



U.S. Department  
of Transportation  
**Federal Transit Administration**

# Memorandum

Subject: MTA New York City Transit Second Avenue Subway  
Project Technical Memorandum No. 7: 72<sup>nd</sup> Street  
Station Entrance and Ancillary Facility

Date: December 16, 2010

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Reply to  
Attn. of:

To: Brigid Hynes-Cherin  
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File

Through: Nancy Danzig  
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and  
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## INTRODUCTION

This memo provides FTA's analysis under the National Environmental Policy Act (NEPA) pursuant to 23 CFR 771.130 of the Metropolitan Transportation Authority's ("MTA") final design of the 72nd Street Station Entrance and Ancillary Facility for the Second Avenue Subway Project (Project). FTA's analysis is based on the "MTA New York City Transit Second Avenue Subway Technical Memorandum No. 7: Evaluation of 72<sup>nd</sup> Street Station Entrance and Ancillary Facility" (Technical Memorandum No. 7), dated September 17, 2010, submitted by the MTA for FTA's review as well as emails from MTA New York City Transit to FTA dated November 18, 2010 and December 3, 2010 which clarified information presented in Technical Memorandum No. 7.

FTA issued a Final Environmental Impact Statement (FEIS), entitled "MTA New York City Transit Second Avenue Subway Final Environmental Impact Statement and Final Section 4(f) and Section 6(f) Evaluation" on April 8, 2004 and Record of Decision (ROD) on July 8, 2004 on the Project. Since the issuance of the ROD, FTA has also reviewed six prior technical memoranda and issued memos to analyze changes to the Project as well as one Supplemental Environmental Assessment and Finding of No Significant Impact.

This review addresses the potential impacts of the final design of one element of the Project: a combined station entrance and ancillary facility located at the northwest corner of 72<sup>nd</sup> Street and

Second Avenue (herein referred to as "Facility"), in order to determine if the final design would result in significant environmental impacts not evaluated in previous NEPA evaluations.

The level of design known and presented at the time of the FEIS for the Project was based on preliminary engineering, given the prohibition on final design activities prior to the issuance of a ROD per 23 CFR 771.113(a). As a result of final design of the Facility, the following specific design details are now known that were not presented in the FEIS:

- specific size of Facility: length, width, and height
- specific appearance of Facility: façade materials and details on cooling towers and intake/exhaust louvers

As a result of the final size of the Facility, there will be an adverse impact to the view of the outdoors from four (4) apartments in an adjacent building; this impact is not considered a significant effect on the quality of the human environment given the Project's context in a densely populated major metropolitan area and the intensity of the impact on a relatively small number of residents. The final appearance of the Facility has no significant adverse impact on the quality of the human environment. We have reviewed the Technical Memorandum No. 7 and find that there will be no new significant environmental impacts as a result of the final design of the Facility compared to what was evaluated in the FEIS. In addition, there will be no necessary changes to the mitigation measures described in the FEIS and ROD. The NEPA requirements pursuant to 23 CFR 771.130 have been met, and we recommend that no further environmental review is necessary.

#### **Comparison of the FEIS Design and Final Design of the 72<sup>nd</sup> Street Station Entrance and Ancillary Facility**

The Project includes 16 new stations with two ventilation structures required at each of the 16 stations. The FEIS presented specific locations and functions of ancillary facilities and stations. The specific location of the 72<sup>nd</sup> Street Facility, which is a combined station entrance and ancillary facility, was identified in the FEIS as the northwest corner of 72nd Street and Second Avenue, on a site currently occupied by four, connected five-story, walk-up apartment buildings fronting onto East 72<sup>nd</sup> Street (Block 1427, Lot 23; herein referred to as "Facility site"). The final design of the Facility did not change that location. The 72<sup>nd</sup> Street Ancillary Facility, described in the FEIS, will house a station entrance, tunnel and ventilation functions, including fresh air intake, exhaust, emergency smoke exhaust, and relief of air pressure build-up caused by movement of the trains. The building will also include cooling equipment related to the air tempering system for the 72<sup>nd</sup> Street Station, with two cooling towers on the rooftop. In addition, consistent with one of the Project goals of combining other station functions to minimize the need for property acquisition, the Facility will also house communication equipment and other support functions for the 72<sup>nd</sup> Street Station. The final design of the Facility did not change those functions described in the FEIS. Although specific details on location and functions were known at the time of the FEIS, the FEIS provided only conceptual information on size and appearance.

## **ASSESSMENT OF ENVIRONMENTAL IMPACTS**

The Technical Memorandum No. 7 provided analysis of impacts on the following sixteen (16) environmental issue areas:

1. Transportation (subway, bus, automobile, parking, and pedestrian)
2. Social and economic conditions
3. Open space
4. Displacement and relocation
5. Historic resources
6. Archaeological resources
7. Air quality
8. Noise and vibration
9. Infrastructure and energy
10. Contaminated materials
11. Natural resources
12. Coastal zone consistency
13. Safety
14. Environmental justice
15. Indirect and cumulative effects
16. Construction impacts

In the following three (3) areas, there are potential environmental impacts as a result of the final design as it relates to size and appearance; however, the impacts are not significant: (1) Social and Economic Conditions; (2) Air Quality; and (3) Noise and Vibration. A summary of the potential impacts under these areas is provided below. For each of these areas, there is a comparison of the FEIS design and the final design.

### **1. Social and Economic Conditions**

The FEIS concluded that no significant adverse impact to social and economic conditions would result from the operation of station entrances and ancillary facilities. The FEIS considered the impacts of the Project on social and economic conditions, which were defined as those components of a community that influence its character, including land uses, zoning and visual/neighborhood character. The FEIS design included a combined station entrance and ancillary building at the northwest corner of Second Avenue and 72nd Street, and that has not changed for final design. The height, bulk, and form of the Facility are consistent with zoning, which allows buildings in this area to be built to the lot-line at a height of up to 85 feet before a setback is required. Therefore, the Project's effects on land use and zoning remain the same.

#### *Visual/Neighborhood Character*

Although the size is consistent with zoning regulations, the specific size of the Facility at the site was not presented in the FEIS, rather various sizes of roughly the same magnitude were presented throughout the FEIS. The final design size of the Facility has the potential to impact visual/neighborhood character. Furthermore, the appearance of the Facility was not known at the time of the FEIS; therefore the final appearance of the Facility has the potential to impact visual/neighborhood character. Below is summary analysis, which focuses on the potential of the final design, specifically the size and appearance of the Facility, to impact visual/neighborhood character.

## Size

### FEIS DESIGN

The FEIS provided a general sense of scale and massing of ancillary facilities; it did not provide specific dimensions for any ancillary facility, including the 72<sup>nd</sup> Street combined station entrance and ancillary facility. Figure 8-7 depicts the Facility to occupy the entire lot of 75 feet by 74 feet 5 ½ inches on the northwest corner of 72<sup>nd</sup> Street and Second Avenue. In the narrative sections of the FEIS, various dimensions for ancillary facilities were provided in different chapters of the FEIS. Chapter 2 of the FEIS indicates that ancillary facilities would be approximately 25 feet wide, 75 feet deep, and four to five stories high (FEIS page 2-22). Chapter 6 of the FEIS indicates that ancillary structures could be three to four stories high and between 20 by 70 feet and 40 by 80 feet (FEIS, page 6-49). In Chapter 8, ventilation and cooling facilities were described as being approximately 25 to 40 feet wide, 75 feet deep, and up to 50 feet high (FEIS, page 8-9). And Chapter 11 indicates that ventilation structures would typically be 25 to 40 feet wide and up to 75 feet high. The presentation of varying sizes is due to the level of design known and presented at the time of the FEIS, which was preliminary design, and the multiple chapters that discuss ancillary facilities in varying contexts, such as in Chapter 8: Displacement and Relocation as well as in Chapter 6: Social and Economic Conditions. The FEIS also indicates that cooling towers would be located on the roofs of building (FEIS, Page 11-23).

### FINAL DESIGN

As a result of final design, the Facility will still occupy the full lot at the northwest corner of the Second Avenue and 72<sup>nd</sup> Street. The height of the Facility will be 75 feet, which is the upper limit of the range of heights described in the FEIS. Two cooling towers (footprint of each will be 8.5 feet by 12 feet) will be located on the rooftop of the 75-foot structure. The cooling towers will have a smaller combined footprint than the one cooling tower described in the FEIS. In addition, a dry cooler, approximately 13 feet, 9 inches long, 8 feet wide, and 3 feet high, will be installed on the east side of the roof. A stair bulkhead will also be located on the rooftop. These are within the range of dimensions presented in the FEIS.

Existing views of the Facility site will change as a result of the new structure and rooftop equipment; however, this change is not adverse for *most* viewers. The size of the Facility will have an adverse visual impact to the residents of four (4) apartments of 1391 Second Avenue; this impact was not presented in the FEIS. Below is a summary of this visual impact.

The residents of 245 East 72<sup>nd</sup> Street with views of the Facility site (currently occupied by four, connected five-story, walk-up apartment buildings fronting onto East 72<sup>nd</sup> Street) from their apartments are the closest viewers of the Facility site. At the street wall, 245 East 72<sup>nd</sup> Street abuts the existing building on the Facility site. At approximately 26 feet inward from its 72<sup>nd</sup> Street building line, the building steps back from the property line of the Facility site to form a rear yard airshaft. As the building steps back, the east-facing windows are located between eight and 21 feet from the existing building. Apartments in the B, C, D, and E lines on the 1<sup>st</sup> to 6<sup>th</sup> floors of 245 East 72<sup>nd</sup> Street face the sidewall of the existing building. East-facing windows and balconies above the 7<sup>th</sup> floor have views onto the roof of the existing building or across the roof. In addition, residents in four (4) apartments located at 1391 Second Avenue are directly adjacent to the northern property line of the Facility site. The four (4) apartments on floors 2 through 5 have one window each that face the rear of the existing building on the Facility site, which is not

currently built to the rear property line.

For the residents of apartments on the northeast line at 245 East 72<sup>nd</sup> Street:

- Residents on the 1<sup>st</sup> to 6<sup>th</sup> floors will have east-facing views of the sidewall of the Facility instead of having views of the sidewall of the existing buildings on the Facility site.

- Residents on the 7<sup>th</sup> and 8<sup>th</sup> floors will have east-facing views of a blank side wall of the Facility instead of having views across the roof because the Facility will be 13 feet higher than the existing structure on the Facility site.

- East-facing views from apartments on floors 9 and higher will remain, but the rooftop Facility equipment will be visible.

For the residents of apartments at 1391 Second Avenue:

- Residents in four (4) apartments on the 2<sup>nd</sup> to 5<sup>th</sup> floors will lose the existing south-facing views entirely, as the existing gap will be filled by the Facility.

The dimensions of the Facility will directly block south-facing window views of four (4) apartments of 1391 Second Avenue. The windows that will be blocked are lot-line windows, thus they cannot be used for the purposes of compliance with New York City Building Code for light and air. Therefore, if the apartments are currently compliant with light and air regulations based on the windows that face Second Avenue as well as the rear yard, then they will continue to meet the requirements of the New York City Building Code with respect to light and air. But because neither MTA nor FTA have access to floor plans for those particular units, this memorandum will assume that the units only windows are on the lot line, and that the Project will block all of the windows.

Assuming this worst case scenario, these four (4) apartments would not be habitable; and mitigation measures consistent with the FEIS and ROD would apply. Although this would be an adverse impact for the residents of the four (4) apartments, even with this assumption, the impact is not significant given the Project's context in a densely populated major metropolitan area and the intensity of the impact on a relatively small number of residents, as previously noted. Therefore, there is no significant change in impacts of the FEIS design as a result of the final size of the Facility.

#### Appearance

##### FEIS DESIGN

The FEIS provided conceptual guidelines for the design of combined station/ancillary facilities; it did not provide specific details on the design of any Project facility. The conceptual guidelines (FEIS page S-47) included commitments that ancillary facilities would be sensitive to the surrounding architectural context; would not disturb the visual context of the study area; would not change the study area's urban design; and that community input on the design would be solicited during the design phase (FEIS page 6-49). The FEIS indicated that some ancillary buildings would include a cooling tower with a privacy screen on the rooftop and intake/exhaust louvers would be located primarily on their rooftops. The FEIS provided illustrative examples of existing ancillary facilities, such as sidewalk grates in Manhattan and a row-house façade in Brooklyn. The FEIS (FEIS Figure 2-11) also provided a conceptual illustration of a Second Avenue Subway ancillary building: a row house façade with the interior of the building

reconstructed as a ventilation facility. These conceptual guidelines for ancillary facilities are the same for combined station/ancillary facilities.

#### FINAL DESIGN

The final design façade of the Facility will not look like a row-house, as in the FEIS conceptual illustration; it will look institutional. The façade will be clad predominantly with unglazed terracotta tiles in an earthen color finish similar to bricks or brownstone. The Facility will have bands of vertical windows spanning from the 2<sup>nd</sup> to 6<sup>th</sup> floors at the ends of the building facades on Second Avenue and East 72<sup>nd</sup> Street; these will be glass curtain walls. At the ground floor, the columns that surround the station entrance and support the upper floors of the building and the ground floor façade on East 72<sup>nd</sup> Street will be clad in granite. Metal slats will create a visual screen that will block the views of the ventilation louvers. In addition, horizontal aluminum bands will run across the facades, dividing the structure visually into six stories. The following elements will be installed on the rooftop: two cooling towers, without privacy screens, with a footprint smaller than the one cooling tower presented in the FEIS; a dry cooler, approximately 13 feet, 9 inches long, 8 feet wide, and 3 feet high; a stair bulkhead; and one tunnel ventilation shaft. Although the FEIS indicated that a privacy screen would be used for the cooling tower, no privacy screen is proposed at this time because MTA believes that the inclusion of a privacy screen that meets the MTA's operational and maintenance requirements would make the Facility appear larger and less attractive than a Facility without such a screen. If the community prefers a privacy screen, then this can be included in the design. In addition, while the FEIS indicated that the intake and exhaust louvers would be primarily located on the rooftop and intake louvers would be on the façade toward the rear yard, in the final design, approximately 85% of the intake and exhaust louvers will be located on the south and east façades and 15%, consisting of one horizontal opening, will be located on the rooftop. (Because adding one cooling tower and the placement of intake/exhaust louvers on the façade have the potential to impact air quality and noise and vibration, analysis for these environmental issue areas is provided later in the Air Quality and Noise and Vibration sections of this Memorandum.)

The 72<sup>nd</sup> Street Station study area ("Study Area") was defined as the area between East 67<sup>th</sup> and 74<sup>th</sup> Streets and First and Third Avenues. The Study Area is largely unchanged from what was described in the FEIS. It continues to have residential and institutional uses, including a post office, schools, and hospital-related buildings. The ground floor of most buildings on Second Avenue has retail use. The Study Area has a wide range of building types and styles. The predominant building types are large high-rise buildings with groups of attached, 5- and 6-story walk-up tenement type apartment buildings. While the high-rise buildings are typically masonry, with some granite, metal, and glass elements, the tenement type apartments are often in brick or brownstone. This Study Area contains a mix of materials used for facades, including brick, brownstone, polished granite, and glass. The Facility will be built with materials that are of similar nature of materials found in the Study area.

The language of the FEIS with regard to the design of ancillary facilities makes the reader aware that the design of the ancillary facilities was not finalized and the design would be determined by the specific site location, site conditions, relative location to other Project elements, context, as well as continued public outreach (more information regarding public outreach is provided below in the Public Outreach section of this Memorandum). Although illustrations of existing

ventilation facilities were provided as examples of what ancillary facilities could look like, no specific information on the design of any Project ancillary facility was provided. The FEIS provided general guidelines that would be used, such as consistency with urban design, and that community input would be solicited during the design phase. The materials used in the façade are sensitive to the surrounding context, does not disturb views within the study area, and does not change the area's urban design. However, as a result of the silver-colored metal slats for louvers located on the façade as well as the lack of residential-style windows, the Facility will look institutional, not residential. The final design of the Facility is consistent with the conceptual design guidelines presented in the FEIS and there will be no significant change in impacts related to visual/neighborhood character as a result of the final size and appearance of the Facility.

Therefore, there will be no significant change in impacts related to social and economic conditions as a result of final design of the Facility.

## **2. Air Quality**

### **FEIS DESIGN**

Based on the FEIS design, no significant adverse impacts related to air quality would occur from the Project's ancillary facilities, including the 72<sup>nd</sup> Street Ancillary Facility. Because the air exhausted from the ventilation facilities would not include hazardous pollutants, the FEIS included a qualitative discussion of the air quality impacts of new ventilation structures. The design assumed that intake and exhaust louvers would be primarily through the roof to minimize the amount of surface area needed at street level. The analysis stated that air emitted from ventilation structures would be ambient air from the subway's tunnels and stations, as well as emergency smoke. In addition, the FEIS anticipated one cooling tower.

### **FINAL DESIGN**

The final design of the Facility relocates some of the intake and exhaust louvers from the rooftop to the facades of the Facility. The façade intake and exhaust louvers will be located near the top of both the 72<sup>nd</sup> Street and Second Avenue facades. The location is adequate to maintain fresh air into the station and to disperse exhaust air. The relocation of some of the louvers from the rooftop to the facades will not change the quantity or circulation of air as compared to the FEIS design. During normal operations, air emitted by the ventilation system will be ambient air from the subway tunnels. There will be no combustion or other air pollutant sources that will be emitted from the louvers.

One of the FEIS functions of the Facility is to also exhaust emergency smoke – this has not changed. No analysis for emergency exhaust was provided in the FEIS because, by definition, such emergencies are extremely rare and of very short duration. All exhaust louvers will be separated from any fresh air intakes and operable windows on adjacent buildings by a minimum of 10 feet as required by the New York State Mechanical Code and as described in the FEIS. Therefore, there will be no significant change in the air quality impacts presented in the FEIS as result of final design of the Facility.

### **3. Noise and Vibration**

#### **FEIS DESIGN**

Based on the FEIS design, the Project would meet FTA standards for operational noise criteria. Specifically, all above-ground mechanical equipment and any below-ground equipment requiring above-ground vents or structures would be designed so that noise levels produced when the equipment is in use would not exceed 60 dBA as measured from the façade of the nearest residential property.

#### **FINAL DESIGN**

The Facility has been designed to meet this threshold of 60 dBA at the nearest residential property by incorporating noise attenuation measures, such as the use of concrete walls and absorptive media, such as fiberglass, into the design of the Facility.

The analysis presented in the Technical Memorandum No. 7 confirmed that noise levels from the Facility at the nearest residential property will not exceed 60 dBA. Noise analysis was based on the distance from the residential receptors to dominant sources of noise, which are equipment located on the roof. Therefore, noise levels were taken from the Facility's rooftop equipment at three receptor sites closest to individual pieces of equipment. These calculations were made in accordance with the methodologies provided in the 2006 FTA Noise and Vibration Impact Assessment guidance.

Therefore, there will be no significant change in the noise and vibration impacts presented in the FEIS as a result of the final design of the Facility.

#### **MITIGATION**

No new or additional mitigation is required as a result of the final design of the 72<sup>nd</sup> Street Facility presented in Technical Memorandum No. 7. The mitigation measures included in the FEIS and ROD remain unchanged, except for a privacy screen around rooftop facilities, which could be included if the community decides that it would be preferable.

#### **PUBLIC OUTREACH**

MTA NYCT has been conducting ongoing public outreach related to the Second Avenue Subway project. This outreach is being conducted through a Second Avenue Subway Task Force established by Manhattan Community Board 8. During a November 30, 2009 Community Board 8 Task Force meeting, MTA discussed the 72<sup>nd</sup> Street and 69<sup>th</sup> Street ancillary facilities. At this meeting, the design of ancillary facilities was presented. The design presented had an institutional appearance with granite bases, metal slats and earth-tone terra-cotta tiles. Buildings shown were rectangular and built to the property line.

At the November 30, 2010 meeting, a number of issues were raised by the community related to ancillary facilities, such as the following:

- A request that retail space be provided at street level in the Project's ancillary facilities. Ground-floor retail space will be provided with access from East 72<sup>nd</sup> Street.
- A request that ancillary facilities be designed to look like row-houses. While the illustrative example provided in the FEIS is different from the final design of the Facility, the design still fits



within the urban fabric of the surrounding area.

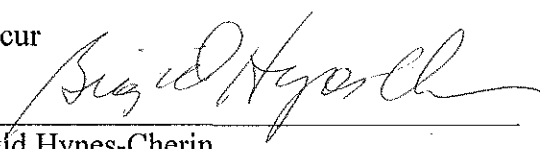
- A request that the size of the ancillary facility building be reduced. Also a request that the 72<sup>nd</sup> Street Facility maintain all or portions of the existing air space over the one-story portion of the existing building on the Facility site. MTA cannot reduce the size of the structure without compromising the mechanical needs of the 72<sup>nd</sup> Street Station or without substantially increasing the overall cost of the Project.

In addition, MTA met with residents of 245 East 72<sup>nd</sup> Street on January 27, 2009 and December 14, 2009 to discuss the design of the 72<sup>nd</sup> Street Facility.

#### **SUMMARY**

Based on our review of Technical Memorandum No. 7 as well as referenced emails, no new significant impacts since the issuance of the FEIS and ROD have been identified by FTA as a result of final design of the 72nd Street Facility.

Concur

  
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Brigid Hynes-Cherin  
Regional Administrator

12/16/10  
\_\_\_\_\_  
Date