Chapter 7:

Public Open Space

A. INTRODUCTION AND METHODOLOGY

This chapter assesses the potential significant impacts of the Second Avenue Subway on public open spaces along the project corridor. Specifically, the analysis addresses the project's potential to affect public open spaces during both construction and operation, whether by using them directly or by causing increased noise and other disturbances that would affect the use and enjoyment of a public open space. In a separate analysis, the "Section 4(f) and Section 6(f) Evaluation" included in this FEIS further details the effects of project construction and operation on publicly owned, officially designated significant parks and significant historic resources, as is required by Section 4(f) of the Department of Transportation Act of 1966 and the Land & Water Conservation Fund Act (LWCFA), 16 U.S.C. §§ 4601-4 to 4601-11. (The requirements of the LWCFA are commonly referred to as Section 6(f), as the provision was originally contained in Section 6(f)(3) of the LWCFA before codification). The Section 4(f) and Section 6(f) Evaluation also describes and provides the analysis necessary to meet the requirements of the Urban Park and Recreation Recovery Act (UPARRA), 16 U.S.C. §§ 2501 to 2514, although to date no park affected by the project has been identified as having received UPARRA funds. St. Vartan Park is the only park along the Second Avenue Subway alignment that has been identified to date as having received funding from the LWCFA.¹

B. EXISTING CONDITIONS

Parks and public open spaces of various sizes are located adjacent to the Second Avenue Subway alignment and near other areas where subway construction or operations would occur. Table 7-1 provides a list and Figures 7-1 and 7-2 illustrate the locations of public open spaces that are located adjacent to the proposed subway alignment and construction areas, from Second Avenue at 129th Street to the tip of Water Street. These public open spaces are located close enough to construction activities to potentially experience significant adverse impacts. In addition to the parks located immediately adjacent to the subway alignment, there are several parks located within the open space study area, which has been defined as being within one block east and west of the corridor. Table 7-2 shows these resources, none of which are expected to experience significant adverse impacts, because of their distance from construction activities.

¹ Another park assessed in the SDEIS because it was originally proposed as a construction site, Crack is Wack Playground, has received LWCFA funds. However, this park would no longer be directly affected by Second Avenue Subway construction as a result of refinements to the proposed design.

Table 7-1 Designated New York City Parks and Open Spaces In or Adjacent to the Second Avenue Subway Alignment or Construction Areas

				Prox	imity to Surfac	e Construction	
Public Open Space ¹	Location Along Second Avenue Alignment	Total Park Acres	Public Open Space Amenities	Direct Use	Possible Direct Use	Adjacent to Surface Construction	Neither
Crack is Wack Playground	127th-128th Sts	1.4	Handball courts, bas- ketball courts, trees, benches, Keith Haring "Crack is Wack" mural, bleachers, fountain			<u>∡</u> (adjacent to potential cut- and-cover for storage tracks/Phase 2)	
Harlem River Drive Park	E 128 to E 129 Sts, Second to Lexington Aves	5.8	Baseball diamond, trees, benches			X (adjacent to potential <u>staging</u> area/Phase 2)	
Triboro Plaza	124th-126th Sts	2.3	Trees			<u>X</u> <u>(adjacent to</u> <u>potential cut-</u> <u>and-cover for</u> <u>storage</u> tracks/Phase 2)	<u>X</u> <u>(align-</u> <u>ment</u> <u>passing</u> <u>beneath)</u>
Wagner Pool	124th St	0.8	Pool, benches, garden			<u>∡</u> (adjacent to potential cut- and-cover for <u>storage</u> tracks/Phase 2)	
Wagner Houses Playground	120th-121st Sts	1.6	Play equipment, bas- ketball courts, handball courts, trees, tables			<u>X</u> (Phase 2)	
Blake Hobbs Park	102nd-104th Sts	1.0	Basketball courts, handball courts, play equipment, volleyball courts, trees, benches				х
Playground 96 (western portion) ²	96th-97th Sts	0.5	Play equipment, swings, benches, trees, comfort station	X (0.5 acres + 0.12 acres of sidewalk; con- struction staging/ Phase 1)			
Playground 96 (eastern portion) ²	96th-97th Sts	1.0	Trees, benches, baseball diamond			<u>∡</u> (adjacent to staging area in western portion/ Phase 1	
Ruppert Park	90th-91st Sts	1.0	Play equipment, benches, trees				х
Tramway Plaza	59th St	0.3	Paved area, trees				Х

Table 7-1 (cont'd) Designated New York City Parks and Open Spaces In or Adjacent to the Second Avenue Subway Alignment or Construction Areas

	Location Along			Proximity to Surface Construction			
Public Open Space ¹	Second Avenue Alignment	Total Park Acres	Public Open Space Amenities	Direct Use	Possible Direct Use	Adjacent to Surface Construction	Neither
Dag Hammarskjold Plaza	47th St	1.6	Benches, trees				X
St. Vartan Park (western portion) ²	35th-36th Sts	0.6	Handball courts, basketball courts, benches, trees,	<u>X</u> (0.57 acres including part of sidewalk; <u>construction</u> <u>staging/</u> Phase 3)			
St. Vartan Park (eastern portion) ²	35th-36th Sts	2.2	Play equipment, swings, open play area, benches, trees, picnic tables, sunken seating area			<u>≚</u> (adjacent to staging area in western portion <u>/</u> Phase 3)	
Vincent Albano Playground	29th St	0.3	Handball, benches, trees, play equipment				X
Peter's Field	20th-21st Sts	1.6	Basketball courts, ten- nis courts, baseball field				<u>X</u>
St. Gaudens Playground	19th-20th Sts	0.6	Swings, basketball courts, trees, play equipment, painted games				X
Stuyvesant Square	15th-17th Sts	3.9	Benches, trees, fountains			<u>X</u> (across 15th St <u>/Phase 3</u>)	
Abe Lebewhol Park	10th St	0.2	Benches, trees				<u>X</u>
<u>First Park³</u>	<u>Houston to 1st</u> <u>Sts, First Ave</u>	<u>14</u>	<u>Swings, play equip-</u> ment, handball courts, trees, tables		X <u>(possible</u> <u>cut-and-</u> <u>cover</u> <u>construction</u> <u>for station</u> <u>structure/</u> <u>Phase 3)</u>		
Sara Delano Roosevelt Park	Houston-Canal Sts	7.9	Handball courts, bas- ketball courts, soccer, benches, trees, gar- dens, seniors center, play equipment, swings, comfort station, turf playing fields, bird garden	<u>X</u> (1.6 acres including part of sidewalk; <u>construction of</u> <u>station and</u> <u>work for tunnel/</u> <u>Phase 4</u>)			<u>X</u> <u>(align-</u> <u>ment</u> <u>passing</u> <u>beneath</u> <u>other</u> <u>portions</u> <u>of park)</u>
Kimlau Square	Chatham Square, Oliver St, Broadway	0.1	Trees, seat walls, statue, memorial arch	<u>X</u> <u>(cut-and-cover</u> <u>construction for</u> <u>station/</u> <u>Phase 4)</u>			
St. James Triangle	St. James PI and Oliver St	0.04	Benches, trees, mural			<u>X</u> <u>(Phase 4)</u>	

Table 7-1 (cont'd) Designated New York City Parks and Open Spaces In or Adjacent to the Second Avenue Subway Alignment or Construction Areas

	Location Along			Proximity to Surface Construction			
Public Open Space ¹	Second Avenue Alignment	Total Park Acres	Public Open Space Amenities	Direct Use	Possible Direct Use	Adjacent to Surface Construction	Neither
Fishbridge Garden	Dover, Pearl, and Water Sts	0.1	Dog run, trees			<u>X</u> (Phase 4)	
Pearl Street Playground ⁴	Fulton, Pearl, and Water Sts	0.2	Play equipment, benches, trees		<u>X</u> <u>(possible</u> <u>station</u> <u>element/</u> <u>Phase 4)</u>	X	
Fulton Street Plaza ⁵	Fulton and Water Sts. <u>(east side)</u>	0.2	Benches, trees, <u>Titanic</u> <u>Memorial Lighthouse</u> <u>monument</u>		<u>X</u> <u>(possible</u> <u>station</u> <u>element/</u> <u>Phase 4)</u>	X	
<u>Wall Street</u> <u>Triangle</u> ⁵	<u>Wall and Water</u> <u>Sts (east side)</u>	<u>n/a</u>	Currently wide street area used for parking: planned for park use		<u>X</u> <u>(possible</u> <u>station</u> <u>element/</u> <u>Phase 4)</u>	X	
Coenties Slip ⁴	Water St and Coenties Slip	0.06	Benches, planters		<u>X</u> <u>(possible</u> <u>station</u> <u>element/</u> <u>Phase 4)</u>	X	
Vietnam Veterans Plaza	Broad and Old Slip	0.7 (city- owned of 1.4 total)	Benches, trees, mem- orial, amphitheater, fountain			<u>X</u> (<u>Phase 4)</u>	
<u>Peter Minuit</u> <u>Plaza</u>	<u>Water and</u> Whitehall Street	<u>0.43</u>	Currently used as staging area for Whitehall Ferry construction			<u>X</u> (Phase 4)	

Notes:

One additional mapped public park, James Madison Plaza, is located along the alignment at Pearl and Madison Streets and St. James Place. This 0.4-acre space. which is used as parking for the New York City Police Department and does not provide any public park amenities or function as a public recreation area.
The eastern and western portions of Playground 96 and St. Vartan Park are considered separate parks for purposes of this

2 The eastern and western portions of Playground 96 and St. Vartan Park are considered separate parks for purposes of this analysis. In the case of St. Vartan Park, a roadway separates the two sections. The use of and impacts to the separate portions of the parks would vary significantly.

3 The portion of First Park that could be affected by the Second Avenue Subway construction is not in current use as a park.

4 In process of being mapped as parkland,

5 This plaza is located on city property, but is not <u>yet</u> mapped as parkland.

6 In the process of being converted to a Greenstreet under a NYCDPR program.

Source: Parks information is from New York City Department of Parks and Recreation, April 2000.

In addition to the public open spaces shown in Tables <u>7-1 and 7-2</u> and Figures 7-1 and 7-2, this chapter also considers the project's potential to affect the City's "Greenstreets," bonus plazas,

and other privately owned public open spaces. "Greenstreets" are paved traffic islands that have been converted into landscaped spaces by the NYCDPR; several of these spaces are located along the alignment. Greenstreets generally provide no recreational amenities, such as benches or other seating elements. <u>However, by increasing the amount of vegetation in communities</u>, <u>Greenstreets provide other benefits</u>, including enhancing neighborhood character, human health, and the quality of life. Additionally, trees and other flora increase the amount of shade, can provide additional protection against flooding, and reduce pollutants in the air.

Table 7-2

Park	Location	Acreage	Amenities
Marcus Garvey Park	120th-124th Sts (west of Madison Ave.)	20.2	Basketball courts, play equipment, benches, trees
P.S. 155 Playground	E 117 to E 118 Sts, First to Second Aves	0.8	Play equipment, handball courts, basketball courts open courtyard, game tables, mural
Park (Metro-North Comm. Gdns.)	E 100 to E 101 Sts, First to Second Aves	0.9	Community garden
Dream Street Park	E 124 St, Second to Third Aves	0.3	Garden, benches
I.S. 117 & Ben Franklin H.S. Plgd. (Poor Richard's Playground)	E 109 St, Second to Third Aves	1.6	Play equipment, handball courts, basketball courts, softball field, game tables
Gateway Plaza	E 59 St, First to Second Aves	0.3	Benches, trees
Robert Moses Playground	E 41 to E 42 Sts, First Ave	1.3	Basketball courts, handball courts, multi-use court, dog run, open play area, play equipment, benches, trees
Ralph J. Bunche Park	E 42 to E 43 Sts, First Ave	0.2	Benches, sculpture
Trygvie Lie Plaza	E 42nd to E 41st Sts, First Ave	0.9	Benches
Bellevue South Park	E 26 to E 28 Sts, Second to Third Ave	1.6	Trees, lighting, seating, play equipment basketball courts
Mary O'Connor Playground	42nd Street, First to Second Aves	0.2	Tot lots, trees, benches
Tudor `Grove Playground	42nd Street, First to Second Aves	0.2	Tot lots, trees, benches
Schiff Pkwy Center Plots	Delancey St, Bowery to Essex St	0.7	Landscaping
Peck Slip	Peck Slip Between South and Front Sts	0.2	Cobblestone street
Battery Park	<u>Water Street and</u> Broadway	<u>22.9</u>	Benches, paths, waterfront esplanade, Castle Clinton National Monument
Source: New York City De	partment of Parks & Recreation	on, April 2000).

Additional New York City Parks Within One Block of the Second Avenue Subway Alignment in Which No Impacts are Anticipated

<u>In addition to these resources</u>, approximately $\underline{35}$ "bonus plazas" (privately owned and operated publicly accessible open spaces associated with residential and commercial buildings) also are located adjacent to the alignment and potentially could be adversely affected by the proposed

project. Bonus plazas are a form of incentive zoning in which the New York City Department of City Planning (NYCDCP) offers a bonus of extra floor area to developers in exchange for creating and maintaining publicly accessible plazas for the public. Though the design of these plazas varies widely, such amenities as seating, trees, bicycle parking facilities, and drinking fountains may be provided. However, NYCDCP requires all bonus plazas to contain some of the following amenities: planters/planting beds, grass and other ground cover, game tables, artwork, fountains and pools, and play equipment. Several privately owned, public parks (such as Tudor City Greens on 42nd Street between First and Second Avenues) are located near the alignment as well, and may be affected by the subway.

C. FUTURE CONDITIONS COMMON TO ALL ALTERNATIVES

Several new parks are expected to be created within the Second Avenue Subway study area. As part of the redevelopment of Lower Manhattan, three permanent parks are planned for currently paved spaces as part of a grant to the City from the Lower Manhattan Development Corporation. These include Wall Street Triangle along Wall Street between Water and South Streets; Coenties Slip, at Coenties Slip and Water Street; and Canal/Laight Park at the intersection of Canal, Varick, and Laight Streets. In addition, the existing Hanover Square Park, one block west of Water Street, is to be transformed into an English-style garden to be known as the British Memorial garden. Coenties Slip and Wall Street Triangle Park would be located adjacent to the Second Avenue Subway alignment and construction.

While only in the conceptual stages, the city also has plans to develop several additional open spaces in Lower Manhattan. The largest of these is the East River Waterfront development, which would feature approximately 35 acres of open space along the East River waterfront, a street level esplanade, a second story linear esplanade, and a colonnade along the FDR Drive from Battery Park to the Brooklyn Bridge arches. A tree-lined promenade is planned along West Street (Route 9A) near the World Trade Center site, with a wide sidewalk on the eastern edge, new open spaces, and various streetscape and pedestrian access improvements. The City is also planning a 2.2-mile pathway that would loop through the downtown area, connecting the Battery, Fulton Street, and the new World Trade Center development.

<u>The Lower Manhattan Development Corporation is also planning improvements to the southern</u> portion of Sara D. Roosevelt Park, between Canal Street and Hester Streets. In this area, a paved playing area will be replaced with a synthetic turf athletic field surrounded by a running track, and landscaping improvements will be made.

<u>In Midtown, the United Nations has proposed a new building on the existing Robert Moses</u> Playground located opposite the Secretariat building at 42nd Street and First Avenue. It is anticipated that as mitigation for such use, a replacement park would need to be identified as part of that project's approval process.

<u>Aside from Robert Moses Playground</u>, it is expected that <u>all</u> existing parks along the Second Avenue Subway corridor would remain. It is <u>also expected</u> that some of the parks and open spaces listed in Tables 7-1 and 7-2 will be renovated before the <u>2025</u> analysis year. In addition, it is possible that additional Greenstreets or bonus plazas will be created, but no specific locations for such additions are yet contemplated.

D. CONSTRUCTION IMPACTS OF THE PROJECT ALTERNATIVES

Table 7-1 lists all public open spaces adjacent to the Second Avenue Subway alignment <u>and</u> <u>indicates whether they would be directly used for or located adjacent to subway construction</u> <u>activities. If so, the table also identifies the construction phase in which any such effects would</u> <u>occur. Chapter 3, "Description of Construction Methods and Activities," provides detailed</u> <u>information on the construction phasing plan for the overall project.</u> The parks listed in Table 7-2, which do not border the Second Avenue Subway's alignment or construction areas, would not be affected because of the increased distance from construction activities and/<u>or</u> the fact that the intervening structures between the public open spaces and the construction activities would function as a screen to shield parks from impacts. Consequently, public open spaces in Table 7-2 would not experience significant adverse impacts, but would possibly experience an increase in use as described below.

The specific impacts on the parks that would be directly used for construction (e.g., staging sites) or permanent activities, (e.g. station entrances, ancillary facilities) are described below in more detail, as are measures to mitigate each of these impacts. In all parks where surface construction would occur, noise impacts on the public open spaces would occur. In several cases, particularly where construction would occur directly beneath the parks, limited ground settlement could occur. Following the discussion of impacts to parks directly used for construction.

When parks are directly used by NYCT and its contractors and thus temporarily closed to public access during construction, some park users would be expected to use other nearby parks with similar facilities, including those listed in Table 7-2. For example, some users of the <u>play</u> equipment at <u>Playground 96</u> might instead use the nearby <u>play equipment at Poor Richard's</u> <u>Playground on East 109th Street.</u> Some users of parks located adjacent to Second Avenue Subway construction might also travel to other nearby parks to avoid noise or other construction disturbances. While nearby parks are expected to experience heavier usage, no significant adverse impacts are expected to those nearby parks, because of the availability of others within the vicinity.

New York State law declares that the city's right to its parks and other public places is inalienable.¹ The permanent or long-term use of publicly owned parkland for non-park purposes constitutes alienation and thus requires the approval of the New York State Legislature. Before construction within any publicly owned parks could occur, a determination would be made regarding the need to secure approval from the New York State Legislature.

PARKS DIRECTLY USED FOR CONSTRUCTION

As described in Chapter 2, "Project Alternatives," since issuance of the SDEIS, the proposed project has been refined as a result of ongoing engineering studies. One such refinement is that the proposed underground storage tracks on Second Avenue north of 125th Street have been substantially reduced in size. Among the benefits of this change are that the Crack is Wack Playground and Triboro Plaza would no longer be directly affected by construction activities, as was described in the SDEIS.

¹ New York General City Law § 20(2).

PLAYGROUND 96

As described in Chapter 3, "Description of Construction Methods and Activities," because of geological conditions, the proposed station at 96th Street, and the presence of the existing tunnel at 99th Street, the area between 99th and approximately <u>91st</u> Streets would be a major focus of construction activity <u>during Phase 1</u>, which is expected to begin in 2004. During construction, the entire 0.5-acre western portion of Playground 96 could be used for up to <u>8</u> years <u>as a staging area for tunnel and station construction activities</u>, in order to minimize construction impacts to nearby blocks. Using the park would require the removal of a paved concrete area, recently installed play equipment, swings, seating areas, and a comfort station. <u>To avoid inadvertent damage to any surface utilities</u>, NYCT would work with the New York City Department of <u>Parks and Recreation (NYCDPR) prior to any construction to identify their locations and avoid disruptive activities in those areas if practicable</u>. Because the area would be closed to public use for up to <u>8</u> years <u>(a reduction in time from the 10-year maximum construction period described in the SDEIS)</u>, a significant adverse impact would occur. No construction would occur in the approximately 1.0-acre eastern portion of the park, which is occupied by a ball field.

During construction, the three mature trees near the play equipment and about eight of the trees <u>on the western side of the park</u> outside the perimeter fence <u>and adjacent to Second Avenue</u> would have to be removed. The trees along the northern and eastern edges of the park could be pruned to remove limbs that would interfere with or be damaged by nearby construction equipment without requiring removal of the tree. This would limit the number of trees in the park that would require removal. Should this not be effective, the number of affected trees could increase if these trees ultimately need to be removed.

Extensive efforts would be made to ensure that the remaining park trees are protected from damage during construction. Protection plans would entail delineating all trees, marking the trees in the field, and building a barricade around each tree that requires protection. Any trees removed during construction or that die because of adjacent construction would be replaced after construction in accordance with a tree replacement plan developed in coordination with NYCDPR. These and any other public trees eliminated elsewhere by Second Avenue Subway construction would be replaced according to NYCDPR's Basal Area Replacement Formula, which is designed to ensure that replacement trees are of the same size as the original trees. If a removed tree is larger than 4 inches in diameter at breast height (dbh), which is the size limit for a transplantable tree, it would be replaced with multiple smaller trees, the basal area of which adds up to the basal area of the original tree. Several replacement trees would be planted prior to the start of construction, in the vicinity of the trees to be removed and in consultation with NYCDPR, in order to replicate some of the functions performed by the trees to be removed. These tree replacement and protection measures would be included in relevant contract specifications, and in the project's Construction Environmental Protection Program (CEPP). NYCT will incorporate relevant portions of the CEPP in all construction contracts, and contractors will be obligated to follow these provisions.

During construction, an attractive sound and safety barrier would be erected to separate the two sections of the park. This barrier would be installed along the north, east and potentially southern edges of the site, and would be of appropriate height to <u>help</u> mitigate noise impacts to the hospital to the north, the balance of the playground and school to the east, and to the residential uses to the south. <u>The barriers would be designed to be visually attractive and to reduce the effects of noise associated with construction activities on the adjacent park and other uses.</u> <u>NYCT will work with NYCDPR to design appropriate security measures, such as lighting, to the south of the south of the security measures.</u>

ensure safety surrounding any noise and construction fences.¹ In addition, protective construction measures would be employed: screens would be used to limit light emitted from work sites; best management practices would be implemented to control dust; and specially quieted construction equipment would be used to minimize noise to the extent practicable. All construction equipment, including construction vehicles, would be contained within the designated staging area to avoid affecting the remaining portion of Playground 96 to the degree practicable.

As <u>use of</u> this playground <u>for construction</u> could last for up to <u>8</u> years, <u>NYCT would work with</u> <u>NYCDPR to identify the mitigation plan that is most compatible with the neighborhood's parks</u> <u>and open spaces. This could entail identifying</u> a temporary replacement site for the park activities that would be displaced. It is possible that current park users could go to the playground at George Washington Houses, on the northwest corner of Second Avenue and 97th Street. It may also be possible to provide replacement facilities on the private parking lot portion of a property on the northeast corner of Second Avenue and 99th Street, but consideration would have to be given to how playground noise levels could affect residents in adjacent residential buildings. NYCT would work with NYCDPR on the location and design of any replacement park facilities <u>provided as mitigation</u>, as well as on a restoration plan for Playground 96 following construction. <u>As described above</u>, any such plans would include planting trees to replace those removed or damaged during construction.

ST. VARTAN PARK

The 0.6-acre western portion of the park could be used as a staging area for station construction and spoils removal <u>during Phase 3</u>; together these activities could <u>last for 6 to 8 years (a reduction from the 10 years identified in the SDEIS)</u>, resulting in a significant adverse impact. During construction, the public would not have access to the western portion of the park, and many of its surface features would be removed, including the heavily used handball and basketball courts.

Approximately four of the 14 trees in the western portion of the park and seven of the 12 surrounding street trees could also be removed. Many of the remaining trees on the northern and eastern borders of the park could likely be pruned to avoid interference with adjacent construction equipment; if this is not successful, some additional trees could require removal. As described above for Playground 96, a protection plan would be developed and included in relevant construction specifications.

During construction, an attractive sound and safety barrier would be erected to separate the $\underline{0.6}$ -<u>acre western</u> section of the park that would be used to support construction activities from the 2.2-acre section to <u>east</u> that would not be used by the Second Avenue Subway project. Physical separation of these two sections would also be provided by the existing Tunnel Access Road; however, openings might be needed to allow trucks to enter and exit the site. An attractive sound barrier would also be provided near the southern curb to screen sound at the residential and institutional buildings to the south, <u>and other measures to mitigate noise impacts would be</u>

¹ As described in further detail in Chapter 12, "Noise and Vibration" upon further investigation, it has been determined that fully enclosed construction sites with roofs identified as a possible mitigation measure in the SDEIS are not practicable at Playground 96, St. Vartan Park, or other open spaces, because tall construction equipment—such as cranes—could not operate within the confines of such structures.

employed as described in Chapter 12, "Noise and Vibration." As described above for Playground 96, appropriate security measures would be provided near the construction area, including safety lighting and fencing, and all construction activity would be contained within the designated staging area and would not be allowed in the adjacent portion of St. Vartan Park. Other protective measures (such as screens to limit light and best management practices to control dust) would also be implemented. The protective construction measures described above would also be employed, if practicable.

As described in the Section 4(f) Evaluation and Section 6(f) Evaluation at the end of the main volume of this FEIS, because some LWCFA funds were used to finance certain improvements to St. Vartan Park in the past, the requirements of Section 6(f) must be satisfied before any portion of the park is used for Second Avenue Subway construction activities. Specifically, the temporary loss of this park space must be mitigated by creation of replacement park space and/or purchase of wetlands (see the Section 4(f) Evaluation and Section 6(f) Evaluation for more information). MTA will comply with Section 6(f) prior to the use of the western portion of St. Vartan Park for construction.

MTA has committed to taking all steps required to comply with Section 6(f). In consultation with OPRHP and NYCDPR, MTA will identify and pursue opportunities for providing replacement facilities; develop programming of recreational facilities for such replacement property; and provide improvements to existing recreational resources as necessary to mitigate the impacts of the temporary conversion of St. Vartan Park, taking into account the substitute resources provided by the replacement properties. At this time, MTA has identified two properties that could satisfy the Section 6(f) requirements for replacement space. These two properties are immediately to the north of St. Vartan Park, adjacent to the entrance to the Oueens-Midtown Tunnel. The southern parcel fronts on First Avenue and contains mature trees; the northern parcel fronts on East 37th Street. Using these two parcels would potentially allow replacement of the current recreational uses in the portion of St. Vartan Park to be affected by subway construction, while retaining the mature trees on the southern parcel. Other candidate locations for replacement facilities will be explored prior to the use of St. Vartan Park. In the event that no better options can be identified for replacing the park space at St. Vartan Park, MTA will provide the entire southern parcel and those areas of the northern parcel that will not interfere with operations of the Queens-Midtown Tunnel.

As described in Chapter 6, some noise impacts could be created at this and other temporary relocation park sites. However, since any replacement park at this site would be located across the street from an existing park, the noise from the park would affect the same neighborhood as the existing park and there would be no significant adverse impact. Overall, creation of a temporary replacement park space in the immediate vicinity of St. Vartan Park would not result in significant adverse impacts. In the event that replacement facilities other than those outlined above are developed, the environmental impacts of those facilities would be considered prior to site selection and implementation.

Because use of St. Vartan Park for construction staging and spoils removal would occur in Phase 3 of the project, it is possible that both the United Nations proposal described above in Section C and the New York City Department of Environmental Protection's water tunnel project (described in Chapter 19, "Indirect and Cumulative Effects,") would be completed prior to any Second Avenue Subway construction activities in this area. Should the construction of either project occur simultaneously with that of the subway, as part of the mitigation process, NYCT would also coordinate with these or any other projects occurring in the vicinity at the same time.

The goal of such coordination would be to seek ways to mitigate public open space impacts in an effort to develop a coordinated strategy. After construction, the park would be fully restored and reopened for public use, including the replacement of any damaged or removed trees in consultation with NYCDPR and in accordance with the Basal Area Replacement Formula.

<u>FIRST PARK</u>

An ancillary facility needed for the Houston Street Station is proposed on private property at the corner of Houston Street and Second Avenue, where a residential building was located until its collapse several years ago. This property is adjacent to a portion of First Park close to Second Avenue. This portion of the park is currently entirely fenced, not accessible to the public, and not in use as a park. The portion of First Park currently in use is close to First Avenue. To construct the subway vent facility, a small portion of the fenced park would be excavated during Phase 3 of the construction process to allow construction below. Because this portion of the park is not accessible to the public, and because First Park's active recreational amenities are located along its First Avenue frontage, the effects of such construction on the park would be somewhat limited. The construction would require the removal of approximately seven trees. The loss of these trees would be similar to trees that must be removed at other locations along the project alignment, such as at stations where excavation must occur. As described above, any trees removed would be replaced after construction according to a tree protection plan developed in consultation with NYCDPR.

SARA D. ROOSEVELT PARK

As described in Chapter 2, the Deep Chrystie Option was selected as the preferred option for the alignment south of Houston Street. The Deep Chrystie Option has been modified somewhat since publication of the SDEIS as a result of ongoing engineering, altering the locations and increasing the extent of required construction and tree removal within the park. These changes are necessary in order to remove existing below-ground obstructions in the park as well as achieve the reconstruction of the existing Grand Street Station. Construction within Sara D. Roosevelt Park would occur entirely during construction of Phase 4 of the project.

The project's tunnels would be constructed beneath Sara D. Roosevelt Park from Houston to Delancey Street using a TBM. Above-ground construction would be needed on the western side of the park between Delancey and Hester Streets and would extend approximately 60 feet into the interior of the park, a larger area than described in the SDEIS for the reasons cited above. Construction would be required at this location because of the need to rebuild the existing Grand Street Station serving the **BO** Lines. Excavation would be required in the park to create a new lower level beneath the existing Grand Street Station and to widen the existing station platform to accommodate the substantial increase in passengers expected here once Second Avenue service is implemented. Approximately 75 trees along Chrystie and Grand Streets would need to be removed as a result. As the construction areas would have to be used for both excavation and staging activities, the entire width of the park could be closed within the area being constructed during a particular period, but the remaining portions of Sara D. Roosevelt Park would be open to both the north and south.

Construction <u>would</u> also extend to the eastern border of the park <u>between Rivington and</u> <u>Delancey Streets within an area occupied by a community garden. In this location, construction</u> <u>would be needed to remove underground obstructions that would interfere with the TBM.</u> <u>Construction in this area would be scheduled to occur during the winter when the garden is less</u> heavily used. However, construction would require the removal of up to 13 trees in the garden area.

As further detailed in the Section 4(f) Evaluation, construction disturbance <u>from the Deep</u> <u>Chrystie Option at Sara D. Roosevelt Park would result in the removal of many of the mature</u> trees currently planted along the park's western perimeter <u>between Delancey and Hester Streets</u>, <u>along Grand Street</u>, and on the eastern border of the park between Rivington and Delancy Streets within an area occupied by a community garden, and some interior trees in that area and immediately north of Delancey Street where removal of the below-ground obstructions would occur. This tree removal is needed to permit construction of the alignment and Grand Street Station, and is the only alternative to demolishing a significant number of adjacent residential and commercial buildings. The removal of the trees and the required closure of large portions of the park during construction would result in a significant adverse impact. The remaining trees near the construction activities would be protected using appropriate measures; <u>however</u>, <u>some</u> settlement could still occur that might affect these trees.

<u>Construction within the park is expected to last 4 to 5 years. However, it is anticipated that park</u> construction activities would be staged to limit the amount of park that would be under construction at any one time. <u>NYCT would work with NYCDPR to identify the mitigation plan</u> that is most compatible with the neighborhood's parks and open spaces. Upon completion of the various construction phases, the portions of the park disturbed by surface construction would be reconstructed and reopened in consultation with NYCDPR. In addition, where practicable, NYCT would redesign and reconstruct facilities on the portions of the park that remain open to the public, in consultation with the community, in order to provide some replacement facilities on site. As engineering continues, a phasing plan for Sara D. Roosevelt Park construction work will be developed. This process will involve meeting with NYCDPR and Community Board 3 regarding the design of replacement spaces within the park. Although the SDEIS indicated that such design plans would be included in the FEIS, this information cannot yet be provided, as project designs in this area are not yet sufficiently advanced. However, meetings with NYCDPR and Community Board 3 to discuss this subject are under way.

Replacement trees would be planted following construction in accordance with the tree replacement plan developed in consultation with NYCDPR, and the Basal Area Replacement Formula would be used. NYCT would also work with NYCDPR to identify permanent improvements for Sara D. Roosevelt Park that would be implemented following construction of the alignment in this area. In addition, the protective construction measures described above would also be employed to minimize disturbance to the park.

Entrances to the new Grand Street Station are currently planned to be located adjacent to the park on Grand Street between Chrystie and Forsyth Streets. These entrances have not yet been designed, but could interfere with the existing park entrance. Additionally, it may be necessary to locate an emergency egress in this vicinity or potentially within the park. As described in Chapters 2, "Project Alternatives" and 8, "Displacement and Relocation," emergency egresses and other ancillary facilities must be sited within specific areas in order to meet fire and safety code requirements. NYCT would work with NYCDPR to ensure that the design of these facilities is compatible with the existing park.

KIMLAU SQUARE

To construct the Chatham Square Station, cut-and-cover construction would be required at Kimlau Square <u>during Phase 4 of the project</u>. <u>As with other station construction, this disruption</u>

<u>could last 4 to 5 years.</u> Such construction would displace users of this public open space, resulting in a significant adverse impact. The five trees and benches in the park would be removed and the commemorative arch for Americans of Chinese ancestry and statue of Lin Ze Xu would be carefully temporarily removed and reinstalled after construction. This need was <u>identified following issuance of the SDEIS</u>. To protect the arch and statue during <u>removal and reinstallation</u>, a structural analysis would be undertaken in coordination with <u>the New York City</u> <u>Department of Transportation (NYCDOT)</u>, which has jurisdiction over the park's monuments, prior to commencing any construction activity. <u>All</u> pieces of the arch <u>and</u> statue would be catalogued and stored appropriately until the park could be rebuilt following construction. At such time, a preservation architect would be retained to ensure the features' safe and appropriate reinstallation. Following construction, trees would also be replanted <u>in accordance with a plan developed</u> in consultation with NYCDPR.

PEARL STREET PLAYGROUND

As described in Chapter 8, identifying potential locations for entrances and ancillary facilities in the Seaport Station vicinity is challenging because of the proximity to the Brooklyn Bridge, the **AC** tunnels, the presence of the Seaport Historic District along the entire east side of the station area, and the presence of several parks and other public open spaces. After extensive planning, the preliminary locations recommended for station entrances include the northwest corner of Fulton Street and Water Street, where the Pearl Street Playground is currently located. An entrance would ideally be located at this intersection to meet demand coming from the residences to the north. Further engineering along with continued discussions with the local Community Board, property owners, and NYCDPR need to occur before final decisions about use of this park can be made. In addition, a supplemental environmental review and a separate Section 4(f) analysis would need to be conducted if an entrance were to be formally proposed at this location.

The playground is heavily used by the surrounding community and would not be available while construction is under way within the playground, a period of approximately 4 to 5 years during Phase 4 of the project. In addition, approximately six trees within the playground would need to be removed at that time. NYCT would work with NYCDPR to identify a temporary replacement site for the playground during construction.

The location of an entrance within the park would not be compatible with the area's underlying use as parkland and would constitute a significant permanent adverse impact. Additionally, the loss of parkland resulting from the new entrance would also be a significant adverse impact. NYCT would implement a range of mitigation measures to minimize these impacts. First, NYCT is coordinating with NYCDOT and the community to enlarge the park following construction by closing the segment of Pearl Street on the park's western edge, so that the amount of useable park area after the new station entrance is constructed is larger than the existing park. NYCT will also work with NYCDPR and the surrounding community to design the entrance so that it is compatible with the surrounding park. For example, the facilities could be incorporated into an active recreational facility or even designed to appear as a playful sculptural element.

FULTON STREET PLAZA

As with Pearl Street Playground, an entrance to the Seaport Station would also be located within Fulton Street Plaza. This entrance is needed both to meet anticipated passenger demand from the South Street Seaport businesses and residential uses located to the east. Fulton Street Plaza is not

mapped parkland, but functions as a public sitting area. During construction of the entrance, the Titanic Memorial Lighthouse could remain in place and would be protected to ensure that it would not be damaged inadvertently. The entire plaza would be closed to public use (a period of 4 to 5 years during Phase 4), resulting in a significant adverse impact. In addition, construction would require the removal of approximately four trees in the plaza. Following construction, NYCT would design the entrance to be integrated into the plaza, including the remaining trees. This is a common treatment in New York's streetscape. As at Pearl Street Playground, use of this open space is still preliminary and based on conceptual engineering and is therefore subject to change.

WALL STREET TRIANGLE

Between Water Street and South Street, Wall Street is a particularly wide roadway, with the extra space used for parking. In the future, the wide space is proposed to become a Greenstreet under NYCDPR's jurisdiction as part of a federal grant for improvements to Lower Manhattan. In the same area, the Second Avenue Subway is currently considering siting a station entrance. Subway construction would therefore be required for up to 4 to 5 years in Phase 4, during which time that portion of the new park space would be closed to the public, resulting in a significant adverse impact to the new open space.

The use of the future park area for a subway entrance has not yet been finalized. If this site is selected for an above-ground station element, that element would be designed to be compatible with the new park space. The design would be prepared in coordination with NYCDPR. However, should the park space be completed before the new subway element is constructed, the loss of the park space would constitute a significant adverse impact to open space. The use of this area for a new station would be assessed in a supplemental environmental review if a new station entrance is proposed for this future Greenstreet area.

COENTIES SLIP

<u>Coenties Slip</u>—currently a paved section of roadway with seating and planters that is separated from traffic—is not currently mapped as parkland. However, in the future, it is expected to become a permanent park as a result of a federal grant for improvements to Lower Manhattan. NYCT hopes to site an entrance in this area to serve the Hanover Square Station. Subway construction would be required in and near this space for up to 4 to 5 years during Phase 4. During construction, the open space would be closed to public use, resulting in a significant adverse impact. In addition, four trees currently located in planters would be removed. However, it is expected that these trees could be relocated elsewhere in the vicinity.

As with all entrances, this location is still preliminary and may change as engineering continues and based upon continued discussions with NYCDPR and the community. If an entrance were to be located at Coenties Slip, it would not be compatible with the area's underlying use as parkland and would constitute a significant permanent adverse impact. Additionally, the loss of parkland resulting from the new entrance/ancillary facility would also be a significant adverse impact. NYCT will coordinate with NYCDPR to design the future subway entrance in a way that would be compatible with the new open space.

PLAZA SPACES

The locations for station entrances and ancillary facilities are currently being evaluated, as described in Chapter 2 of this FEIS. Some locations currently proposed for use as station

entrances include wide sidewalk areas and open plaza areas adjacent to buildings. If these locations are selected for station elements, the affected area would be closed during construction during the relevant construction phase for that geographic area. Following construction, some of the public space would be converted to a different public use (rather than a plaza, it would be a subway station element).

PARKS ADJACENT TO OR NEAR SURFACE CONSTRUCTION

<u>Almost all parks</u> parks that would be located adjacent to surface construction activities but where no construction would occur within the parks (see Table 7-1), would experience adverse impacts resulting from access limitations or construction disturbances (such as increased noise and dust) <u>during the phase in which construction is occurring in the area</u>. In addition, people using the adjacent parks may experience increased visual disturbances related to the construction equipment and activities. <u>Construction adjacent to parks would typically last from 4 to 5 years</u>. For those parks listed in Table 7-1 where construction of project elements is under consideration (e.g., Pearl Street Playground, Fulton Street Plaza, Wall Street Triangle, and Coenties Slip), even if no permanent project element is constructed in those open spaces, construction activities related to nearby stations would occur in close proximity.

As described in Chapter 12, "Noise and Vibration," significant adverse noise impacts would occur for distances up to approximately 750 feet from where construction operations are taking place whenever there is a line-of-sight available between the noise source and the receptor—in this case a park. Noise impacts occur when noise levels at sensitive receptor locations (such as parks) exceed one or more of the FTA construction noise impact criteria. Thus, surface construction activities would result in noise impacts at adjacent parks. Similarly, the parks listed in Table 7-1 that are located along the Second Avenue Subway alignment but not in immediate proximity to proposed surface construction activities are also within 750 feet of construction activities and have a clear line of sight to the proposed construction. Therefore, these parks, too, would experience noise impacts <u>during the construction phase for that geographic area</u>. In contrast, parks listed in Table 7-2 would have no line of sight to construction activities and thus would have no noise impacts.

As described in Chapter 12, existing background noise levels in Manhattan are already high throughout the corridor, and many daily activities (such as visiting parks) are undertaken in a noisy environment. Consequently, despite the significant adverse noise impacts that would occur at the parks cited above, the actual impact to park users would vary depending on the type and use of the park. For example, noise impacts would be more disruptive at passive open spaces and areas without physical separation from the adjacent construction. In contrast, noise impacts would not be as severe at active recreation areas. Measures to be employed to reduce noise impacts are described in Chapter 12. In addition, where practicable, parks adjacent to subway construction would be screened using site-appropriate design, such as brightly colored barriers at a children's facility. These barriers would be designed to minimize effects from construction noise, and would be attractively designed.

Two park spaces that would be adjacent or close to surface construction activities would not experience significant adverse impacts from the construction. Those parks are Triboro Plaza (Phase 1) and Peter Minuit Plaza (Phase 4). Near Triboro Plaza, the construction method to be used to create the project's main line tunnels has been refined since the publication of the SDEIS, and cut-and-cover activities in the park are no longer required. Instead, the tunnel would be constructed beneath the park, which could cause limited settlement but would not adversely

affect use of the park. In addition, if storage tracks are constructed beneath Second Avenue north of 125th Street, this would result in cut-and-cover construction adjacent to Triboro Plaza. However, this park area resembles a landscaped traffic triangle; it is not an inviting space for park users because of the absence of amenities and its proximity to a heavily used traffic corridor. Therefore, the increase in dust and noise and other construction-related disturbances would not result in a significant adverse impact to park users.

Similarly, while surface construction could occur adjacent to Peter Minuit Plaza, this park would also not experience significant adverse park impacts. Peter Minuit Plaza is currently being used to accommodate construction staging activities for the Whitehall Ferry Terminal reconstruction project. The park is surrounded by heavily traveled roadways on all sides and is effectively a traffic island with available seating (when not used for construction staging). The plaza is located more than 750 away from surface construction activities related to the Hanover Square Station. It would be located across Water Street from the site to be used for construction activities associated with an associated vent structure for the plaza's character as a traffic island, any effects from noise associated with constructing the vent facility would not result in a significant adverse impact to users of this park.

Despite efforts to screen adjacent parks from construction activities, several of the parks located along the alignment would experience increased noise and dust because of adjacent or nearby surface construction activities. Such impacts would be especially disruptive at parks with passive open spaces or with facilities for young children's play (Wagner Houses Playground in Phase 2, Stuyvesant Square in Phase 3, and St. James Triangle and Vietnam Veterans Plaza in Phase 4). Extensive efforts would be made by NYCT through its contractors to keep these parks free of construction debris and excessive dust during construction. The parks with active recreational facilities located adjacent to proposed construction are not expected to be affected as much because these facilities do not depend on a quiet setting. These include Harlem River Drive Park, Crack is Wack Playground, Wagner Pool, the eastern portions of Playground 96 and St. Vartan Park, and Fishbridge Garden. In addition, NYCT, through its contractors, would monitor noise and dust at parks adjacent to construction. If unforeseen noise and dust disturbances arise during construction, mitigation measures would be employed at parks adjacent to construction. Trees in both active and passive recreational spaces adjacent to construction may experience stress from dust or soil settlement resulting from underground construction. The health of all trees in parks adjacent to construction would be monitored and (to the extent practicable) maintained by NYCT through its contractors, and ongoing coordination with NYCDPR would continue throughout the construction phase.

GREENSTREETS AND BONUS PLAZAS

With respect to Greenstreets and bonus plazas, it is likely that several of these areas would also be affected during construction, <u>through the removal of trees and the creation of noise and dust</u> from adjacent construction activity. Greenstreets along the Second Avenue corridor <u>that could be affected include</u> the Greenstreet at 127th Street and Second Avenue (because of the construction of the proposed storage tracks north of 125th Street <u>in Phase 2</u>); the Greenstreet located on 66th Street between Second and Third Avenues (because of the proposed shaft site at this location <u>in Phase 1</u>); the Greenstreet at Second Avenue and Houston Street during Phase 3; and <u>the Greenstreets at Park Row and St. James Place and Park Row south of St. James Place (because of the need to construct the Chatham Square Station during Phase 4). In an improvement since the SDEIS, the Greenstreet at 124th Street and Second Avenue would no longer be affected by</u>

<u>construction activities related to the curve at 125th Street.</u> <u>NYCT has committed to replace any</u> trees removed from a Greenstreet during construction. <u>For any Greenstreets that would be</u> removed for more than three months (such as at 66th Street), NYCT would work with NYCDPR and NYCDOT to identify replacement Greenstreet sites nearby to be planted prior to the start of construction at the existing Greenstreet.

Any construction occurring within or adjacent to bonus plazas could temporarily prevent the public from using any park-like amenities (such as benches) that these spaces provide. To the extent that this occurs, such closures would be considered a temporary adverse impact. In addition, any surface construction adjacent to a bonus plaza would create a noise impact on these open spaces. Any construction requiring closure of a bonus plaza would occur in consultation with NYCDCP, which administers these sites. Any plaza surfaces disturbed by subway construction activities would be reconstructed upon the completion of construction.

E. PERMANENT IMPACTS OF THE PROJECT ALTERNATIVES

After completion of the Second Avenue Subway, all park spaces would be restored in consultation with NYCDPR, and there would be few remaining impacts to the parks. However, five public open spaces could be permanently affected by the presence of subway entrances or ancillary facilities such as vents within these parks¹. <u>Based on preliminary project plans, these include:</u>

- Sara D. Roosevelt Park (emergency egress for Grand Street Station);
- Pearl Street Playground (entrance for Seaport Station);
- Fulton Street Plaza (entrance to Seaport Station);
- <u>Wall Street Triangle (entrance to Hanover Square Station); and</u>
- Coenties Slip (entrance to Hanover Square Station).

<u>Subway entrances within Playground 96 and Kimlau Square, which were described in the SDEIS, are no longer under consideration. If any of these open spaces listed above were to be used for these purposes, a permanent loss of parkland—a significant adverse impact—would result. As mitigation for the loss of parkland, NYCT would work to design subway facilities located in parks to complement the park environment, wherever practicable. Additionally, in the case of Pearl Street Playground, NYCT will work with NYCDOT and the community to enlarge the park following construction by closing a portion of Pearl Street as described above. Finally, mitigation for the long-term use of parkland during construction could also include the identification of replacement park space elsewhere in the city.</u>

As noted above, the permanent or long-term use <u>for construction</u> of any publicly-owned, <u>mapped</u> parkland, including those parks under the jurisdiction of NYCDPR (currently Playground 96, <u>St.</u> <u>Vartan Park, First Park,</u> Sara D. Roosevelt Park, <u>and Pearl Street Playground</u>), would require approval from the New York State Legislature for alienation of City-owned parkland. <u>In addition, a portion of an underground ancillary facility for the Houston Street Station would also be located under First Park, and tunneling could occur beneath several parks (Triboro Plaza, Dag Hammarskjold Plaza [possible underpinning], Stuyvesant Square, Sara D. Roosevelt Park, and <u>Peter Minuit Plaza).</u></u>

¹ This list does not include parks where subway elements would be located entirely below ground with no surface penetrations or other impacts.

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When construction is completed, trees would be replanted in affected parks to the extent feasible in consultation with NYCDPR. Despite the replanting, the loss of the <u>approximately 90 original</u> trees—portions of two rows lining the park <u>and some interior trees</u>—that must be removed in Sara D. Roosevelt Park would still be noticeable, and would create significant visual and neighborhood character impacts as described in Chapter 6 of the <u>FEIS</u>, "Social and Economic Conditions."

Entrances or ancillary facilities could potentially be located within Greenstreets or bonus plazas. Neighborhood character impacts related to the loss of this visual amenity would occur unless new Greenstreets could be constructed in close proximity to their original locations. NYCT would consult with the NYCDCP regarding the placement of any subway <u>entrances or ancillary</u> facilities within bonus plazas to maximize the public usefulness of these sites.

F. SUMMARY OF SIGNIFICANT ADVERSE IMPACTS AND MITIGATION MEASURES

SIGNIFICANT ADVERSE IMPACTS

- <u>During construction</u>, significant temporary adverse impacts would result from direct use of and removal of recreation facilities <u>from the western portion of</u> Playground 96 (<u>Phase 1</u>), <u>western portion of</u> St. Vartan Park (<u>Phase 3</u>), <u>a portion of</u> Sara D. Roosevelt Park (<u>Phase 4</u>), <u>Kimlau Square (Phase 4</u>), <u>Pearl Street Playground (Phase 4</u>), <u>Fulton Street Plaza (Phase 4</u>), <u>and Coenties Slip (Phase 4</u>) during construction.
- Parks located directly within 750 feet of surface construction, which includes all parks adjacent to the Second Avenue Subway alignment, would experience temporary noise impacts during the relevant construction phase, due to exceedances of FTA noise criteria.
- <u>During all construction phases</u>, parks in immediate proximity to surface construction activities would experience adverse impacts resulting from access limitations or construction disturbances, such as increased noise and visual disturbances.
- Removal of trees at Playground 96 (<u>Phase 1</u>), St. Vartan Park (<u>Phase 3</u>), <u>First Park (Phase 3</u>), <u>and Kimlau Square</u>, <u>Pearl Street Playground</u>, <u>Fulton Street Plaza</u>, <u>Coenties Slip (Phase 4)</u>, <u>as well as at</u> various Greenstreets, and bonus plazas <u>during any construction phase</u> would constitute a temporary adverse impact.
- Removal of a portion of two rows of trees <u>and some interior trees</u> (approximately <u>90</u> trees) at Sara D. Roosevelt Park <u>during Phase 4</u> would be a permanent impact until the trees mature to the comparative size of the existing trees.
- Bonus plazas could experience temporary significant adverse impacts if they were used during construction and could not be publicly accessed or are located directly within 750 feet of surface construction, and would thus have noise impacts.
- Subway entrances could be located in <u>Pearl Street Playground</u>, Fulton Street Plaza, <u>Wall Street</u> <u>Triangle</u>, and Coenties Slip. <u>All of these entrances would be built during Phase 4</u>, <u>but would</u> <u>remain as permanent subway elements</u>.
- <u>Emergency exits</u> could be located <u>under First Park and underneath or in Sara D. Roosevelt.</u> Both of these facilities would be built during Phase 3 but would be permanent features.

MITIGATION MEASURES

- NYCT, through its contractors, will erect screen walls between construction areas and adjacent sensitive uses and portions of parks not used for construction activities.
- NYCT, through its contractors, <u>will erect attractive sound and safety barriers</u> at Playground 96, <u>during Phase 1, at</u> St. Vartan Park <u>during Phase 3, and at Sara D. Roosevelt Park in Phase 4 to</u> reduce the effects of noise associated with construction activities on the adjacent park areas <u>and other uses.</u>
- NYCT, through its contractors, will construct light screens, employ best management practices to control dust, and use specially quieted construction equipment wherever practicable to separate parks from construction activities.
- <u>NYCT will develop a forestry plan for all affected parks that will be subject to NYCDPR review and approval. In accordance with the plan, trees will be replaced prior to completion of each phase according to NYCDPR specifications for tree protection and replacement. All trees under 4-inch dbh would be replaced according to the Basal Area Replacement Formula, which is designed to ensure that replacement trees are of equal size to removed trees. If a removed tree is larger than 4-inch dbh (the limit of transplantable trees) NYCT, through its contractors, will plant multiple smaller trees, the basal areas of which add up to the basal area of the original tree, as replacement trees. Several of the replacement trees will be replanted in the vicinity of the trees to be removed prior to construction. The forestry plan will be included in relevant contract specifications to protect trees within parks.</u>
- <u>After completion of each construction phase</u>, NYCT will reconstruct spaces damaged during construction <u>of that phase</u> in coordination with NYCDPR.
- <u>Where parks or portions of parks would be displaced during construction, N</u>YCT will work with NYCDPR to <u>identify the mitigation plan most compatible with each neighborhood's</u> <u>parks and open spaces. For St. Vartan Park, this would consist of identifying a temporary</u> replacement <u>park or wetlands, as per the requirements of Section 6(f). This replacement park</u> would be created prior to any construction of Phase 3.
- NYCT will work with the <u>NYCDPR and Community Board 3</u> to design reconfigured recreational facilities in the portions of Sara D. Roosevelt Park that remain publicly accessible during construction of <u>Phase 4</u>.
- NYCT will work with NYCDPR to design any permanent features located in New York City parks to ensure compatibility with park character.