

**X727.07 Rehabilitation/Replacement of Five (5) Cross Bronx
Expressway (I-95) Bridges between Boston Road and Rosedale
Avenue**

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The New York State Department of Transportation (NYSDOT), in cooperation with the Federal Highway Administration (FHWA), has prepared this Draft Design Report/Environmental Assessment (DDR/EA) for the Rehabilitation/Replacement of Five (5) Cross Bronx Expressway (CBE, I-95) Bridges between Boston Road and Rosedale Avenue Project (hereafter, “the Project”) in accordance with the National Environmental Policy Act (NEPA); the FHWA *Environmental Impact and Related Procedures* (23 CFR 771, effective July 3, 2025); the Fiscal Responsibility Act of 2023 (Pub. L. No. 118-5, 137 Stat. 10); and the NYSDOT Project Development Manual. The Project is federally and state funded. The FHWA is the Federal Lead Agency and the NYSDOT is the Joint Lead Agency and Project Sponsor.

The Project is classified under NEPA as an action requiring the preparation of an Environmental Assessment (EA) to determine whether the Project will result in significant impacts to the environment. The FHWA and NYSDOT have advanced the Project through the EA process in consideration of public and agency comments received about the Project.

Following a public comment period and public hearing, the EA process will conclude with either a Finding of No Significant Impact (FONSI) under NEPA or a determination that an Environmental Impact Statement (EIS) is required.

S.1 Project Location

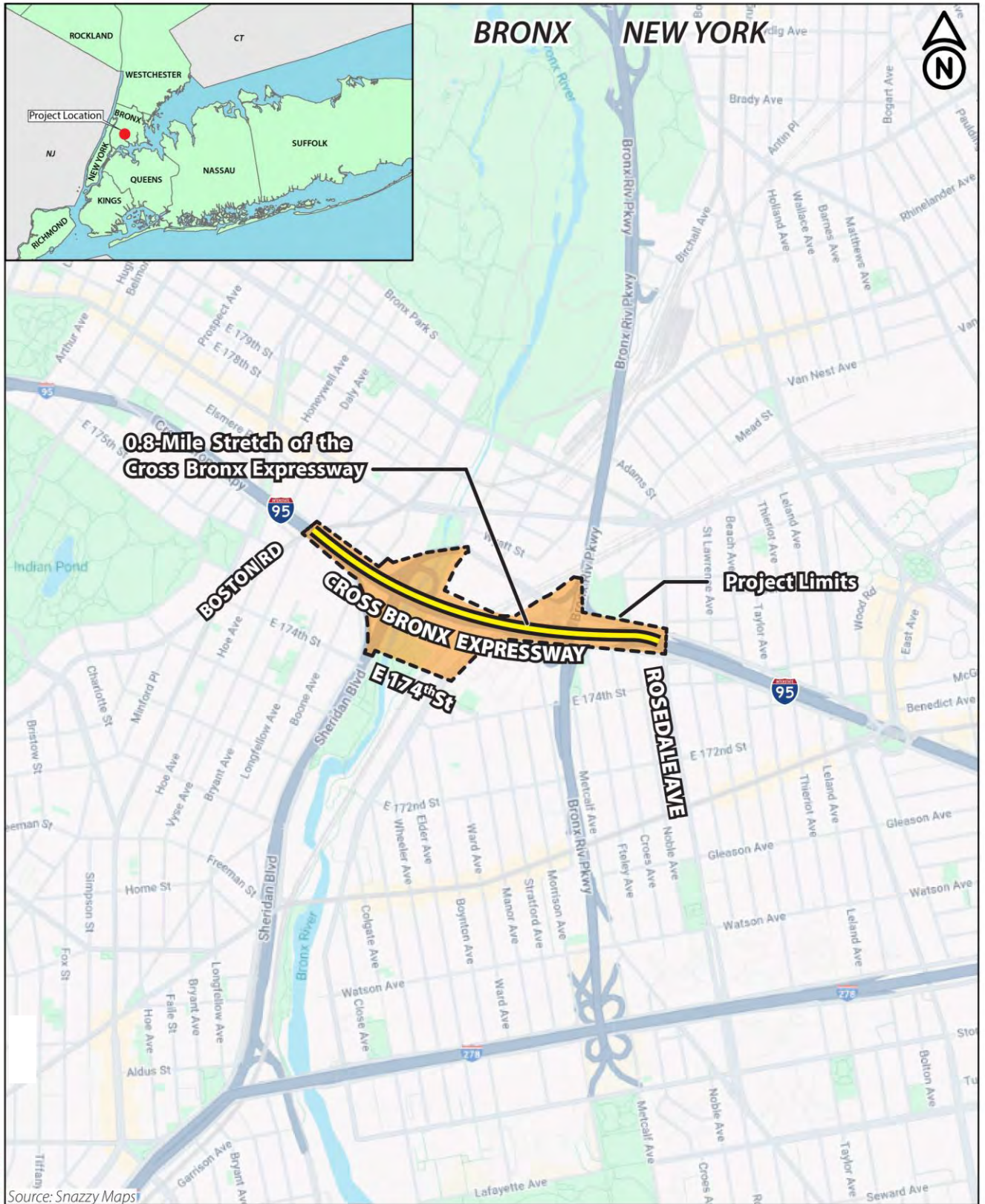
The Project is located in the central portion of the Bronx, Bronx County, New York, just south of the Bronx Zoo, along an approximately 0.8-mile elevated segment of the CBE (I-95). The project limits (limits of work) extend from Boston Road on the west to Rosedale Avenue on the east, and from East 174th Street on the south to East 177th Street on the north (See **Figure S-1: Project Location Map**). The five bridges along this elevated portion of the CBE include the CBE over West Farms Road, (Bridge Identification Number {BIN}1075559), the CBE over Sheridan Boulevard, Bronx River Avenue, Amtrak, and the Bronx River (BIN 1066419), the CBE over the Bronx River Parkway (BIN 1067089), the CBE east to Sheridan Boulevard South (Exit 4A) ramp over West Farms Road (Ramp LCH) (BIN 1076270), and Boston Road over the CBE (BIN 1066407). A sixth bridge, Sheridan Boulevard over the Bronx River (BIN 2242399) is included in the project limits due to proposed improvements to Sheridan Boulevard that would impact traffic flow onto the bridge and necessitate operational and geometric improvements to the structure.

The general study area for the Project extends a ½ mile from the project limits. The general study area primarily consists of transportation/utilities, residential, retail/commercial, warehouse/storage, light industrial uses, and some open space. The Bronx River runs north-south through the middle of the general study area. (See **Figure S-2: Existing Roadway**)

S.2 Project Purpose, Objectives and Needs

S.2.1 Project Purpose and Objectives

The purpose of the Project is to address geometric and structural deficiencies of five bridges between Boston Road and Rosedale Avenue and improve community multi-modal connectivity within the project limits.



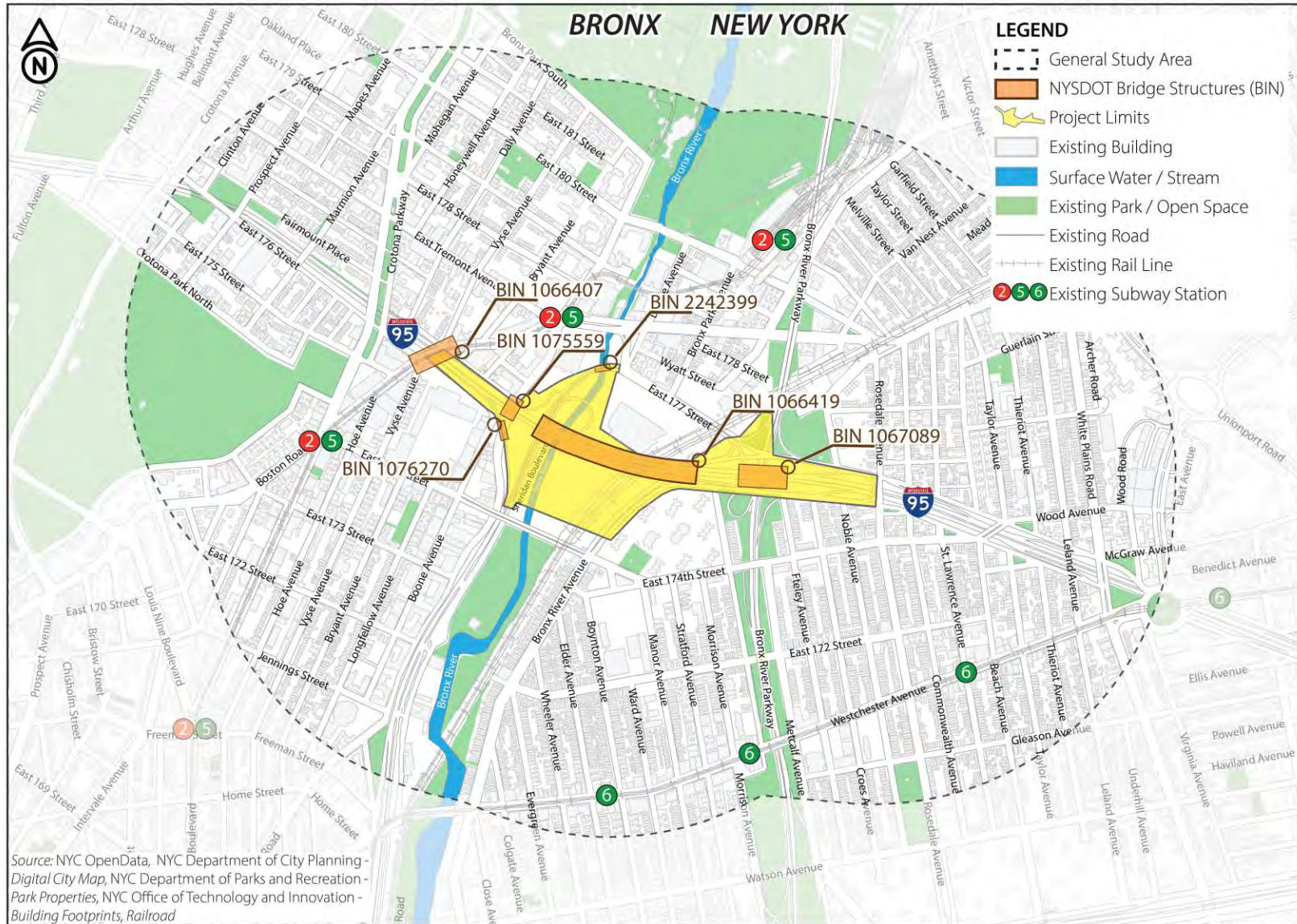
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Source: Snazzy Maps

X727.07 - Rehabilitation/Replacement of Five (5) Cross Bronx Expressway (I-95) Bridges between Boston Road and Rosedale Avenue



Project Location Figure S-1



X727.07 - Rehabilitation/Replacement of Five (5) Cross Bronx Expressway (I-95) Bridges between Boston Road and Rosedale Avenue



Existing Roadway
Figure S-2

The following objectives have been established to further refine the purpose of the Project:

- Address structural deficiencies, including seismic performance, and achieve at least 75 years of service life for the bridges in this Project, except for Boston Road over CBE. The service life for the Boston Road bridge is to be extended 40 years to minimize the overall life cycle costs of the bridge;
- Address operational and geometric deficiencies within this section of the CBE to improve traffic flow and reduce the number of weaving movements;
- Improve the vehicular connection between the southbound Bronx River Parkway (BRP) to the westbound CBE; and
- Improve multimodal accessibility within the project limits to address identified safety deficiencies and community connectivity.

S.2.2 Project Needs

The Project needs relate to structural, seismic, operational, and geometric deficiencies; congestion and vehicular connectivity; public transportation access; and pedestrian/bicycle connectivity. The Project purpose and objectives were developed based on these identified needs.

Structural Deficiencies

The five CBE mainline bridges included in the Project were built as part of several CBE construction projects between 1947 and 1958 and require repairs, major rehabilitation, or replacement. The bridges are exposed to deicing salts in the winter, which contribute to corrosion and deterioration of the steel and concrete elements in the substructure and superstructure, and include roadside safety nonstandard features¹. Recent bridge inspection reports indicate deck slabs exhibiting spalling; cracking, exposed reinforcement; isolated corrosion of the superstructures and substructures; and impact damage to the bridge as a result of nonstandard vertical clearance over the CBE roadway. Therefore, there is a need to address the structural deficiencies of the existing bridges. Below is a summary of the NYSDOT's General Condition Recommendation of each structure, which rates the existing condition on a scale from 1 to 7 where 1 indicates the structure is exhibiting extensive deterioration and there is little to no remaining capacity to carry traffic and 7 indicates the structure is new or without deterioration other than minor deterioration such as paint flaking. NYSDOT defines a deficient bridge as one with a State condition rating less than 5.

¹ Nonstandard Feature: A non-standard feature is created when an established design criteria set by NYSDOT for a critical design element is not met.

Bridge Identification Number (BIN)	BIN 1075559	BIN 1066419	BIN 1076270	BIN 1067089	BIN 1066407
Year Built	1951	1951	1951	1947	1958
NYSDOT Condition Rating	5	4	5	5	4

Seismic Deficiencies

The five CBE mainline bridges were designed to the seismic codes in place approximately 70 years ago and no longer meet current seismic design requirements². The five bridges are supported on high rocker bearings that tilt in the direction of the bridge movement. This type of bearing is considered obsolete and does not meet current seismic design requirements³. More specifically, seismic vulnerability assessments⁴ indicate that three of the five bridges are seismically vulnerable. Therefore, there is a need to address seismic deficiencies.

Geometric Deficiencies

The bridges and roadways within the project limits have nonstandard and nonconforming⁵ geometric design features including low vertical clearances, poor stopping sight distances, minimal shoulder widths, nonstandard horizontal curvature, and nonstandard acceleration lane lengths that contribute to frequent crashes, congestion, and delays. In particular, nonstandard sight distances, short acceleration lane lengths and narrow shoulders along the CBE mainline contribute to a substantial portion of recorded crashes in both the eastbound (271 crashes between 1/19/2019 and 12/31/2021) and westbound (302 crashes between 1/19/2019 and 12/31/2021) directions. These crash patterns were validated and found consistent with recent crash data. Therefore, there is a need to address the identified geometric deficiencies within the project limits.

Congestion due to lack of a direct connection between southbound BRP and westbound CBE

The lack of an existing direct connection between the southbound BRP and the westbound CBE results in traffic congestion on local streets and the CBE service roads. The current travel movement utilizes BRP Exit 4, which sends traffic to the CBE South Service Road, across the Rosedale Avenue bridge over the CBE, and ultimately to the westbound on-ramp to CBE at Rosedale Avenue.

² Load and Resistance Factor Design (LRFD) Bridge Design Specifications by American Association of State Highway and Transportation Officials (AASHTO), December 2024 10th Edition, and as adopted by NYSDOT

³ FHWA Seismic Retrofitting Manual for Highway Structures (2006)

⁴ This procedure is performed in accordance with the Bridge Safety Assurance Seismic Vulnerability Assessment Manual by NYSDOT as part of the NYSDOT seismic evaluation and retrofit program for highway bridges which is intended to reduce the vulnerability of the state's bridges to failures caused by earthquakes.

⁵ Nonconforming feature: In addition to the *critical design elements*, there are other design elements with established values or parameters that must be considered when scoping and designing a project. These other elements are important because they can have a considerable effect on the cost, scope, schedule and quality of a project. Any decision to vary from recommended values or accepted practices for these elements needs to be explained and documented as nonconforming features.

However, many vehicles avoid this movement by utilizing BRP Exit 5 to East 177th Street, then to southbound Sheridan Boulevard, and ultimately to the westbound CBE on-ramp. This adds traffic volume to East 177th Street and creates congestion at the signalized intersection at the main entrance to the MTA West Farms Bus Depot, impacting local street and MTA bus depot operations. Therefore, there is a need for a direct connection to address documented congestion on local streets due to through traffic between the BRP and CBE.

Improve Public Transportation Access and Pedestrian/Bicycle Connectivity

There is limited access to public transportation and limited pedestrian/bicycle connections to the Bronx River, Crotona, West Farms, Parkchester, and Van Nest communities on both sides of the Bronx River. Given this limited public transportation access, the only option for many residents in the general study area for crossing the Bronx River, Amtrak/CSX railroad corridor and MTA Bus Depot is to utilize East 177th Street or East Tremont Avenue on the north side of the CBE and/or East 174th Street on the south side of the CBE corridor⁶. Existing pedestrian connections lack safe crossings at high volume traffic intersections. At the East 177th Street/Sheridan Boulevard/Bronx River Greenway intersection, there is no crossing or facilities for bicycles, and the pedestrians have to cross the MTA West Farms Bus Depot entrance and then East 177th Street to access areas to the north. At the East 177th Street/Bronx River Avenue/Metcalf Avenue intersection, pedestrians are directed across the BRP Exit 5 off-ramp and only have access to the south via Metcalf Avenue and an unprotected crossing of the CBE South Service Road. Therefore, there is a need to improve public transportation access and pedestrian connectivity.

S.3 Project Alternatives

S.3.1 No Build Alternative

The No Build Alternative assumes no improvements would be made to the CBE corridor within the Project limits other than those planned by others or implemented by routine maintenance. Although the No Build Alternative does not address the identified needs or meet the stated purpose and objectives for the Project, it serves as the baseline condition against which the potential effects of the Build Alternatives are assessed.

S.3.2 Build Alternatives

The following three Alternatives were developed to address the Project's needs and objectives (See **Figures S-3a – S-3e**). Potential alternatives and build alternative options dismissed are discussed in **Section 3.1**.

Alternative A - Bridge and Ramp Improvements With Shared Use Path along CBE

Alternative A would include the complete replacement of the four CBE bridges and replacement of the deck and bearings, bridge steel repairs/strengthening, and concrete repairs to substructures at Boston Road over the CBE bridge; improvements to the geometry including profile adjustments, vertical clearances, cross slopes, sight distances and shoulder widths to the CBE mainline, approach slab and deck overlay with potential substructure repairs at Sheridan Boulevard over the Bronx River;

⁶ This need to improve community connectivity is also identified in the *Reimagine the Cross Bronx Study*.

a new ramp from the southbound BRP to the westbound CBE; and improvements to westbound on-ramps to lengthen existing acceleration lanes. Alternative A also includes a shared-use path (SUP) along the CBE. The SUP would provide a connection over the Bronx River.

Alternative B - Bridge and Ramp Improvements With Shared Use Path along CBE and Greenway Connection

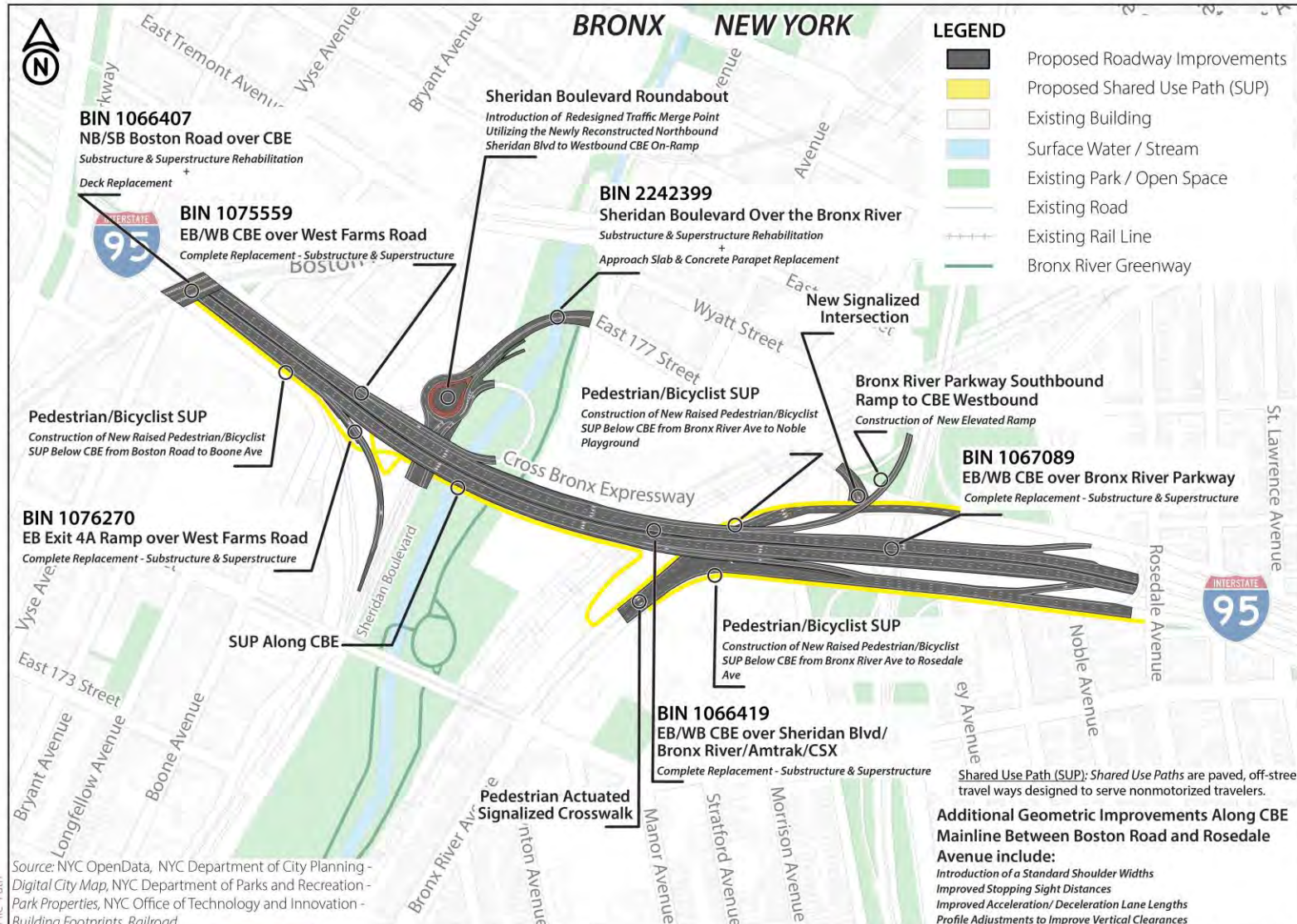
Alternative B includes all of the improvements detailed above in Alternative A, as well as a connection to the Bronx River Greenway from the SUP along the CBE.

Alternative C - Bridge and Ramp Improvements Without Shared Use Path along CBE

Alternative C includes all of the improvements detailed above in Alternative A but without the SUP along the CBE.

Key Geometric elements of Alternatives A, B, and C:

- Correcting the superelevation on the CBE and associated ramps by reconstructing each facility.
- Upgrading the inside shoulder along the CBE to 2 feet in the westbound direction and 7 feet in the eastbound direction from West Farms Road to Bronx River Avenue, upgrading the inside shoulders to 4 feet from Bronx River Avenue to Rosedale Avenue, and the outside shoulders to 10 feet from West Farms Road to Rosedale Avenue. The nonstandard horizontal sight distance on the horizontal curve on the viaduct would be improved to 531 feet from 430 feet, thus meeting the NYSDOT Highway Design Manual (HDM) Chapter 2 standards.
- Retaining a nonstandard grade on the CBE from the BRP to Rosedale Avenue, along the CBE, and retaining a nonstandard horizontal stopping sight distance on Sheridan Boulevard over the Bronx River. Justification for retaining these nonstandard features is included in **Appendix F**.
- Realigning the eastbound CBE Exit 4A ramp (Ramp LCH) to improve horizontal sight distance and accommodate the proposed geometry.
- Improving the eastbound CBE Exit 4B ramp (Ramp ES) deceleration lane length to meet the American Association of State Highways and Transportation Officials (AASHTO) “A Policy on Geometric Design of Highways and Streets,” 7th Edition, 2018, Chapter 10 standards.



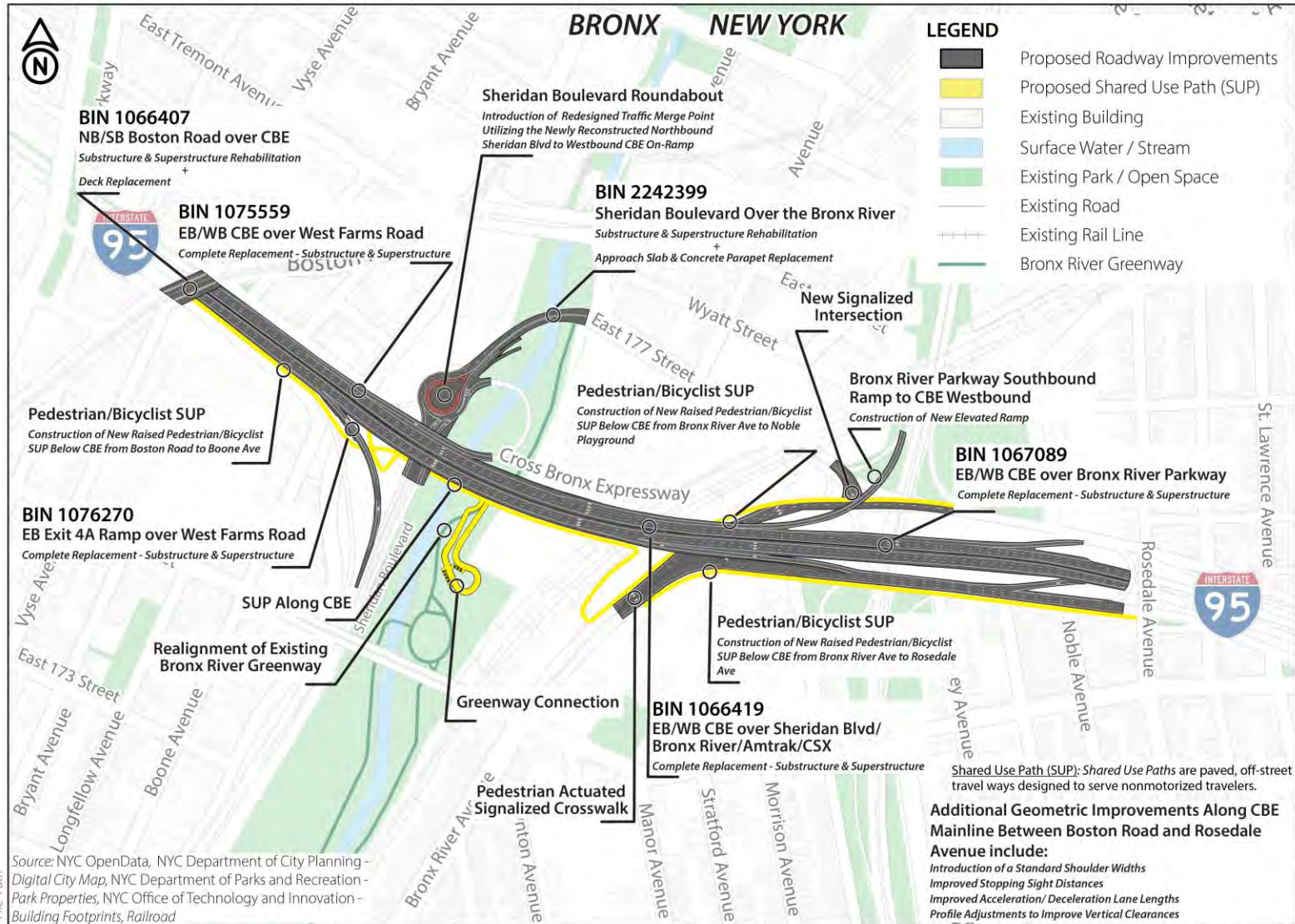
Source: NYC OpenData, NYC Department of City Planning - Digital City Map, NYC Department of Parks and Recreation - Park Properties, NYC Office of Technology and Innovation - Building Footprints, Railroad

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Shared Use Path (SUP): Shared Use Paths are paved, off-street travel ways designed to serve nonmotorized travelers.

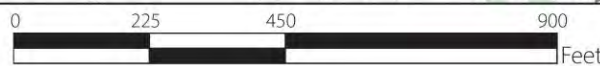
Additional Geometric Improvements Along CBE Mainline Between Boston Road and Rosedale Avenue include:
 Introduction of a Standard Shoulder Widths
 Improved Stopping Sight Distances
 Improved Acceleration/ Deceleration Lane Lengths
 Profile Adjustments to Improve Vertical Clearances

Alternative A
 Bridge and Ramp Improvements with SUP along CBE
 Figure S-3a

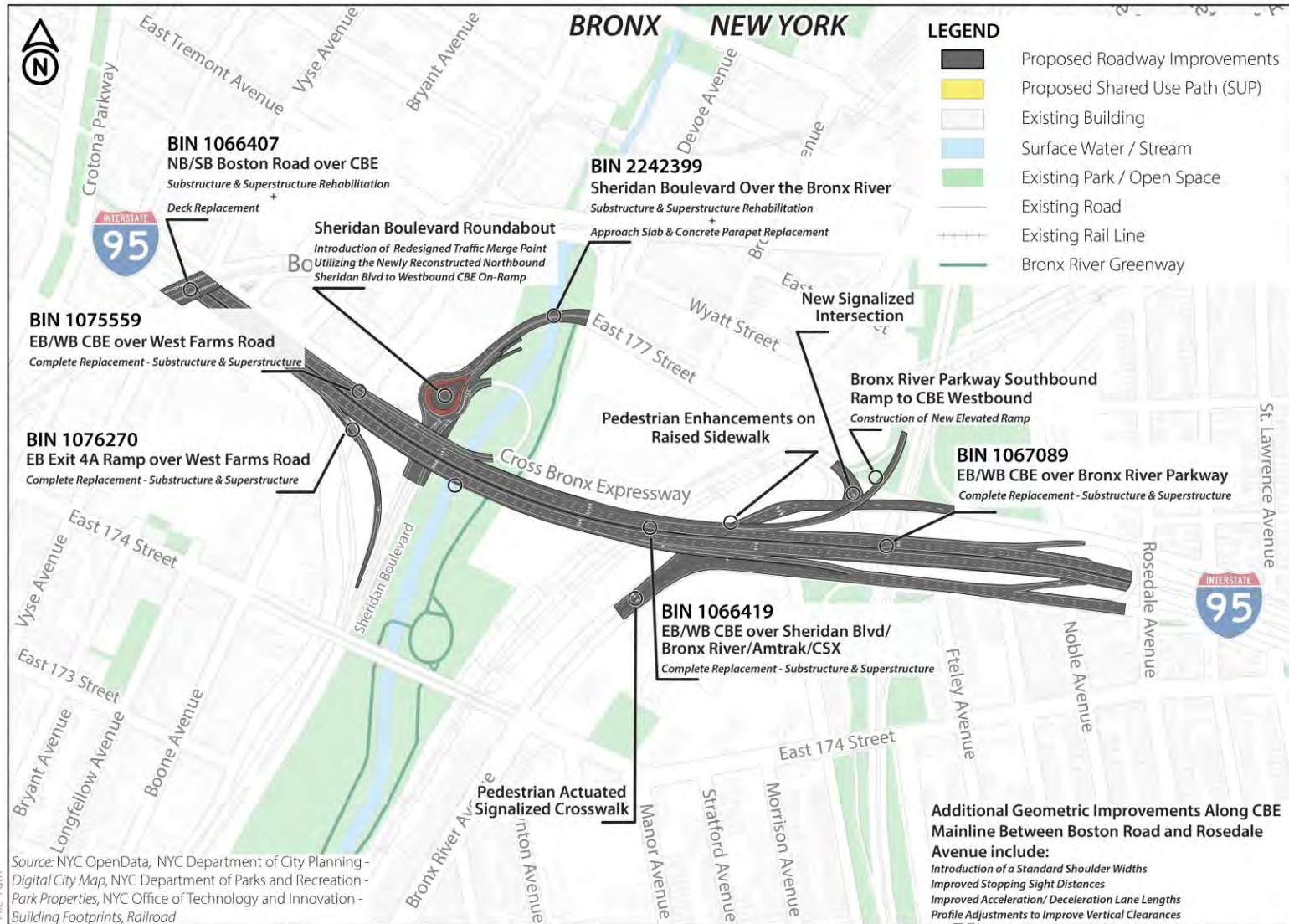


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X727.07 - Rehabilitation/Replacement of Five (5) Cross Bronx Expressway (I-95) Bridges between Boston Road and Rosedale Avenue



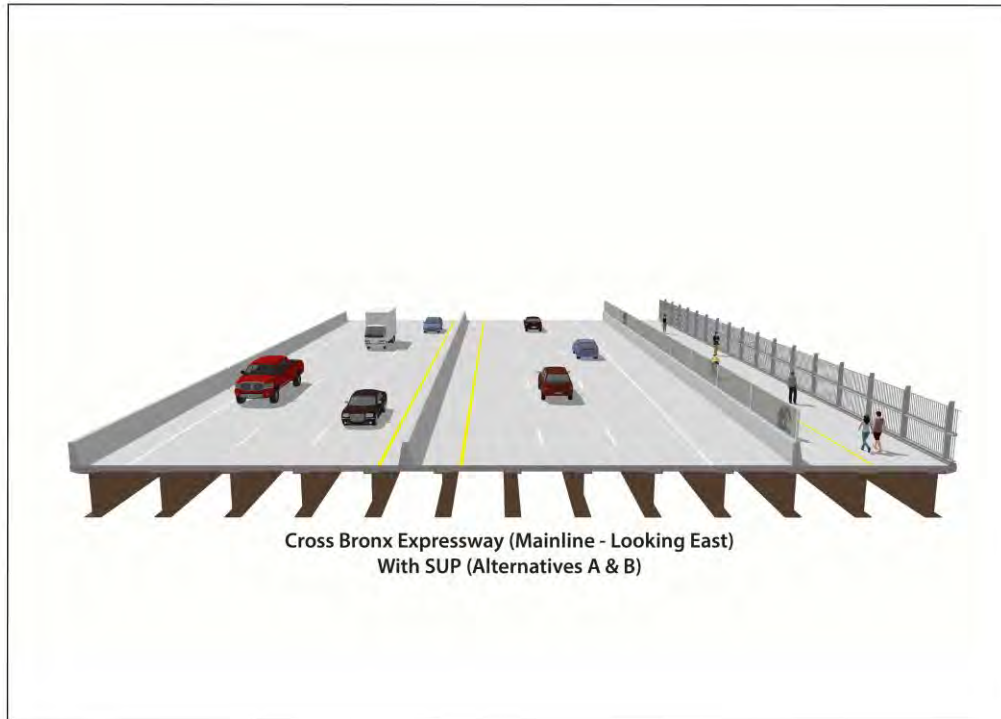
Alternative B
 Bridge and Ramp Improvements with SUP along CBE and Greenway Connection
 Figure S-3b



Source: NYC OpenData, NYC Department of City Planning - Digital City Map, NYC Department of Parks and Recreation - Park Properties, NYC Office of Technology and Innovation - Building Footprints, Railroad

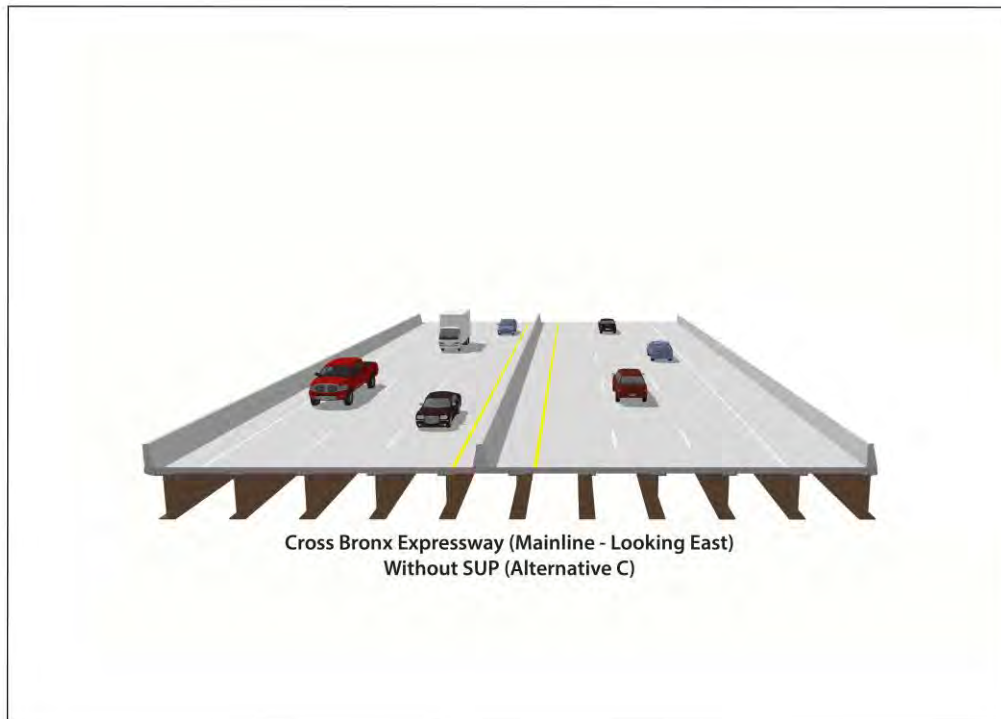
X727.07 - Rehabilitation/Replacement of Five (5) Cross Bronx Expressway (I-95) Bridges between Boston Road and Rosedale Avenue

Alternative C
 Bridge and Ramp Improvements without SUP along CBE
 Figure S-3c



X727.07 - Rehabilitation/Replacement of Five (5) Cross Bronx Expressway (I-95) Bridges between Boston Road and Rosedale Avenue

Cross Bronx Expressway Mainline With Shared-Use Path Figure S-3d



X727.07 - Rehabilitation/Replacement of Five (5) Cross Bronx Expressway (I-95) Bridges between Boston Road and Rosedale Avenue

Cross Bronx Expressway Mainline Without Shared-Use Path Figure S-3e

- Reconstructing the eastbound CBE entrance ramp from the South Service Road to two lanes at the gore⁷ providing a choice lane decision for eastbound movements to improve merging/weaving operations at this location. The two lanes would transition back to one lane where adjacent to the CBE eastbound lanes immediately west of Rosedale Avenue.
- Providing a new ramp from southbound BRP Exit 5 to westbound CBE spanning over East 177th Street and the CBE North Service Road.
- Lengthening the existing CBE North Service Road near Rosedale Avenue entrance ramp (Ramp EN) acceleration lane to meet merging standards before traffic enters the CBE mainline.
- Modifying the Sheridan Boulevard interchange to eliminate the southbound Sheridan Boulevard to westbound CBE on-ramp (Ramp NW) and introducing a new Sheridan Boulevard roundabout to combine the northbound and southbound Sheridan Boulevard exit traffic utilizing the newly reconstructed northbound Sheridan Boulevard to westbound CBE on-ramp (Ramp OCH). The new roundabout would include two separated northbound approach lanes with the outer lane exiting to westbound CBE. This outer exit lane would bypass the roundabout and yield to exiting traffic from the roundabout making the same movement to the westbound CBE. The southbound approach would consist of two lanes with the outside lane continuing south of the roundabout and the inside lane looping around the roundabout to westbound CBE.
- Rehabilitating the Sheridan Boulevard bridge over the Bronx River (BIN 2242399) to accommodate two lanes in the northbound direction approaching the East 177th Street/Devoe Avenue intersection by removing the concrete median barrier and restriping the roadway with a double yellow median line.
- Enhancing the East 177th Street and Bronx River Avenue/CBE North Service Road intersection to a signalized intersection at Metcalf Avenue. The north leg would provide a southbound thru lane to Metcalf Avenue, a southbound right-turn lane to Bronx River Avenue, and a northbound receiving lane on East 177th Street. The east leg would provide a westbound thru-left movement lane to Metcalf Avenue and Bronx River Avenue, and a westbound thru-right movement lane to East 177th Street and Bronx River Avenue. A pedestrian actuated signal would be installed at the northern leg of this intersection, ensuring a safe crossing for pedestrians and bicyclists between the northbound and southbound lanes. The northernly crossing would also include a refuge splitter island, marked crosswalks and detectable warning surfaces at the curb ramps.
- Utilizing staged construction⁸ and would maintain all CBE travel lanes during peak hours as determined by NYCDOT's Office of Construction Mitigation and Coordination (OCMC).

Key Geometric Improvements for Alternatives A and B:

- Constructing a 19-foot wide raised pedestrian/bicyclist SUP below the CBE on the west side of Bronx River Avenue from south of the CBE to the existing pedestrian actuated signalized on-ramp

⁷ Gore: area located between the main roadway and the ramp just beyond where the ramp branches from the main roadway

⁸ Staged Construction: construction of a facility by phases in a sequential manner based on the construction elements and maintenance and protection of traffic requirements

from the CBE North Service Road to Bronx River Parkway northbound just south of Noble Playground.

- Enhancing the CBE South Service Road from Bronx River Avenue to Rosedale Avenue to provide a 12-foot wide raised pedestrian/bicyclist SUP on the south side while maintaining the existing vehicular lane configuration.
- Enhancing East 176th Street from Boston Road to Boone Avenue to provide a 13-foot wide raised pedestrian/bicyclist SUP on the north side while maintaining one vehicular lane, one parking lane and a 5-foot wide raised sidewalk on the south side.

Key Geometric Improvements for Alternative B:

- Construction of a raised ADA compliant pedestrian and bicyclist connection immediately west of the MTA West Farms Bus Depot parking lot to the Bronx River Greenway. The direct connection would extend to the southern limit of the parking lot, then loop down to the Bronx River Greenway via ADA grades with tiered retaining walls. Stair options are provided for non-ADA users.

Key Geometric Improvements for Alternative C:

- Enhancing the sidewalk on the CBE South Service Road from Bronx River Avenue to Rosedale Avenue while maintaining the existing vehicular lane configuration.
- Enhancing the sidewalk on the west side of Bronx River Avenue from south of the CBE to the existing pedestrian actuated signalized on-ramp from the CBE North Service Road to Bronx River Parkway northbound just south of Noble Playground.

Operational Improvements for Alternatives A, B, and C:

- Providing breakdown shoulders on the CBE mainline and conforming acceleration and deceleration lane lengths for ramps.
- The introduction of the roundabout on Sheridan Boulevard eliminates successive on-ramps in close proximity and provides conforming acceleration lane length for Sheridan Boulevard on-ramp movement.
- Providing direct vehicular movement from southbound Bronx River Parkway to westbound CBE with conforming acceleration lane length.
- Improving the westbound CBE on-ramps in the general study area to provide longer merging distances and reduce conflicts at merging locations.

Control of Access for Alternatives A, B, and C:

- Control of access, or the degree of restriction on entry and exit points to a roadway, would meet the criteria in NYSDOT's HDM Chapter 2 for Other Freeways. The entrance points for the Sheridan Boulevard and CBE interchange are proposed to be changed and a new exit point off the

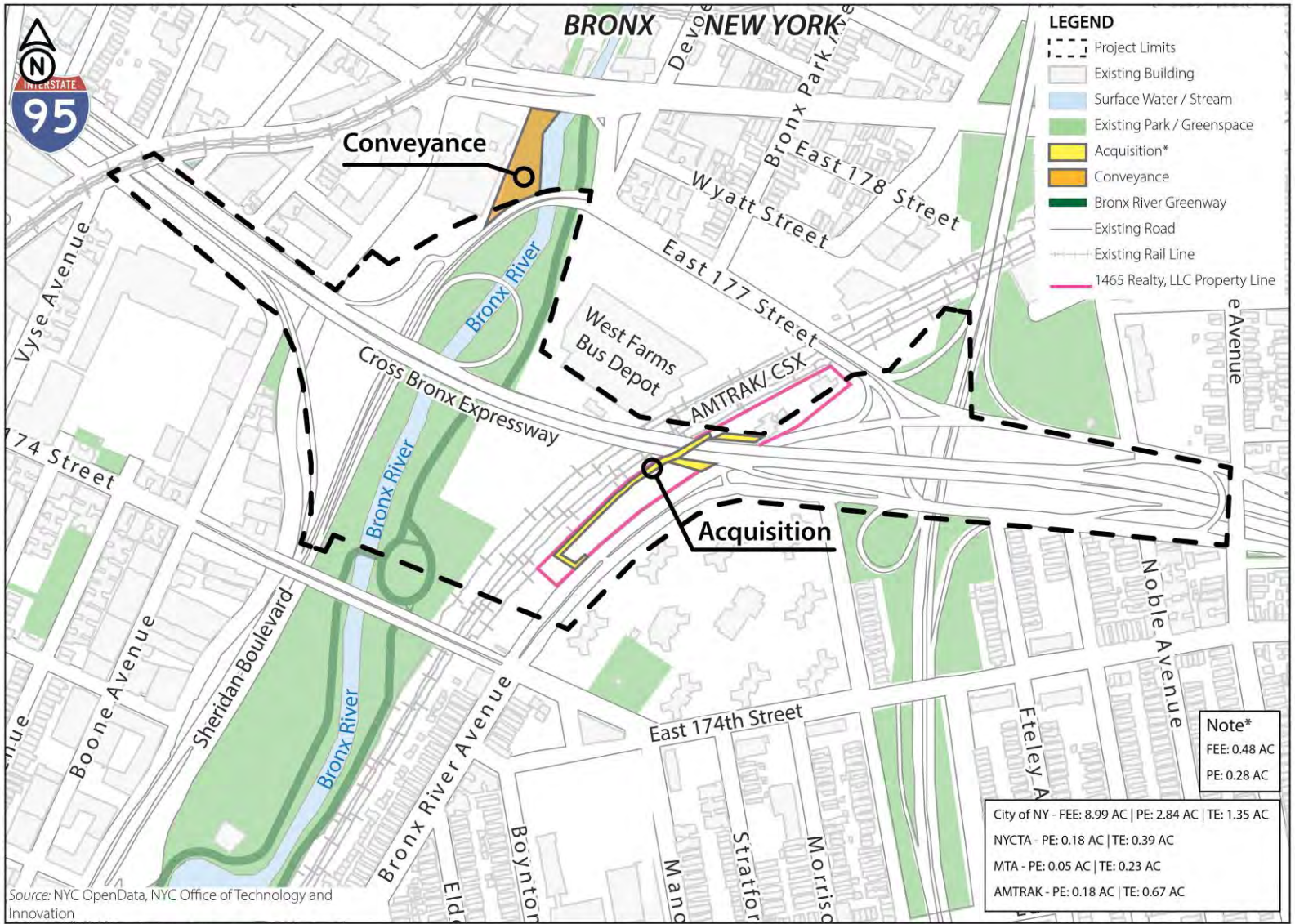
southbound BRP and new entrance point to the westbound CBE is proposed with the Alternatives A, B and C requiring access modifications to the two roadways. The Access Modification Report for the Project is included in **Appendix H1**.

Right of Way (ROW) for Alternatives A, B, and C: (See **Figures S-4a and S-4b** for acquisitions and conveyances)

- The Project would require land acquisitions and permanent and temporary easements. Various ROW title transfers or clarification acquisitions between the City of New York and NYSDOT would be required. Land acquisitions for the existing and proposed walls supporting or protecting the CBE would be required. Permanent easements would be required for features over local roadways, existing and proposed wall footings on local roadways from the City of New York and 1465 Realty LLC for future maintenance, and the MTA West Farms Bus Depot. Temporary easements would also be required for construction staging areas.
- A commercial property (1465 Realty LLC) between the Amtrak/CSX corridor and Bronx River Avenue would require partial land acquisitions. The property would be reconfigured to maintain business operations including maintaining the existing north-south access road within the property and existing driveway access for Alternatives A, B or C. Alternatives A and B would require additional reconfiguring of the parking along the southern limits of the concrete plant operation. Coordination with the property owner is ongoing and will continue through final design.
- The parcel of land bound by P.S. 214, East Tremont Avenue, the Bronx River and Sheridan Boulevard would be conveyed to the New York City Department of Parks and Recreation (NYCDPR) for the Drew Gardens community garden.
- In accordance with the federal Highway Beautification Act and NYS Signs Program, billboards located within the ROW are generally not permitted and may require removal or relocation.

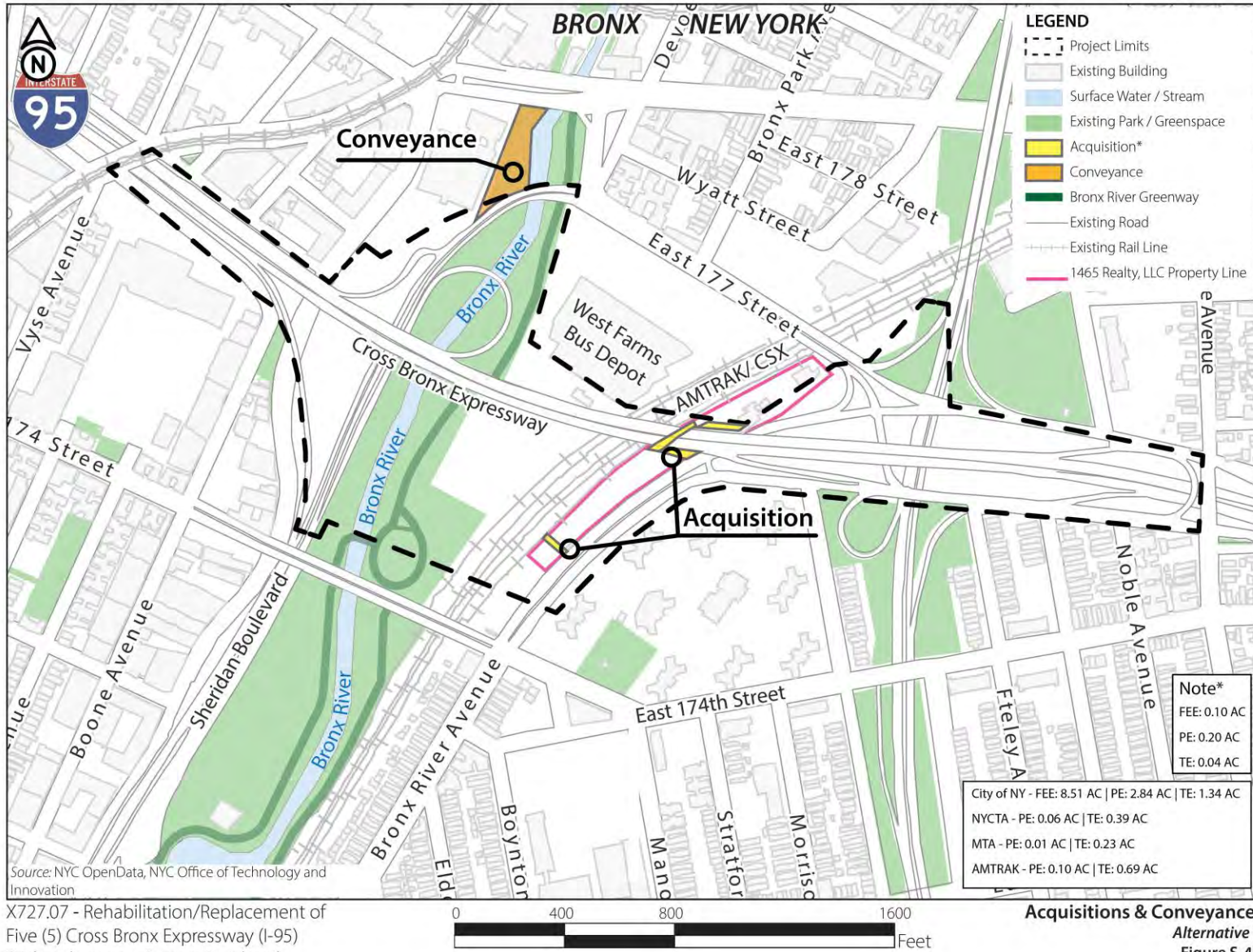
Economic and/or Operations for Alternatives A, B, and C:

- The Project would permanently remove existing parking lanes on local roadways to accommodate the proposed intersections at West Farms Road and Bronx River Avenue, as well as modifications to East 176th Street. Additionally, the Project would temporarily restrict parking lanes during off-peak hours on local streets following the NYCDOT Office of Construction Mitigation and Coordination's (OCMC) lane closure stipulations.



X727.07 - Rehabilitation/Replacement of Five (5) Cross Bronx Expressway (I-95) Bridges between Boston Road and Rosedale Avenue

Acquisitions & Conveyances
 Alternatives A & B
 Figure S-4a



X727.07 - Rehabilitation/Replacement of Five (5) Cross Bronx Expressway (I-95) Bridges between Boston Road and Rosedale Avenue

S.3.2.1 Selected Alternative

The selected alternative will be documented in the Final Design Report/Environmental Assessment. The decision-making process for selecting the alternative will be based on a balanced consideration of the need for safe and efficient transportation and the reasonably foreseeable social, economic and environmental effects of the action. The decision will be informed by public, agency, and stakeholder input received on this EA, including input received at the public hearings for the Project.

S.4 Social, Economic, and Environmental Effects

Table S.4-1 provides a summary of the potential social, economic, and environmental effects of each alternative. **Table S.4-2** provides a summary of mitigation measures and commitments associated with the alternatives.

Table S.4-1 Summary of Potential Effects of the Alternatives				
Category		Alternatives		
		No Build	Alternative A	Alternative B
Environmental Effects				
Wetlands	State Wetlands	None	No freshwater or unvegetated tidal wetland effects Littoral zone (tidal wetland): permanent effects = 0.01 acre (restoration), temporary effects = 0.10 acres Tidal Wetland Adjacent Area permanent effects = 0.05 acres (0.01 acre of restoration), temporary effects = 0.46 acres	

**Table S.4-1
Summary of Potential Effects of the Alternatives**

Category		Alternatives			
		No Build	Alternative A	Alternative B	Alternative C
			Shading effects: Littoral Zone (Tidal Wetland): permanent = 0.07 acres, temporary = 0.12 acre Tidal Wetland Adjacent Area: permanent = 0.10 acre, temporary = 0.03 acre		Shading effects: Littoral Zone (Tidal Wetland): permanent = 0.05 acres, temporary = 0.12 acre Tidal Wetland Adjacent Area: permanent = 0.06 acre, temporary = 0.03 acre
	Federal Wetlands	None	None		
Surface Waters		None	Permanent beneficial in-water effects include the restoration of approximately 0.01 acre of river bottom habitat from the removal of the existing CBE mainline Pier 3 and the restoration of 230 linear feet of riverbank along the Bronx River. Temporary in-water effects = approximately 0.10 acre (with 0.07 acre associated with cofferdam dewatering) Beneficial effect associated with the removal of Pier 3 resulting in a net increase in water volume of the Bronx River.		
Navigable Waters		None	The replacement of the CBE mainline bridge over the Bronx River would not reduce the existing navigability of the Bronx River or hinder the passage of the primarily small recreational vessels as the placement of the new bridge piers would be located outside of the regulated navigable waterway. The abandoned Pier 5 would be rehabilitated to remove fallen rock in the navigable water, providing a benefit to public safety and additional recreational navigation width.		

**Table S.4-1
Summary of Potential Effects of the Alternatives**

Category	Alternatives			
	No Build	Alternative A	Alternative B	Alternative C
		Short-term effects to small recreational navigation during construction.		
Floodplains	None	No significant floodplain encroachment and no significant effects on natural beneficial floodplain values per 23 CFR Part 650 Subpart A		
Coastal Resources	None	Consistent with the NYS Coastal Consistency Policies and NYC Waterfront Revitalization Program.		
Stormwater Management	None	(+) 1.50 acres of impervious surface	(+) 1.94 acres of impervious surface	(+) 0.98 acre of impervious surface
		No adverse effects to stormwater runoff to the Bronx River or the NYCDEP combined sewer system No effect to stormwater management with incorporation of stormwater management practices (i.e., bioretention basins and hydrodynamic separators)		
Cultural Resources (Section 106)	None	No Adverse Effect		
Section 4(f)	None	The CBE and associated bridges and ramps meet the exception criteria of and does not constitute a use per 23 CFR 774.13(a)(3); and, of the remaining identified resources, no Section 4(f) resource in the Project Study Limits is subject to a use as defined in 23 CFR 774.17.		
Recreational Resources	None	Temporary impacts to the Bronx River Greenway from East 177th Street to just south of the Sheridan Boulevard during construction		

Table S.4-1 Summary of Potential Effects of the Alternatives				
Category	Alternatives			
	No Build	Alternative A	Alternative B	Alternative C
		Improved recreational use of Bronx River with removal of CBE mainline Pier 3 and rehabilitation of abandoned Pier 5		
		Improved access to Noble Park through construction of raised SUP along East 176 th St, the CBE, Bronx River Avenue and North & South Service Roads	Improved access to Noble Park through construction of raised SUP along East 176 th St, the CBE, Bronx River Avenue and North & South Service Roads Improved access to the Bronx River Greenway & Starlight Park through the construction of a greenway connection from the SUP to the Bronx River Greenway Permanent relocation of Bronx River Greenway to accommodate connection from SUP	Improved access to Noble Park through enhancement of pedestrian sidewalks along Bronx River Avenue and North & South Service Roads
General Ecology – Terrestrial Resources	None	No adverse shading effects from the reconstructed CBE mainline with SUP	No adverse shading effects from reconstructed CBE mainline with SUP and greenway connection	No adverse shading effects from the reconstructed CBE mainline

**Table S.4-1
Summary of Potential Effects of the Alternatives**

Category	Alternatives			
	No Build	Alternative A	Alternative B	Alternative C
		Removal of approximately 268 trees	Removal of approximately 268 trees	Removal of approximately 263 trees
		Available planting areas would optimize density of new 3-inch caliper trees planted under coordination with NYCDPR as part of the Project		
		Beneficial effects on invasive species with the implementation of an invasive species management plan		
General Ecology – Aquatic Resources	None	Beneficial effects to aquatic resources from restoration of river bottom habitat		
		No adverse shading effects		
		Temporary effects during construction associated with cofferdam and trestle installation		
Endangered and Threatened Species	None	No Effect on Piping Plover		
		No Effect on National Marine Fisheries Service Endangered Species Act Protected Species		
		Proposed project would not jeopardize the continued existence of the Monarch Butterfly		
Essential Fish Habitat	None	No adverse effect on essential fish habitat with the incorporation of conservation recommendations identified by the FHWA Programmatic Essential Fish Habitat Consultation		
Noise	Peak hour predicted traffic would	No adverse effect		
		At most receivers, there is a slight reduction in noise levels.		

**Table S.4-1
Summary of Potential Effects of the Alternatives**

Category	Alternatives			
	No Build	Alternative A	Alternative B	Alternative C
	meet or exceed the Noise Abatement Criteria at 27 receivers	No location would experience a perceptible (greater than 3 dB(A)) increase over the No Build Temporary construction-related noise effects from use of construction equipment		
Visual Resources	None	Visual Adverse Effects for two viewpoints Beneficial Effects for one viewpoint	Visual Adverse Effects for four viewpoints Visual Beneficial Effect for one viewpoint	Visual Adverse Effect for two viewpoints Visual Beneficial Effects for one viewpoint
Air Quality	None	No Adverse Effect		
Asbestos	None	No Adverse Effect with implementation of abatement measures, if required		
Hazardous Materials	None	Likely contamination of subsurface conditions. Detailed site assessment to be conducted during final design prior to construction.		

Table S.4-1 Summary of Potential Effects of the Alternatives				
Category	Alternatives			
	No Build	Alternative A	Alternative B	Alternative C
Property/Relocations	None	<p>Property Transfers from City of New York to NYSDOT Title Clarification on Properties</p> <p>Permanent & Temporary Easements on City of New York, and MTA Properties</p> <p>Permanent Easements and Partial Property Acquisition on private property (1465 Realty LLC)</p> <p>MTA Bus Depot acquisition is non-de minimis.</p> <p>1465 Realty LLC acquisition is non-de minimis.</p> <p>Total FEE = 8.99 acres (19 properties) Total PE = 3.53 acres (16 properties) Total TE = 2.64 acres (8 properties)</p>		<p>Property Transfers from City of New York to NYSDOT Title Clarification on Properties</p> <p>Permanent & Temporary Easements on City of New York, and MTA Properties</p> <p>Permanent Easements and Partial Property Acquisition on private property (1465 Realty LLC)</p> <p>MTA Bus Depot acquisition is non-de minimis.</p> <p>1465 Realty LLC acquisition is de minimis.</p> <p>Total FEE = 39.73 acres (20 properties) Total PE = 3.21 acres (17 properties)</p>

Table S.4-1 Summary of Potential Effects of the Alternatives				
Category	Alternatives			
	No Build	Alternative A	Alternative B	Alternative C
				Total TE = 2.69 acres (10 properties)
Mobility (Pedestrian, bicycle, transit, etc.)	No Effect	Improved pedestrian and bicycle mobility with SUP along East 176 th St, the CBE, Bronx River Avenue, North & South Service Roads and signalized pedestrian crossings on Bronx River Avenue and East 177 th St	Improved pedestrian and bicycle mobility with SUP along East 176 th St, the CBE, Bronx River Avenue, North & South Service Roads and connection to Bronx River Greenway. Signalized pedestrian crossings on Bronx River Avenue and East 177 th St	Improved pedestrian mobility with enhanced sidewalks and signalized pedestrian crossings on Bronx River Avenue and East 177 th St
Community Character and Community Cohesion	No improvements to neighborhood and community cohesion No Effect to land use and zoning or school and	No land use or zoning effects. No displacement of residences or businesses No direct effect to neighborhood configuration, population levels, number of housing units, or occupancy/ vacancy rates Improved community cohesion through the construction of SUP and	No land use or zoning effects. No displacement of residences or businesses No direct effect to neighborhood configuration, population levels, number of housing units, or occupancy/ vacancy rates Improved community cohesion through the construction of SUP and greenway connection, as well	No land use or zoning effects. No displacement of residences or businesses No direct effect to neighborhood configuration, population levels, number of housing units, or occupancy/ vacancy rates Improved community cohesion through the construction of

Table S.4-1 Summary of Potential Effects of the Alternatives				
Category	Alternatives			
	No Build	Alternative A	Alternative B	Alternative C
	places of worship	additional pedestrian/bicycle improvements. Increased access to school and places of worship with construction of SUP	as additional pedestrian/bicycle improvements. Increased access to school and places of worship with construction of SUP	additional bicycle/pedestrian improvements
General Social Groups	No Effect	Beneficial impacts to the transit dependent population with the creation of new sidewalks and intersection improvements that would shorten the walking distances to bus and subway stations. Beneficial effects to persons with disabilities, elderly and/or disabled persons or groups with the addition of new ADA facilities and improvement of existing ADA facilities.		
Crash Costs	High	Low ⁹		
Economic and/or Operational Effects				
Economic Impacts	No Effect	Improved access to businesses Short-term beneficial effect to regional and local economies from construction expenditures (employment and spending) Long-term beneficial effect to local economies from accessibility to transit and local business and greenspace enhancements increasing property values		

⁹ Crash costs are estimated based on evaluating the level of injury for the persons involved and assigning that injury level to a monetary value.

Table S.4-1 Summary of Potential Effects of the Alternatives				
Category	Alternatives			
	No Build	Alternative A	Alternative B	Alternative C
Temporary Vehicle Detours	No Effect	Temporary Signal on Sheridan Blvd		
Reduction of Parking	No Effect	33 On-Street, Off-Peak Parking Closures per NYC Closure Stipulations		7 On-Street, Off-Peak Parking Closures per NYC Closure Stipulations
Operation at ETC +20	1,388 min delay WB CBE (PM)	1,456 min delay WB CBE (PM)		
Utilities	None	Relocation required \$3,400,000		
Construction Cost (2028)	None	\$783.9M	\$799.9M	\$692.2
Construction Duration	N/A	6 years		

Table S.4-2 Environmental Mitigation/Commitments	
Category	Action/Commitments
Surface Waterbodies and Watercourses	The Project will incorporate the below special conditions of its US Army Corps of Engineers Section 404 Nationwide Permit authorization (NAN-2024-00783-MLO) into the project plans and/or contract documents. If future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized

Table S.4-2 Environmental Mitigation/Commitments	
Category	Action/Commitments
	<p>representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, NYSDOT will be required, upon due notice from the US Army Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.</p> <p>NYSDOT shall restore temporarily impacted wetlands or waters of the United States to their pre-construction elevations and re-seed or plant these areas with native vegetation where appropriate.</p>
General Ecology – Terrestrial Resources	<p>Trees would be planted as part the Project to replace the trees that would need to be removed during construction under Alternatives A, B, and C. NYSDOT would optimize the density of new 3-inch caliper planting in available planting areas and would continue coordination with NYCDPR.</p> <p>NYSDOT would restore all the landscaping and the green space affected by the construction of this Project. A restitution plan would be developed to enhance the landscape, tree planting and aesthetic environment within the project limits.</p>
General Ecology – Aquatic Resources	<p>NYSDOT will incorporate the conservation recommendations identified by the FHWA Programmatic Essential Fish Habitat Consultation into the project plans and/or contract documents. These recommendations include use of a vibratory hammer and a soft-start to pile driving; following best management practices for impact driving, including a specification to use a maximum of 16-inch tube steel piles for temporary (<1 year) trestles to meet acoustic restrictions, spacing piles 4-foot off center; abiding by essential fish habitat time of year restrictions for certain activities (i.e. avoiding pile driving between March 1st and June 30th); installation of mesh screening for water withdrawal maximum intake velocity, turbidity and soil erosion and sediment control measures; removal of obsolete structures to 2 feet below mudline, and returning disturbed areas to pre-construction or better conditions.</p>
Endangered and Threatened Species	<p>To ensure the Project has 'No Effect' on federally listed aquatic species, NYSDOT will incorporate specifications into the final design to utilize 16-inch steel pipe piles with 100 blows per pile and install 6 piles per day.</p>
Visual Resources	<p>Adverse effects would be mitigated utilizing the below measures, which would be finalized during the final design phase of the Project.</p>

Table S.4-2 Environmental Mitigation/Commitments	
Category	Action/Commitments
	<p>Provide plantings as visual buffers to reduce the views to and soften the massing of the new structural features and hardscapes.</p> <p>Replace lost plantings with supplemental plants and rehabilitate existing landscapes.</p> <p>Provide context-appropriate decorative wall treatments and finishes, where practical. Finishes and treatments that could be included as a component of the proposed design might include replacement bridges and structures developed in architectural styles sympathetic to and in harmony with the overall architectural style of the immediate Bronx context, constructed with materials such as concrete with architectural, rubbed or formliner finishes and detailing and/or stone veneer similar to that seen on the abutment and wing walls of the existing bridge that carries the CBE over the Bronx River Parkway or the brick veneer on the walls typical of the CBE's mainline.</p>
Construction Effects – Noise/Vibration	During final design, vibration monitoring and mitigation plan will be required adhering to Title 15 of the Rules of the City of New York Chapter 28 Citywide Construction Noise Mitigation. The Contractor shall use and implement all reasonable efforts to accommodate the spirit and intent of Chapter 28 of the City Rules by planning and carrying out the work on this Project to ensure that the noise from construction equipment and activities is kept to minimum.
Construction Effects - Traffic	Public communication via the Project website, social media blasts, VMS alerts and various other public engagement opportunities anticipated to be identified in the Transportation Management Plan would provide the community advanced notification of construction activities and traffic shifts and changes during construction. Additionally, robust advanced advisory signage would be provided at all affected roadways and approaches to roadways alerting the traveling public of the construction traffic conditions and speed/advisory notifications.
Construction Effects - Trees	Effects to trees would be minimized during the staging of construction by conducting tree removal and trimming in the winter to allow replanting to occur in the appropriate season.
Construction Effects – Bronx River	Best management practices will be utilized during construction to protect the Bronx River and minimize potential effects including implementing containment measures to prevent disturbed sediment within the work zone from being released to downstream waters

Table S.4-2 Environmental Mitigation/Commitments	
Category	Action/Commitments
	<p>A Stormwater Pollution Prevention Plan (SWPPP) would be developed to comply with the NYS Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity. SPDES monitoring and frequent inspections by the NYSDOT and project liaisons would occur during construction.</p> <p>Prior to bridge demolition activities over the Bronx River, temporary netting would be installed under the bridge to stop debris from falling into the river. Next, the bridge deck and steel would cut into pieces from deck mounted machinery and placed on trucks to haul away. Cofferdams would be installed around the footings in the river and wetland adjacent areas and the footings would be removed by saws and rams within the cofferdams protecting the river with weighted turbidity curtains. Temporary netting would also be installed underneath the new bridge decks spanning the river to stop debris from falling into the river.</p> <p>Riverbed surveys would be performed prior to construction and after construction to identify any foreign objects that may have fallen into the river and those objects removed to ensure the river’s natural state.</p>
Construction Effects – Air Quality	<p>Measures incorporated in Alternatives A, B, and C to avoid and minimize temporary construction air quality effects include the following:</p> <p>Requiring the Contractor to use lower emission equipment (Tier 4 emissions standards), where appropriate and to the extent practicable. Contract provisions would require the Contractor to report at least monthly to the NYSDOT the total number of pieces of equipment over 50 horsepower used onsite and the number/type out of this total that met Tier 4 emissions standards. The Contractor would also be required to consider and report on the use of Diesel Particulate Filter retrofits on older equipment over 50 horsepower per NYSDOT Specification 696.0002 Diesel Engine Emission Control.</p> <p>Requiring the Contractor to prepare and implement a Dust Control Plan that includes proactive measures to prevent discharge of dust into the atmosphere. In areas not subject to traffic, apply products and materials including vegetative cover, mulch, and spray adhesives on soil surfaces to prevent airborne migration of soil particles. In areas subject to traffic, apply products and materials including water sprinkling, polymer additives, barriers, windbreaks, and wheel washing.</p>

Table S.4-2 Environmental Mitigation/Commitments	
Category	Action/Commitments
	<p>Avoiding locating diesel engines within 50 feet of sensitive receptors such as residences and schools, where practicable.</p> <p>Limiting idling time for diesel powered equipment per NYSDOT's standard specifications for delivery and dump trucks and all other diesel-powered equipment with limited exceptions. The Contractor would be required to post signage notifying workers of the idling limit.</p>

S.4.1 Permits, Approval, and Consultations

Table S.4.1-1 Environmental Coordination	
New York State Department of Environmental Conservation (NYSDEC)	
State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-25-001)	
Article 25 Tidal Wetland Permit	
Clean Water Act Section 401 Blanket Water Quality Certification	
Water Withdrawal Permit ¹	
Army Corps of Engineers (USACE):	
Clean Water Act Section 404 Nationwide Permit #3 and #14	
Section 10 of the Rivers and Harbors Act Permit	
Others	
New York City Department of Parks and Recreation – Tree Work Permit	
New York City Department of Parks and Recreation – Construction Permit	
New York City Department of Transportation - Office of Construction Mitigation and Coordination Local Street Permit	
New York City Department of Transportation - Office of Construction Mitigation and Coordination Highway Permit	
Approvals and Consultations	
Essential Fish Habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act (FHWA and NOAA-Fisheries).	
Fire Department of the City of New York coordination	
Metropolitan Transportation Authority coordination	
National Historic Preservation Act Section 106	
Section 4(f) of the US Department of Transportation Act	
Coordination pursuant to the “NYSDEC/NYS DOT Memorandum of Understanding Regarding ECL Articles 15 & 25”	
United States Coast Guard Section 9 Bridge Permit Coordination	
Utilities – NYCDEP, Con Edison, ECS, Altice	
NYS Department of State Federal Coastal Assessment Review	
Endangered Species Act Section 7	
Certifications	
NYS Department of Labor: Asbestos Variances	
NYS Department of Labor: Site-Specific Asbestos Variance	
NYS Department of State Article 42 Coastal Zone Consistency Certification	
Local Waterfront Revitalization Certification	

¹ NYSDEC Water Withdrawal Permit is dependent upon Contractor’s means and methods but shall incorporate recommendations identified by the FHWA Programmatic Essential Fish Habitat Consultation.

S.5 Project Costs and Schedule

The total estimated cost for Alternative A is \$783.9M for, \$799.9M for Alternative B, and \$692.2M for Alternative C (Table S.5-1).

Table S.5-1 Project Costs				
Description		Alternative A	Alternative B	Alternative C
CBE Mainline Bridges		\$333,626,177	\$333,626,177	\$287,965,931
Highway		\$149,803,742	\$149,803,742	\$137,364,427
Retaining Walls		\$10,828,002	\$10,828,002	\$7,301,915
Utilities		\$6,670,034	\$6,670,034	\$6,670,034
Subtotal in Base Year Dollars		\$500,927,955	\$500,927,955	\$439,302,307
Contingency/Risk	15%	\$75,139,193	\$75,139,193	\$65,895,346
Subtotal in Base Year Dollars		\$576,067,149	\$576,067,149	\$505,197,654
<i>Cost Data Year and Midpoint of Construction Year</i>	2025	2028	2028	2028
Inflation/Escalation to Midpoint of Construction	2%	\$35,259,918	\$35,259,918	\$30,922,138
Construction Cost		\$611,327,067	\$611,327,067	\$536,119,792
Final Design, Construction Inspection, and QC	22%	\$134,491,955	\$134,491,955	\$117,946,354
Allowance for SUP to Greenway Connection		\$0	\$16,000,000	\$0
Allowance for Missing Ped/Bike Connections		\$625,000	\$625,000	\$625,000
RR Force Account (Amtrak)		\$11,000,000	\$11,000,000	\$11,000,000
No-Show Cost (Amtrak)		\$2,750,000	\$2,750,000	\$2,750,000
RR Force Account (MTA)		\$3,000,000	\$3,000,000	\$3,000,000
No-Show Cost (MTA)		\$750,000	\$750,000	\$750,000
RR Force Account (NYCT)		\$8,000,000	\$8,000,000	\$8,000,000

Description	Alternative A	Alternative B	Alternative C
No-Show Cost (NYCT)	\$2,000,000	\$2,000,000	\$2,000,000
RR Force Account (CSX)	\$2,000,000	\$2,000,000	\$2,000,000
No-Show Cost (CSX)	\$500,000	\$500,000	\$500,000
Design Build Award Amount	\$776,444,021	\$792,444,021	\$684,691,146
ROW	\$7,500,000	\$7,500,000	\$7,500,000
Total Project Cost	\$783,944,021	\$799,944,021	\$692,191,146
Rounded to nearest \$10K	\$783,944,000	\$799,944,000	\$692,191,000

This project is estimated to require 72,239 design hours to complete with an estimated resource cost of \$11,882,212. For a more detailed estimate of how the design hours are broken down, see the Design Resource Estimate in **Appendix I1**. Construction is expected to start in 2026 and continue for six years (**Table S.5-2**).

Activity	Date Occurred/Tentative
Notice of Availability of DDR/EA	Fall 2025
NEPA Public Hearings	Fall 2025
DDR/EA Comment Period Ends	Fall 2025
Release FDR/EA / Environmental Determination	Spring 2026
Design Approval	Spring 2026
Obtain Permits and Approvals	Summer 2026
ROW Acquisition	Early Fall 2026
Construction Start	2026
Construction Complete	2032

S.6 Public Involvement

Public involvement is an integral part of the environmental review and decision-making processes. NYSDOT has met with a wide range of stakeholders in the Bronx, including Community Boards and the identified Community Representatives, to inform them of the Project and to seek feedback on the project elements. NYSDOT also prepared a one-page fact sheet (both in English and in Spanish) about the Project. The fact sheet was distributed via email to interested stakeholders at Community Organization Meetings (hard copies were produced for the in-person April 24th meeting with the Bronx Council for the Environment (BCEQ) and Bronx River Alliance) and Community Board Meetings by the project team. Project update meetings were held in-person in June 2025 to solicit community input on the initial alternative and its initial two options, Option 1 which involved the

construction of a temporary traffic diversion structure and included four sub options (1A, 1B, 1C, 1D), and Option 2 which utilizes staged construction with no temporary traffic diversion structure, being considered for the Project. Both English and Spanish display boards were available, as well as a stenographer and Spanish translator. Based on public comments, NYSDOT made the determination to remove Options 1A, 1B, 1C and 1D from further consideration. See **Section 3.1.2** and **Appendix A** for more information about the dismissed Options. A detailed description of the public involvement process utilized for the Project is provided in **Chapter 5** and public comments are in **Appendix J**.

S.7 Contact

For additional information or to provide comments, please contact:

Email: Rehab5CBEBridges@dot.ny.gov

Website: <https://webapps.dot.ny.gov/cross-bronx-bridges-project>

Phone: 718-482-4610

U.S. Mail: Cross Bronx Bridges Project Team

NYS Department of Transportation

47-40 21st Street

Long Island City, NY 11101

Please include the six-digit Project Identification Number (PIN) X727.07 in any correspondence.