems would be designed to operate based on NO₂ concentrations in the tunnel, as per Amtrak specifications (see attached).

- b. The automated ventilation control system would be located in the proposed building as required by Amtrak to be installed in the proposed building. The system would use jet fans controlled by a programmable system, similar to the systems in other overbuilds above the Empire Line in New York City. The system would be installed near the tunnel vent fan starters and would include systems for NO₂ gas sampling including calibration and maintenance.
- c. The ventilation system would have temperature sensors in the tunnel which are compared with the outside air temperature to detect a fire condition. The system also would have four NO₂ sampling points that will be installed below the site in the tunnel, providing NO₂ readings. The control system will actuate the fans automatically if an emergency situation is detected (i.e., smoke/fire) and if NO₂ concentrations reach 3 ppm.
- d. Engineered Energy Solutions (EES), a private engineering company, maintains the control systems in the existing buildings developed above the Empire Line. The control system would be integrated with the Penn Station Control Center (PSCC)—the command center for LIRR, NJ TRANSIT and Amtrak, in and out of Penn Station—via a redundant fiber optic link. EES receives messages immediately whenever the system goes into an emergency situation and can advise the building managers. EES can also monitor the system via modem or internet access. A local computer installed in a central area (conciierge) near the fire alarm system would display fan operation status and would alert the building manager via phone, email, text, or fax. All maintenance would be reported and sent to the building owner. Fan operation time and duration would be recorded, and mechanical reports would be prepared during each inspection. The building owner would maintain records and forward them to PSCC. PSCC will have direct access to the data and reports and the fiber optic link.
- e. A sample scope of work for system maintenance is attached, describing all maintenance requirements. These maintenance activities are approved by Amtrak and are currently being performed on the other Amtrak Tunnel Ventilation Systems from West 72nd Street to West 45th Street.
- f. The system would be automatic, as described above.
- g. The sensors would be located 14 feet above the top of the rail, as specified by the Amtrak guidance (attached). It is likely that the air exiting the system would have lower concentrations due to additional mixing within the tunnel prior to collection and release by the vent system.
- h. This has not yet been determined. As part of the analysis, we will review the latest guidance from EPA and other sources as well as data regarding initial NO:NO₂ ratio from locomotives. In addition to determining an appropriate ratio for each averaging period (e.g., 1-hour and annual), refined methods including EPA-approved chemical modeling procedures for AERMOD may be applied.

5. Please determine the concentrations that would trigger the NAAQS for 1-hr NO₂. Certain concentration levels must be determined at the second floor terrace based on air quality emission rates.

- Response: The 1-hour NAAQS will be evaluated based on modeled concentrations at receptors added to background concentrations, as per the standard modeling approach (background concentrations would not exceed the NAAQS).

JAMES P. POWER
SPECIAL COUNSEL
PHONE 212-715-7839
FAX 212-715-7832
JPOWER@KRAMERLEVIN.COM

April 10, 2015

Honorable Corey Johnson
New York City Council
250 Broadway
New York, New York

Re: 505 West 43rd Street, Block 1072, Lot 24
CPC Nos. 140407ZRM, 140408ZSM, 140409ZSM

Dear Councilmember Johnson:

We are writing in follow-up to the March 24, 2015 public hearing of the Subcommittee on Zoning and Franchises on the referenced application.

We understand the Subcommittee on Zoning and Franchises is considering the following modifications to the application: (1) enlargement of the size of the vent in the rear yard equivalent to satisfy Amtrak emergency ventilation requirements, and (2) removal of the accessory parking from the building.

After removal of the parking, a total of 1,458 square feet of floor area would be recaptured for residential use and the floor area of the proposed building would increase to 150,020 square feet.¹ This increased floor area requires that 23,618 square feet of floor area be dedicated to inclusionary housing. In accordance with commitments previously made by the applicant, 1818 Nadlan LLC (“Nadlan”), 1/3 of the inclusionary housing (7,873 square feet) would be located on-site, with the remainder provided off-site within the Special Clinton District.

Nadlan has agreed to provide one additional inclusionary unit on site, so that there would be a total of 9 inclusionary units, consisting of 5 two-bedroom units and 4 one-bedroom units, within the 7,873 square feet of inclusionary floor area. The nine units would be ownership

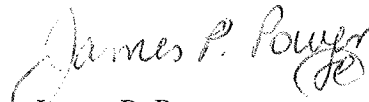
¹ The accessory parking area consisted of a driveway off of West 43rd Street and a parking area in the central portion of the ground floor of the building.

Honorable Corey Johnson
April 10, 2015
Page 2

units and they would be distributed between the two building segments and located on floors one through 8 and 11, with no more than one unit on any one floor.²

Thus, with the modification, the proposed building would have approximately 109 condominium units, 9 of which would be inclusionary housing units. In addition, 15,745 square feet of inclusionary housing would be provided off-site by another developer; we estimate that that this square footage would result in at least 19 or 20 additional units of inclusionary housing.

Very truly yours,


James P. Power

cc: City Planning Commission

² Note that the layouts of the proposed building are still being designed and that, for example, mechanical and Quality Housing Program deductions may change. In the event that, within the confines of the approved height and setback envelope, the total FAR were to increase, the total amount of inclusionary floor area would also increase in accordance with the formula set forth in Zoning Resolution Section 23-952, and Nadlan would be obligated to provide at least 1/3 of the increased amount of the required inclusionary on-site.