

2020 Combined Continuing Disclosure Filings

2020 COMBINED CONTINUING DISCLOSURE FILINGS PURSUANT TO SEC RULE 15c2-12

relating to

METROPOLITAN TRANSPORTATION AUTHORITY Dedicated Tax Fund Bonds Transportation Revenue Bonds Special Obligation Taxable Refunding Bonds Hudson Rail Yards Trust Obligations

and

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY (MTA BRIDGES AND TUNNELS) General Revenue Bonds Subordinate Revenue Bonds

Dated: April 29, 2020

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INTRODUCTION

This book contains the 2020 Combined Continuing Disclosure Filings prepared by Metropolitan Transportation Authority ("MTA") and Triborough Bridge and Tunnel Authority ("TBTA") pursuant to various written undertakings made to assist the underwriters in complying with their obligations in accordance with SEC Rule 15c2-12 in connection with the following credits:

- MTA Transportation Revenue Bonds,
- TBTA General Revenue Bonds,
- TBTA Subordinate Revenue Bonds,
- MTA Dedicated Tax Fund Bonds,
- MTA Special Obligation Taxable Refunding Bonds, and
- MTA Hudson Rail Yards Trust Obligations.

A roadmap to the continuing disclosure information that MTA or TBTA has contractually agreed to update, in accordance with the respective continuing disclosure agreements in official statements, describing where the materials required may be found in MTA's Annual Disclosure Statement is set forth at the end of this Introduction. This Annual Information booklet contains the following information:

PART I contains the **MTA Annual Disclosure Statement** ("ADS"). The ADS describes the Related Entities, and includes the information necessary to meet the requirements of the continuing disclosure agreements under MTA and TBTA official statements, offering circulars and remarketing circulars, as applicable, for all credits.

PART II includes the following, which are also part of the Annual Continuing Disclosure Filings:

- **Tab 1** lists, by designation, the various issues of securities outstanding for all credits.
- **Tab 2** provides certain details of each series and subseries for MTA and TBTA credits, for the issues listed in Tab 1.
- Tab 3a lists any material events that have occurred within the past year for all credits.
- Tab 3b lists any voluntary disclosures that have been posted within the past year for all credits.

APPENDICES

- Appendix A See Part I.
- Appendix B Metropolitan Transportation Authority Consolidated Financial Statements.
- Appendix C New York City Transit Authority Consolidated Financial Statements.
- Appendix D Triborough Bridge and Tunnel Authority Financial Statements.
- Appendix E History and Projection of Traffic, Toll Revenues and Expenses and Review of Physical Conditions of the Facilities of Triborough Bridge and Tunnel Authority.

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Note that page numbers in this printed version of the 2020 Combined Continuing Disclosure Filings may differ from page numbers in version posted to MTA's website and EMMA on April 29, 2020.

Roadmap for Continuing Disclosure to the Annual Information Statement

As part of all the official statements provided under all of the credits, the continuing disclosure agreements ("CDAs") require the filing of certain Annual Information with the Electronic Municipal Market Access System (EMMA). The following roadmap indicates where information under these CDAs may be found in this annual report, specifically in the **ADS**. There is additional information incorporated into the **ADS** that may not be reflected in the CDAs, so if it is not listed here, see the **ADS** Table of Contents for the detailed listing.

TRANSPORTATION REVENUE BONDS	ADS Location	
Continuing Disclosure Document	Caption(s)	Heading(s)
A. Description of the systems operated by the		
Related Transportation Entities and their		
operations.		
Related Transportation Entities	1. THE RELATED ENTITIES	All headings
Transit System	1. TRANSIT SYSTEM	All headings
Commuter System	1. COMMUTER SYSTEM	All headings
MTA Bus	1. MTA BUS COMPANY	All headings
B. Description of changes to the fares or fare		
structures charged to users of the systems		
operated by the Related Transportation		
Entities.		
Transit System	1. REVENUES OF THE	1. Fares and Tolls – Transit System Fares
	RELATED ENTITIES	
Commuter System	1. REVENUES OF THE	1. Fares and Tolls – Commuter System Fares
	RELATED ENTITIES	1. Fares and Tolls – MTA Bus Fares
MTA Bus	1. REVENUES OF THE	1. Fares and Tolls – MTA Bus Fares
C. Operating Data of the Related	RELATED ENTITIES	
Transportation Entities.		
Transportation Entities.	1. TRANSIT SYSTEM	All headings
Transit System	2. RIDERSHIP AND	1. Transit System (MTA New York City
	FACILITIES USE	Transit and MaBSTOA) Ridership
	3. EMPLOYEES, LABOR	1. MTA New York City Transit and
	RELATIONS AND PENSION	MaBSTOA
	AND OTHER POST-	2. MTA Bus
	EMPLOYMENT	3. MTA Staten Island Railway
	OBLIGATIONS	
Commuter System	1. COMMUTER SYSTEM	All headings
5	2. RIDERSHIP AND	1. Commuter System Ridership
	FACILITIES USE	5 1
	3. EMPLOYEES, LABOR	1. Commuter System
	RELATIONS AND PENSION	
	AND OTHER POST-	
	EMPLOYMENT	
	OBLIGATIONS	
MTA Bus	1. EMPLOYEES, LABOR	1. MTA Bus
	RELATIONS AND PENSION	
	AND OTHER POST-	
	EMPLOYMENT	
	OBLIGATIONS	
	2. RIDERSHIP AND	
	FACILITIES USE	

D. Information regarding the Transit and Commuter Capital Programs.	1. FINANCIAL PLANS AND CAPITAL PROGRAMS	 Capital Programs – Background and Development Approved 2015-2019 Capital Program 2010-2014 Capital Program 1992-2009 Transit Capital Programs Objectives 1992-2009 Commuter Capital Programs Objectives Climate Bond Standard and Certification Compliance
E. Presentation of changes to indebtedness issued by MTA under the Transportation Resolution, as well as information concerning changes to MTA's debt service requirements on such indebtedness payable from pledged revenues.	1. TRANSPORTATION REVENUE BONDS	1. TRB Table 1 2. TRB Table 2a 3. TRB Table 2b
F. Information concerning the amounts, sources, material changes in and material factors affecting pledged revenues and debt service incurred under the Transportation Resolution.	1. REVENUES OF THE RELATED ENTITIES	 Fares and Tolls State and Local General Operating Subsidies State Special Tax Supported Operating Subsidies Metropolitan Transportation Authority Financial Assistance Fund Receipts Urban Taxes for Transit System MTA Bridges and Tunnels Surplus Financial Assistance and Service Reimbursements from Local Municipalities Miscellaneous Revenues
G. Additional financial information.	See Items E and F above.	8. Wiscenaneous Revenues
H. Material litigation relating to any of the foregoing.	1. LITIGATION	 MTA Transit System Commuter System MTA Bus
TBTA GENERAL REVENUE BONDS	ADS Location	
Continuing Disclosure Document	Caption(s)	Heading(s)
A. Certain financial and operating data.	1. TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY	 MTA Bridges and Tunnels Facilities Authorized Projects of MTA Bridges and Tunnels
	2. RIDERSHIP AND FACILITIES USE	 MTA Bridges and Tunnels Total Revenue Vehicles Toll Rates Competing Facilities and Other Matters E-ZPass
	3. EMPLOYEES, LABOR RELATIONS AND PENSION AND OTHER POST- EMPLOYMENT OBLIGATIONS	1. MTA Bridges and Tunnels
B. Information regarding the TBTA, Transit and Commuter Capital Programs.		

1. FINANCIAL PLANS AND CAPITAL PROGRAMS	 Capital Programs – Background and Development Approved 2015-2019 Capital Program 2010-2014 Capital Program 1992-2009 Transit Capital Programs Objectives 1992-2009 Commuter Capital Programs Objective 1992-2009 MTA Bridges and Tunnels Capital Programs Objectives
I. MIA BRIDGES AND TUNNELS SENIOR REVENUE BONDS	1. MTA Bridges and Tunnels Senior Table 1 2. MTA Bridges and Tunnels Senior Table 2
1. REVENUES OF THE RELATED ENTITIES	1. MTA Bridges and Tunnels Surplus
2. RIDERSHIP AND FACILITIES USE	1. MTA Bridges and Tunnels Total Revenue Vehicles
3. MTA BRIDGES AND TUNNELS SENIOR REVENUE BONDS	1. MTA Bridges and Tunnels Senior Table 2
1. LITIGATION	1. MTA Bridges and Tunnels
ADS Location	
<u>Caption(s)</u>	Heading(s)
1. TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY	 MTA Bridges and Tunnels Facilities Authorized Projects of MTA Bridges and Tunnels
2. RIDERSHIP AND FACILITIES USE	 MTA Bridges and Tunnels Total Revenue Vehicles Toll Rates Competing Facilities and Other Matters E-ZPass
3. EMPLOYEES, LABOR RELATIONS AND PENSION AND OTHER POST- EMPLOYMENT OBLIGATIONS	1. MTA Bridges and Tunnels
1. FINANCIAL PLANS AND CAPITAL PROGRAMS	 Capital Programs – Background and Development Approved 2015-2019 Capital Program 2010-2014 Capital Program 1992-2009 Transit Capital Programs Objectives 1992-2009 Commuter Capital Programs Objective 1992-2009 MTA Bridges and Tunnels Capital Programs Objectives
1. MTA BRIDGES AND TUNNELS SUBORDINATE	1. MTA Bridges and Tunnels Subordinate Table 1
	CAPITAL PROGRAMS

D. Historical information concerning traffic, revenues, operating expenses, TBTA Subordinate Resolution debt service and debt service coverage	1. REVENUES OF THE RELATED ENTITIES	1. MTA Bridges and Tunnels Surplus
	2. RIDERSHIP AND FACILITIES USE	1. MTA Bridges and Tunnels Total Revenue Vehicles
	3. MTA BRIDGES AND TUNNELS SUBORDINATE REVENUE BONDS	1. MTA Bridges and Tunnels Subordinate Table 2
E. Material litigation relating to any of the foregoing.	1. LITIGATION	1. MTA Bridges and Tunnels
DEDICATED TAX FUND BONDS	ADS Location	
Continuing Disclosure Document	Caption(s)	Heading(s)
A. Description of the Transit and Commuter Systems operated by MTA and its affiliates and subsidiaries and their operation.	1. THE RELATED ENTITIES 2. TRANSIT SYSTEM 3. COMMUTER SYSTEM	All headings
	4. RIDERSHIP AND FACILITIES USE	 Transit System (MTA New York City Transit and MaBSTOA) Ridership Commuter System Ridership
	5. FEDERAL AND STATE LAWS	 Transit System Commuter System
	6. EMPLOYEES, LABOR RELATIONS AND PENSION AND OTHER POST- EMPLOYMENT OBLIGATIONS	 MTA New York City Transit and MaBSTOA MTA Bus MTA Staten Island Railway Commuter System
B. Information regarding the Transit and Commuter Capital Programs.	1. FINANCIAL PLANS AND CAPITAL PROGRAMS	 Capital Programs – Background and Development Approved 2015-2019 Capital Program 2010-2014 Capital Program 1992-2009 Transit Capital Programs Objectives 1992-2009 Commuter Capital Programs Objectives
C. Presentation of changes to indebtedness issued by MTA under the DTF Resolution, as well as information concerning changes to MTA's debt service requirements on such indebtedness payable from DTF Revenues.	1. DEDICATED TAX FUND BONDS	1. DTF Table 1 2. DTF Table 2
D. Financial information and operating data, including information relating to the following:	1. FINANCIAL PLANS AND CAPITAL PROGRAMS	1. 2020-2023 Financial Plan (The February Plan)
Description of how the State allocates taxes to the MTA Dedicated Tax Fund.	1. DEDICATED TAX FUND BONDS	 Sources of Payment – Revenues from Dedicated Taxes DTF Table 2
Description of the material taxes allocated to the MTA Dedicated Tax Fund, together with a description of the tax rate, the tax base and the composition and collection of such taxes by the State.	1. DEDICATED TAX FUND BONDS	 Sources of Payment – Revenues from Dedicated Taxes DTF Table 2 MTTF Receipts – Dedicated Petroleum Business Tax

For the material taxes then constituting a source of revenue for the MTA Dedicated Tax Fund, an historical summary of such revenue, if available, together with an explanation of the factors affecting collection levels, for a period of at least the five most recent completed fiscal years then available.	1. DEDICATED TAX FUND BONDS	 MTTF Receipts – Dedicated Petroleum Business Tax MTTF Receipts – Motor Fuel Tax MTTF Receipts – Motor Vehicle Fees MMTOA Account – Special Tax Supported Operating Subsidies
E. Information concerning the amounts, sources, material changes in and material factors affecting DTF Revenues and debt service incurred under the DTF Resolution.	See Items C and D above.	
F. Material litigation relating to any of the foregoing.	1. LITIGATION	1. MTA 2. Transit System 3. Commuter System
SPECIAL OBLIGATION TAXABLE REFUNDING BONDS	ADS Location	
Continuing Disclosure Document	Caption(s)	Heading(s)
A. Updates to Table 1, Estimated Released Escrow Amounts and Debt Service on the Bonds	1. SPECIAL OBLIGATION TAXABLE REFUNDING BONDS	1. Special Obligations Table 1
B. Material litigation relating to Released Escrow Accounts	1. LITIGATION	1. General
HUDSON RAIL YARDS TRUST OBLIGATIONS	ADS Location	
Continuing Disclosure Document	Caption(s)	Heading(s)
A. Presentation of the financial results of the Related Transportation Entities prepared in accordance with GAAP for the most recent year for which that information is then currently available	1. FINANCIAL PLANS AND CAPITAL PROGRAMS	1. 2020-2023 Financial Plan (The "February Plan")
B. Presentation of changes to indebtedness issued by MTA under the Transportation Revenue Bond Resolution, as well as information concerning changes to MTA's debt service requirements on such indebtedness payable from pledged revenues	1. TRANSPORTATION REVENUE BONDS	1. TRB Table 1 2. TRB Table 2a 3. TRB Table 2b
C. Information concerning the amounts, sources, material changes in and material factors affecting pledged revenues and debt service incurred under the Transportation Revenue Bond Resolution.	1. REVENUES OF THE RELATED ENTITIES	 Fares and Tolls State and Local General Operating Subsidies State Special Tax Supported Operating Subsidies Metropolitan Transportation Authority Financial Assistance Fund Receipts Urban Taxes for Transit System MTA Bridges and Tunnels Surplus Financial Assistance and Service Reimbursements from Local Municipalities Miscellaneous Revenues
D. Financial information of the type included in TRB Table 2	1. TRANSPORTATION REVENUE BONDS	1. TRB Table 2a 2. TRB Table 2b
E. Material litigation related to any of the foregoing	1. LITIGATION	1. MTA 2. Transit System 3. Commuter System 4. MTA Bus
F. A summary presentation of the current status of development of the ERY and WRY components of the Hudson Rail Yards Project	1. FINANCIAL PLANS AND CAPITAL PROGRAMS	Non-Capital Program Projects - Hudson Yards Development and Financing

G. Updated Schedule 1 to the Financing	See item F above.	
Agreement		

CUSIP numbers used herein have been assigned by an organization not affiliated with MTA or TBTA and are included solely for the convenience of the holders of the securities listed. Neither MTA nor TBTA is responsible for the selection or uses of these CUSIP numbers, nor is any representation made as to their correctness on the securities or as indicated herein.

Part I – MTA Annual Disclosure Statement lina 265 L Line Tunnel Rehabilitation

MTA ANNUAL DISCLOSURE STATEMENT

This Metropolitan Transportation Authority ("MTA") Annual Disclosure Statement ("ADS") is dated April 29, 2020, as supplemented on June 3, 2020, to (i) replace the table captioned TRB Table 2a and the bullets that follow, in the section captioned "PUBLIC DEBT SECURITIES AND OTHER FINANCIAL **INSTRUMENTS – TRANSPORTATION REVENUE BONDS – Pledged Transportation Revenues Gross** Lien and Rate Covenant - TRB Table 2a", (ii) replace the table captioned TRB Table 2b and the bullets that follow, in the section captioned "PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS - TRANSPORTATION REVENUE BONDS - Pledged Transportation Revenues Gross Lien and Rate Covenant - TRB Table 2b", (iii) reflect the inclusion of updated information relating to MTA's Property Insurance Program, as effective May 1, 2019, in the section captioned "REGULATORY, EMPLOYMENT, INSURANCE AND LITIGATION MATTERS - INSURANCE - Property Insurance Program", (iv) incorporate by specific cross-reference the audited Consolidated Financial Statements for the years ended December 31, 2019 and 2018 of each of MTA, New York City Transit, and Triborough Bridge and Tunnel Authority, which financial statements were filed with the Municipal Securities Rulemaking Board on its Electronic Municipal Market Access system ("EMMA"), and (v) change references to the unaudited financial statements to audited financial statements, and contains information only through that date (or the specific earlier dates noted herein, such as year-end December 31, 2019 financial and statistical information). MTA intends to update and supplement specific information contained herein (1) through additional updated Continuing Disclosure Filings, (2) on a periodic basis, generally corresponding to its July, November and February financial plan updates and (3) by periodic supplement, as appropriate, in connection with its periodic issuance of bonds, notes and other obligations, or otherwise. MTA expects to file such updated and supplemental information with EMMA and may incorporate such information herein by specific crossreference. Such information is also posted on the MTA website under "MTA Info - Financial Information" at www.mta.info for convenience. Such information is accurate as of its date. MTA retains the right to update and supplement specific information contained herein as events warrant.

The factors affecting MTA's financial condition are complex. This ADS contains forecasts, projections, and estimates that are based on expectations and assumptions, which existed at the time they were prepared, and contains statements relating to future results and economic performance that are "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995. Such statements generally are identifiable by the terminology used, such as "plan," "expect," "estimate," "budget," "project," "forecast," "anticipate" or other similar words. Such forward-looking statements include, but are not limited to, certain statements contained in the information under the captions "PART 1 BUSINESS -UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES", "PART 2 FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS" and "- PART 3 PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS." The forward looking statements contained herein are based on MTA's expectations and are necessarily dependent upon assumptions, estimates and data that it believes are reasonable as of the date made but that may be incorrect, incomplete, imprecise or not reflective of actual results. Forecasts, projections and estimates are not intended as representations of fact or guarantees of results. The achievement of certain results or other expectations contained in such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements described to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Except as set forth in the preceding paragraph, MTA does not plan to issue any updates or revisions to those forward-looking statements if or when its expectations change or events occur that change the conditions or circumstances on which such statements are based. Forward-looking statements in this ADS speak only as of the date of this ADS.

The current MTA Budget and Financial Plan were adopted prior to the onset of the Coronavirus Pandemic and do not reflect the severe economic and operational consequences of the Coronavirus Pandemic, which are generally described herein under "PART 1. BUSINESS– UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC."

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PART 1. BUSINESS

THE RELATED ENTITIES

Legal Status and Public Purpose

The Metropolitan Transportation Authority ("MTA") was created by New York State legislation in 1965 (the Metropolitan Transportation Authority Act, New York Public Authorities Law, Title 11, Section 1260, et seq.), as a public benefit corporation. MTA is a corporate entity separate and apart from the State of New York (the "State"), without any power of taxation – frequently called a "public authority." MTA has the responsibility for developing and implementing a unified mass transportation policy for The City of New York (the "City") and Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk and Westchester counties (collectively with the City, the "MTA Commuter Transportation District").

MTA carries out these responsibilities directly and through its subsidiaries and affiliates, which are also public benefit corporations. The following entities, listed by their legal names, are subsidiaries^{*} of MTA:

- The Long Island Rail Road Company;
- Metro-North Commuter Railroad Company;
- Staten Island Rapid Transit Operating Authority;
- MTA Bus Company; and
- MTA Construction and Development Company (formerly MTA Capital Construction Company).

The following entities, listed by their legal names, are affiliates of MTA:

- Triborough Bridge and Tunnel Authority; and
- New York City Transit Authority, and its subsidiary, the Manhattan and Bronx Surface Transit Operating Authority.

MTA and the foregoing subsidiaries and affiliates are collectively referred to herein, from time to time, as the "Related Entities." Throughout this ADS, the Related Entities are referred to by their popular names, which are listed below under "– Use of Popular Names."

Certain insurance coverage for the Related Entities is provided by a State-licensed captive insurance public benefit corporation subsidiary of MTA, First Mutual Transportation Assurance Company ("FMTAC"). See "PART 6. REGULATORY, EMPLOYMENT, INSURANCE AND LITIGATION MATTERS – INSURANCE."

MTA and its subsidiaries are generally governed by the Metropolitan Transportation Authority Act, being Title 11 of Article 5 of the New York Public Authorities Law, as from time to time amended (the "MTA Act").

Triborough Bridge and Tunnel Authority is generally governed by the Triborough Bridge and Tunnel Authority Act, being Title 3 of Article 3 of the New York Public Authorities Law, as from time to time amended (the "MTA Bridges and Tunnels Act").

New York City Transit Authority and its subsidiary, the Manhattan and Bronx Surface Transit Operating Authority, are generally governed by the New York City Transit Authority Act, being Title 9 of Article 5 of the New York Public Authorities Law, as from time to time amended (the "MTA New York City Transit Act").

Due to the continuing business interrelationship of the Related Entities and their common governance and funding, there are provisions of each of these three acts (the MTA Act, the MTA Bridges and Tunnels Act and the MTA New York City Transit Act) that affect some or all of the other Related Entities in various ways.

The MTA subsidiary Metropolitan Suburban Bus Authority discontinued its provision of transportation services at the end of 2011. Its activities are limited to the winding up of its affairs.

As more fully described herein under "PART 1. BUSINESS – THE MTA TRANSFORMATION PLAN," MTA is required by the State's fiscal year 2019-20 budget (the "State Fiscal Year 2019-2020 Enacted Budget") to take actions which, when implemented, may substantially alter the organizational structure and operations of MTA and its Related Entities.

Use of Popular Names

The following table sets forth the legal and popular names of the Related Entities. Throughout this ADS, reference to each agency will be made using its popular name.

Legal Name	Popular Name
Metropolitan Transportation Authority	MTA (also referred to as "MTA Headquarters")
New York City Transit Authority	MTA New York City Transit
Manhattan and Bronx Surface Transit Operating Authority	MaBSTOA
Staten Island Rapid Transit Operating Authority	MTA Staten Island Railway
MTA Bus Company	MTA Bus
The Long Island Rail Road Company	MTA Long Island Rail Road
Metro-North Commuter Railroad Company	MTA Metro-North Railroad
MTA Construction and Development Company*	MTA Construction and Development
Triborough Bridge and Tunnel Authority	MTA Bridges and Tunnels

Governance

MTA's Board consists of a Chairman and 16 other voting Members, two non-voting Members and four alternate non-voting Members, all of whom are appointed by the Governor with the advice and consent of the State Senate. Of the voting Members, four Members must reside in Dutchess, Orange, Putnam and Rockland counties, respectively, and cast one collective vote. The other voting Members, including the Chairman, cast one vote each (except that in the event of a tie vote, the Chairman shall cast one additional vote). Members of MTA are, *ex officio*, the Members or Directors of the other Related Entities and FMTAC. The Chairman is by statute also the Chief Executive Officer ("CEO") of MTA and is responsible for the discharge of the executive and administrative functions and powers of the Related Entities. The Chairman and CEO of MTA is, *ex officio*, the Chairman and CEO of the other Related Entities.

As more fully described herein under "PART 1. BUSINESS – THE MTA TRANSFORMATION PLAN," MTA is required by the State Fiscal Year 2019-2020 Enacted Budget to take actions which, when implemented, may substantially alter the organizational structure and operations of MTA and its Related Entities.

Facilities and Operations

The following is a summary of the facilities and operations presently conducted by the Related Entities.

MTA Headquarters. MTA Headquarters includes the executive staff of MTA, as well as a number of departments that perform largely all-agency functions, including the Business Service Center ("BSC"), information technology, security, audit, budget and financial management, capital programs management, finance, governmental relations, insurance and risk management, legal, planning, procurement, real estate, corporate compliance and ethics, information technology, and treasury. In addition, MTA maintains its own Police Department ("MTA Police Department") with non-exclusive jurisdiction over all facilities of the Related Entities and is responsible for the costs and expenses of such police department.

Transit System. MTA New York City Transit and its subsidiary MaBSTOA operate all subway transportation and most of the public bus transportation within the City (the "Transit System"). Throughout this ADS, unless otherwise noted, the term "Transit System" includes only the operations of MTA New York City Transit and its subsidiary MaBSTOA, and

^{*} As part of the Transformation Plan (described herein), MTA formed the MTA Construction and Development Company to replace MTA Capital Construction Company. This entity will oversee the integration of all MTA capital planning, development and project delivery by planning and prioritizing capital projects across the MTA service region. See "PART 1. BUSINESS – THE MTA TRANSFORMATION PLAN".

does not include the operations of MTA Staten Island Railway (except for certain capital projects included in the Transit Capital Program (as defined below under "-*Capital Programs*")), or MTA Bus.

Commuter System. MTA Long Island Rail Road and MTA Metro-North Railroad operate commuter rail services in the MTA Commuter Transportation District (the "Commuter System").

- MTA Long Island Rail Road operates commuter rail service between the City and Nassau County and Suffolk County in Long Island and within Nassau County and Suffolk County in Long Island.
- MTA Metro-North Railroad operates commuter rail service between the City and the northern suburban counties of Westchester, Putnam and Dutchess; from the City through the southern portion of the State of Connecticut ("Connecticut"); through an arrangement with New Jersey Transit Rail Operations, Inc. ("NJ Transit"), the Port Jervis and Pascack Valley commuter rail services to Orange and Rockland Counties; and within such counties and Connecticut.

MTA Bus. MTA Bus operates certain bus routes in the City formerly served by seven private bus operators pursuant to franchises granted by the City (the "MTA Bus System"). Under an agreement between MTA and the City, the City is responsible for paying MTA Bus the difference between the actual cost of operation and all revenues and subsidies received by MTA Bus and allocable to the operation of the routes. Certain portions of the MTA Bus Capital Program (as defined below) are included in the capital programs approved by the Metropolitan Transportation Authority Capital Program Review Board ("CPRB"). The City is not responsible for paying debt service on bonds issued by MTA for the benefit of MTA Bus in connection with the 2005-2009 Capital Program and later Capital Programs described below. The expense of debt service on bonds issued by MTA for the benefit of MTA Bus in connection with the 2010-2014, 2015-2019 and 2020-2024 Capital Programs described below is submitted to the City for reimbursement. MTA Bus is an "Additional Related Transportation Entity" within the meaning of the Transportation Resolution (as hereinafter defined), which allows MTA Bus to finance its capital projects with Transportation Revenue Bonds. See "PART 3 PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – TRANSPORTATION REVENUE BONDS".

MTA Staten Island Railway. MTA Staten Island Railway operates a single rapid transit line extending from the Staten Island Ferry Terminal at St. George to the southern tip of Staten Island. The City pays the operating expenses of MTA Staten Island Railway not covered by fares, State and local subsidies, and other amounts. Capital needs of MTA Staten Island Railway are financed under Transit Capital Programs.

MTA Bridges and Tunnels. MTA Bridges and Tunnels operates all nine of the intra-State toll bridges and tunnels in the City (the "MTA Bridges and Tunnels Facilities").

- MTA Bridges and Tunnels is authorized to issue its own obligations to finance the cost of capital costs and projects of its own facilities, including the Central Business District tolling program (the "CBD Tolling Program"), and of the Transit and Commuter Systems.
- MTA Bridges and Tunnels' annual operating surplus, after meeting its own expenses and after payment of debt service on its own obligations, is used to fund the operating expenses of the Transit System and the Commuter System and/or to finance the cost of certain capital costs and projects of the Transit System and the Commuter System, including payment of debt service on obligations of MTA issued to finance such costs and projects.
- MTA Bridges and Tunnels' annual surplus investment income, after meeting its own expenses and after payment of debt service on its own obligations, is used at the MTA Board's discretion to fund the operating or capital expenses of any of the Related Entities.

As more fully described herein under "PART 2. FINANCIAL INFORMATION – REVENUES OF THE RELATED ENTITIES – Capital Program Funding Sources," and "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Central Business District Tolling Program," MTA Bridges and Tunnels will also operate the CBD Tolling Program.

MTA Construction and Development. MTA Construction and Development (formerly MTA Capital Construction) is responsible for the planning, design and construction of major MTA system expansion projects for the other Related Entities, currently including East Side Access (bringing MTA Long Island Rail Road into Grand Central Terminal) ("East

Side Access"), the Second Avenue Subway, the Canarsie Tunnel Rehabilitation Project (repairing damage to the tunnel carrying MTA New York City Transit's L subway line), and system-wide capital security projects.

Capital Programs. MTA is required to prepare and submit for approval to the CPRB successive five-year capital programs for (1) the Transit System and MTA Staten Island Railway and (2) the Commuter System. MTA Bridges and Tunnels and MTA Bus undertake their own capital planning that is not subject to CPRB approval; however, certain security projects of MTA Bridges and Tunnels and certain capital projects of MTA Bus have been included in CPRB-approved MTA Capital Programs (as defined below).

Capital program documents are distributed to certain elected officials and posted on MTA's website for review by the public. These documents are not a part of this ADS and are not filed on the Municipal Securities Rulemaking Board's Electronic Municipal Market Access System ("EMMA"). They are not prepared with a view to providing disclosure to investors in the securities of MTA or any of the Related Entities, and, accordingly, should not be relied upon by an investor in making an investment decision.

As used in this ADS, the following terms shall have the following definitions:

- The term "Capital Program," as used in connection with any five-year period, shall refer to the combined "MTA Capital Program" and "MTA Bridges and Tunnels Capital Program" for that period. For example, the term "2020-2024 Capital Program" shall refer to the combined "2020-2024 MTA Capital Program" and the "2020-2024 MTA Bridges and Tunnels Capital Program."
- The term "MTA Capital Program" as used in connection with any five-year period, shall refer to the combined "Transit Capital Program" and "Commuter Capital Program" for that period. For example, the term "2020-2024 MTA Capital Program" shall refer to the combined "2020-2024 Transit Capital Program" and the "2020-2024 Commuter Capital Program." As described herein, 2020-2024 MTA Capital Program currently consists of the following components: New York City Transit Core Capital Program, Long Island Rail Road Core Capital Program, MTA Bus Core Capital Program, MTA Interagency Core Capital Program and MTA Construction and Development Company Capital Program.
- The term "Transit Capital Program," as used in connection with any five-year period, shall refer to the capital program for MTA New York City Transit, MaBSTOA and MTA Staten Island Railway that is approved by the CPRB for that five-year period.
- The term "Commuter Capital Program," as used in connection with any five-year period, shall refer to the capital program for MTA Long Island Rail Road and MTA Metro-North Railroad that is approved by the CPRB for that five-year period.
- The term "MTA Bridges and Tunnels Capital Program," as used in connection with any five-year period, shall refer to the capital program for MTA Bridges and Tunnels that is adopted by the MTA Board, but that does not need the approval of the CPRB to become effective.

MTA-Wide Security

Mission. The MTA Office of Security works to achieve a secure environment in MTA's multi-modal transportation system for its customers and employees, and at its facilities.

Management. The MTA Office of Security, under the supervision of the Assistant Director of Security Program Management, reports to the MTA Chief Safety Officer.

General. The MTA Office of Security is pledged to the protection of life and property by adopting and incorporating contemporary technology and best practices in its operations and management based on current intelligence and evolving threat scenarios. The MTA Office of Security:

- Assesses risks and vulnerabilities associated with terrorist threats and develops mitigation strategies to protect ridership, employees and infrastructure;
- Collects intelligence and provides analysis and investigation to counter terrorist or criminal threats;

- Plans, coordinates and manages security mitigation strategies for all MTA physical assets;
- Manages and coordinates emergency planning and response with local, state and federal agencies;
- Develops training initiatives derived from intelligence information collected in coordination with the MTA Police and other law enforcement agencies;
- Maintains strategic partnerships with city, state and federal agencies and not-for-profit organizations; and
- Collaborates and coordinates with the Related Entities regarding their evolving security needs.

Cyber Security. MTA maintains a cybersecurity division within its Information Technology department lead by the MTA Chief Information and Security Officer, who reports to the MTA Chief Technology Officer. MTA uses National Institute of Standards and Technology Cybersecurity Framework to measure the maturity of cybersecurity controls and exposure to cyber risks at MTA and its Related Entities. The current focus is on improving detection, response and recovery capabilities along with a continual review of critical controls for systems which process MTA and its Related Entities corporate/IT data. Funding has been provided to cover previously identified cybersecurity investment needs. While the 2019 MTA operating budget provided \$24 million for cybersecurity, an additional \$199 million has been allocated over MTA's current financial plan period through 2023 to strengthen cybersecurity defenses at MTA and its Related Entities.

MTA Information Technology implements a robust information security program to contend with constantly changing technology, compliance requirements, increasing complexity of information security and evolving threats. MTA Information Technology's security activities involve:

- Recommending necessary changes in controls, policies, or procedures;
- Maintaining an ongoing risk assessment process with respect to rapidly changing technology and the emergence of new threats;
- Making risk management practices an integral part of doing business;
- Revisiting information security efforts as needed to maintain their relevance to changes in MTA's mission, operational requirements, threats, environment, or deterioration in the degree of compliance;
- Aligning MTA's Cyber Security Program to applicable laws, regulations, standards, and policies and ensuring compliance therewith;
- Achieving industry standard best practices to reduce cyber risk to MTA;
- Improving cyber resilience for all MTA critical infrastructure systems in order to protect them from cyber breaches and attacks; and
- Assessing the adequacy of cyber security controls to protect MTA's critical infrastructure.

For a discussion of risks to MTA relating to cybersecurity matters, see "- CERTAIN RISK FACTORS - Cybersecurity Risks" below.

Climate Change Adaptation

The Climate Adaptation Task Force at MTA, formed after Superstorm Sandy in 2012, has been coordinating and creating information exchange platforms on climate change adaptation initiatives, ideas, projects and processes among the Related Entities as well as with outside experts. The Climate Adaptation Task Force is maintained and managed by the MTA Headquarters Department of Environmental Sustainability & Compliance, which also publishes the Climate Adaptation & Resiliency Report periodically, updating completed and ongoing MTA-wide adaptation and resiliency projects. The most recent report, the 2019 Climate Adaptation & Resiliency Report, is available on MTA's website. This document is not a part of this ADS and is not filed on EMMA. It was not prepared with a view to providing disclosure to investors in the securities of MTA or any of the Related Entities, and, accordingly, should not be relied upon by an investor in making an investment decision. The Climate Task Force meets quarterly to discuss MTA's response to various climate change adaptation, greenhouse gas emissions and energy efficiency initiatives. For a discussion of risks to MTA relating to climate change matters, see "– CERTAIN RISK FACTORS – Climate Change" below.

Financial Operations

MTA's fiscal year begins on January 1. The MTA Board has adopted financial planning and budgeting practices for the Related Entities that require the preparation of four-year financial plans covering the existing and three future fiscal years. The preparation of the financial plans of the Related Entities includes provision for capital spending (including debt service) authorized by the Capital Programs of the Related Entities, including those Capital Programs approved by the CPRB as described above.

The implementation of the financial plans, as adopted from time to time, and the Capital Programs, as submitted and amended from time to time, are interrelated and complex. Any failure to implement an important component of one can adversely affect the implementation of the other. See generally "PART 2 FINANCIAL PLANS AND CAPITAL PROGRAMS".

Financial Plans and Budgetary Practices.

- The MTA Board's financial planning and budgeting practices for the Related Entities require the following in each year:
 - In July of each year, MTA management will submit to the MTA Board a revised forecast of the current year's finances, a preliminary budget for the next year and an update to the four-year financial plan (which includes the next year and the three years thereafter) (referred to as the "July Plan").
 - In September, the MTA Board and the operating committees of the MTA Board will include the July preliminary budget and financial plan on their agendas. Public comments will be solicited at the September meeting.
 - In November, a revised forecast of the current year's finances and a proposed final budget for the next fiscal year, together with a revised four-year financial plan, will be submitted to the MTA Board (referred to as the "November Plan").
 - A final budget for the next fiscal year, following public comment, will be adopted by the MTA Board by no later than December 31.
 - No later than February of the following year, MTA Budget will issue a plan book containing the financial tables and supporting schedules for the current year's budget, as well as the financial plan for the next three years, as adopted by the MTA Board the preceding December (referred to as the "February Plan"). The February Plan incorporates applicable below-the-line policies and includes necessary technical adjustments to the financial plan. The budget is allocated over the 12-month period and becomes the basis on which monthly results are compared.
 - Consistent with the MTA budget process, the November and February Plans highlight certain policy actions and other adjustments for the benefit of the MTA Board and financial stakeholders. Until these items have been approved by the MTA Board, MTA excludes their financial impact from the "Statement of Operations" (also referred to as the "baseline"). Instead, these items are captured individually, and in total, on the "Plan Adjustments." Such Plan Adjustments are also referred to as being "below-the-baseline."
- Budget and financial plan documents are distributed to certain elected officials and posted on MTA's website for review by the public. (These documents are not a part of this ADS and are not filed on EMMA. They are not prepared with a view to providing disclosure to investors in the securities of MTA or any of the Related Entities, and, accordingly, should not be relied upon by an investor in making an investment decision).
- The Related Entities (other than MTA Bridges and Tunnels) are each required by law to adopt an annual budget
 that is self-sustaining on a cash basis, including self-generated fares and other revenues, as well as operating
 subsidies of various types from numerous sources, including the State and local governments. MTA was
 recently authorized to issue notes, bonds or other obligations during 2020 through 2022 to offset decreases in
 revenue, including but not limited to, lost taxes, fees, charges, fares and tolls, or increases in operating costs of
 the Related Entities due in whole or in part to the State disaster emergency caused by the COVID-19 pandemic.
 See "PART 1. BUSINESS UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC

AND CERTAIN MTA, FEDERAL AND STATE RESPONSES – *New York State Fiscal Year 2020-2021 Budget Provisions of Importance to MTA*". MTA Bridges and Tunnels transfers surplus funds (which do not include moneys deposited into the CBD Tolling Capital Lockbox Fund as described under "PART 2. FINANCIAL INFORMATION – REVENUES OF THE RELATED ENTITIES – Capital Program Funding Sources") to finance the Transit and Commuter Systems.

- MTA is required by law each year to update and submit to the Governor a five-year strategic operation plan (that extends by one year the period covered by the four-year financial plan referenced above) that includes not only estimated operating and capital cost information, but also long-range goals and objectives, planned service and performance standards, and strategies to improve productivity.
- The State Comptroller has promulgated regulations that require the Related Entities to follow certain guidelines in reporting certain budget and financial plan information.
- MTA uses a common chart of accounts to present standardized financial reporting among all of the Related Entities.
- MTA prepares quarterly unaudited consolidated financial statements on behalf of the Related Entities as described below under "-*Quarterly Financial Statement Reports*" and files them on EMMA.

Five-Year Capital Programs.

- The MTA Act requires the preparation of five-year capital programs for (1) the Transit System and MTA Staten Island Railway and (2) the Commuter System. MTA has included funding for the MTA Bus Capital Program in approved Capital Programs as well as certain MTA Bridges and Tunnels security projects which are similarly included in a broader list of security projects in approved Capital Programs.
- Though not required by law, MTA Bridges and Tunnels prepares its own capital program that covers the same time period as the MTA Capital Programs.
- MTA Bus has identified capital projects (the "MTA Bus Capital Program") that are funded through the overall MTA Capital Program approved by the CPRB.
- The capital programs of MTA Bridges and Tunnels and MTA Bus are not required to be approved by the CPRB.
- For information relating to the most recent Capital Programs, see "PART 2 FINANCIAL PLANS AND CAPITAL PROGRAMS".

Quarterly Financial Statement Reports. MTA issues unaudited quarterly financial statement reports for the Related Entities on a consolidated basis. The reports are filed with EMMA and are posted on MTA's website. The review of the quarterly financial statements is conducted in accordance with the standards established by the American Institute of Certified Public Accountants.

Interagency Loans. The Related Entities are authorized to transfer their revenues, subsidies and other moneys or securities to another Related Entity for use by such other Related Entity, provided at the time of such transfer it is reasonably anticipated that the moneys and securities so transferred will be reimbursed, repaid or otherwise provided for by the end of the next succeeding calendar year. The use of such interagency loans allows for cash flow management on a more efficient MTA-wide basis and allows the Related Entities to meet their operating needs and other periodic financial commitments generally reducing the need for public or private cash flow borrowings. There are currently no interagency loans outstanding among the Related Entities.

Public Statements and Reports by Others. From time to time, the Governor, the State Comptroller, the Mayor of the City, the City Comptroller, County Executives, State legislators, City Council Members and other persons or groups may make public statements, issue reports, institute proceedings or take actions that contain predictions, projections or other information relating to the Related Entities or their financial condition, including potential operating results for the current fiscal year and projected baseline surpluses or gaps for future years, that may vary materially from, question or challenge the information provided herein or in budgets or financial plans prepared by MTA. While MTA may not directly respond to each such statement or action, MTA intends to update and supplement specific information contained herein and to prepare

the quarterly financial statement reports and financial plan updates described above. Investors and other market participants should refer to MTA's filings on EMMA, from time to time, for information regarding the Related Entities and their financial condition.

Management

- The Chairman and Members of MTA, by statute, are also the Chairman and Members of the other Related Entities.
- The Chairman of MTA by statute is the CEO of MTA, who is responsible for the discharge of the executive and administrative functions and powers of the Related Entities. The CEO of MTA is, *ex officio*, the CEO of the other Related Entities.
- Each of the Related Entities has its own management that is responsible for its day-to-day operations.

The following are brief biographies of MTA's senior officers.

Patrick Foye was appointed Chairman and Chief Executive Officer of MTA on March 29, 2019, and his appointment was confirmed by the State Senate on April 1, 2019. Mr. Foye previously served as MTA President. As President, he led key innovation and modernization efforts. Mr. Foye previously served as the Executive Director of The Port Authority of New York and New Jersey ("PANYNJ") and President of the Port Authority Trans-Hudson transit system ("PATH"). Prior to joining the Port Authority, he served as Deputy Secretary for Economic Development for Governor Andrew M. Cuomo. Mr. Foye was a Mergers and Acquisition partner at the law firm of Skadden, Arps, Slate, Meagher & Flom and managing partner of the firm's Brussels, Budapest and Moscow offices. He was also Executive Vice President of AIMCO, a real estate investment trust and a component of the S&P 500. Mr. Foye served as President and CEO of the United Way of Long Island. He also served as a Board member of MTA from 2010 to 2012. Mr. Foye received his B.A. from Fordham College and J.D. from Fordham Law School.

Mario Péloquin was appointed Chief Operating Officer of MTA in November of 2019. He has worked in the transit and rail industries for over 30 years. His experience includes senior level management in rail and transit regulation; building and operating a new light rail system, the O-Train system in Ottawa, Canada; managing the transportation business line for Siemens Canada; and leading the transit business line for AECOM in Canada. He has worked as General Manager for Nova Bus, a Volvo Company, where he was responsible for transit buses for the North American market. He also worked for Thales in the area of business development and was President and CEO of Thales Transportation and Security, Inc., in Pittsburgh, PA. Mr. Péloquin's most recent assignment was as Senior Vice President, Business Development and Proposals, with the Canadian-based firm SNC Lavalin, where he helped build and strengthen the company's business development processes and created a world-class proposals team to optimize the firm's chances of winning large public-private partnership (P3) projects. Mr. Péloquin holds an MBA from Université du Québec à Montréal (UQAM).

John N. "Janno" Lieber has served as MTA Chief Development Officer since May 2017. Mr. Lieber also serves as President of MTA Construction and Development. His responsibilities include oversight and management of key strategic capital initiatives focused on increasing the capacity of the MTA system. Prior to joining MTA, Mr. Lieber served as President of World Trade Center Properties for 14 years. Before that, he served as Senior Vice President of Lawrence Ruben Company and as Deputy Assistant Secretary for Policy for the U.S. Department of Transportation under President William Clinton. Earlier in his career, Mr. Lieber practiced law at a private law firm and served as a transportation policy advisor in the office of New York City Mayor Ed Koch. He is a graduate of Harvard University and New York University Law School.

Robert E. Foran has served as Chief Financial Officer of MTA since April 2010. Mr. Foran is responsible for various financial functions at MTA, such as the departments of the Comptroller, Finance, Management and Budget, and Treasury. Prior to this position, Mr. Foran spent 28 years as an investment banker in public finance, including 16 years as the head of public finance for Bear, Stearns & Co. Inc. Mr. Foran started his career in the audit division of Arthur Andersen & Co. where he became a Certified Public Accountant. Mr. Foran is a graduate of Bob Jones University and the Harvard Business School.

Thomas J. Quigley has served as MTA General Counsel since February 2018. Mr. Quigley was previously a partner in the law firm of Winston & Strawn, where he headed the firm's New York litigation department. He joined Winston &

Strawn as an associate. Mr. Quigley received his B.A. from Fairfield University, an M.S. from Columbia University and his J.D. from St. John's University School of Law.

THE MTA TRANSFORMATION PLAN

Background and Implementation to Date

To address MTA's financial situation, the State Fiscal Year 2019-2020 Enacted Budget required a series of MTA reforms, including a mandate to develop an organizational restructuring plan with the goal of streamlining MTA and providing safe and reliable service. To that end, MTA procured the services of a management consulting firm, AlixPartners, LLP ("AlixPartners"), to aid in the development of a transformation plan. The firm presented its report to MTA (the "AlixPartners Report") and initial anticipated fiscal impacts of the report's recommendations were included in the 2019 July Plan. The AlixPartners Report recommended centralizing common support functions to improve operations and create opportunities to ensure consistent standards, quality and policies across departments; unifying the management of capital programs to improve and streamline planning, development and construction so capital improvements can be delivered on time and on budget; expanding senior leadership; and cost savings by the reduction of up to 2,700 primarily administrative positions, with reliance on attrition, as much as possible, to meet this goal (the "Transformation Plan"). The Transformation Plan was approved as a blueprint plan by the MTA Board at its July 24, 2019 meeting.

MTA has begun to change the way its business is conducted, in an effort to deliver to its customers a more modern and efficient system. This significant transformation includes the centralization of all operating support functions, with a focus on core service delivery by the operating agencies. Since the November Plan, key Transformation Plan actions include:

- Hiring of the Chief Transformation Officer, who reports directly to the MTA Board and is leading the transformation of MTA;
- Establishment of a new Transformation Management Office, supporting the Chief Transformation Officer assisted by outside experts to ensure that changes are delivered effectively and successfully;
- Installation of new MTA senior leadership positions, including the Chief Operating Officer, Chief People Officer, Chief Procurement Officer and Chief Technology Officer; and
- MTA Board approval to award specialist and consulting services agreements to help deliver elements of the Transformation Plan.

COVID-19 Impact on Implementation of Transformation Plan

In light of the COVID-19 pandemic, Transformation Plan efforts will proceed, but on a different timeline that (i) focuses on employee and customer health and safety, (ii) prioritizes ensuring continued operation of MTA through the pandemic, and (iii) addresses immediate financial challenges. Layoffs related to Transformation Plan are not contemplated in 2020.

During the pandemic, the Transformation Plans leadership team has shifted its focus to providing support to ensure that back-office and administrative processes are operationally efficient, effective and resilient. In addition, there will be a renewed focus on implementing continuous improvement opportunities that do not impact resource levels and do not require any cash or capital outlays at this time. For further information related to the impact of the COVID-19 pandemic on the operations and finances of MTA and its Related Entities, see "– UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES".

UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES

Background Relating to the Global Coronavirus Pandemic. The novel coronavirus ("COVID-19") outbreak is continuing to have an adverse and severe impact on MTA's financial condition and operating results. The outbreak of COVID-19, a respiratory disease caused by a new strain of coronavirus was first detected in China and has since spread globally, including to the United States and to New York State. On March 12, 2020, the World Health Organization declared the COVD-19 outbreak to be a pandemic in the face of the global spread of the virus. The COVID-19 pandemic has

dramatically altered the behavior of businesses and people in a manner that is having negative effects on global and local economies. In addition, stock markets in the U.S. and globally, have seen significant declines and volatility attributed to concerns over COVID-19, and capital markets remain disrupted. These adverse impacts have intensified and continue to evolve daily globally, nationally, and particularly within the State and MTA's service area, which has become the most severely impacted region in the United States, with the most confirmed cases of infection and regrettably the most fatalities from COVID-19. On March 7, 2020 Governor Cuomo declared a Disaster Emergency in the State of New York and on March 13, 2020 President Trump declared a national state of emergency as a result of the COVID-19 pandemic. In addition, by order of Governor Cuomo ("New York State on PAUSE"), as of Sunday, March 22nd, all non-essential businesses Statewide were required to be closed, among other restrictive social distancing and related measures. These related measures, most recently, include by Governor's Executive Order, that effective Friday, April 17, 2020 any individual who is over age two and able to medically tolerate a face-covering shall be required to cover their nose and mouth with a mask or cloth face-covering when in a public place and unable to maintain, or when not maintaining, social distance. New York State on PAUSE restrictions remain in place at least through May 15, 2020. These interventions to fight the aggressive spread of the COVID-19 pandemic have further eroded already severely diminished public transportation and bridge and tunnel usage during the duration of the COVID-19 pandemic.

NY Essential Service Plan. On March 24, 2020, MTA management announced the implementation of the "NY Essential Service Plan ("Service Plan")." The Service Plan is designed to ensure healthcare workers, first responders and essential personnel are able to get to and from work by public transportation. MTA New York City Transit, MTA Long Island Rail Road and MTA Metro-North Railroad have implemented temporary reduced service schedules. All of the foregoing service changes are described on the MTA website, the MYmta app and on countdown clocks in stations and on platforms.

The schedule changes followed the Governor's New York State on PAUSE order, which directed New Yorkers' use of public transportation for only essential travel and attempts to limit potential exposure by spacing out riders by six feet. MTA New York City Transit, MTA Bus Company, MTA Long Island Rail Road and MTA Metro-North Railroad continue their aggressive disinfecting procedures at each of its stations twice daily, and continue daily sanitization of its fleet of rolling stock with the full fleet of train cars and buses disinfected every 72 hours or less. The Access-A-Ride dedicated fleet is disinfected daily. Surfaces frequently used by customers in stations, such as turnstiles, MetroCard and ticket vending machines, and handrails, will be disinfected twice daily with EPA-approved and National Centers for Disease Control-endorsed disinfectants.

MTA is employing its pandemic plan, which is updated regularly, and serves as a blueprint guiding MTA's response in accordance with Federal, State and local authorities. MTA is distributing the following resources to operating employees: masks, gloves to those whose jobs require it, hand sanitizer, cleaning supplies and sanitizing wipes. Additionally, MTA continues to replenish and maintain a stockpile of these essential items so that MTA can continue to distribute them as needed. In addition, to these actions, MTA has taken a number of aggressive steps to ensure worker safety, including reducing the number of crews that need to report to work, implementing rear-door boarding to ensure social distance for bus operators, eliminating cash transactions and, as detailed above, disinfecting workplaces, trains, buses and all rolling stock, among other actions. MTA is also working closely with the National Centers for Disease Control, the State Department of Health, and other government agencies during this time.

Capital Program Procurement and Construction Contract Delays. MTA Construction and Development is currently evaluating the impacts of the COVID-19 pandemic on MTA's Capital Programs. MTA Construction and Development expects to reassess a path forward for implementation of the Capital Programs in the face of the COVID-19 pandemic by early June 2020. In the meantime, MTA Construction and Development will cease the award of new Capital Program construction or consulting contracts, with few exceptions, and effective April 1, 2020, MTA Construction and Development suspended action on open solicitations for all such contracts. With limited exceptions, the dates for submission of bids, requests for qualification and requests for proposals for open solicitations for MTA Construction and Development, or for any other capital budget-funded MTA projects, will be adjourned until further notice. Similarly, previously scheduled qualification hearings and pre-bid conferences have been cancelled and will be rescheduled as appropriate. The full impact of the COVID-19 pandemic on Capital Program implementation cannot be determined at this time.

Certain information provided in this ADS with respect to MTA's Capital Programs has been provided without regard to the impact of the COVID-19 pandemic and MTA expects to supplement this ADS with relevant updates once it has reassessed its Capital Programs.

Currently Adopted Federal Legislative and Administrative Actions. The Federal government has taken several actions which are expected to provide flexibility and substantial additional funding to MTA. The Federal Transit Administration ("FTA") has given transit grantees, including MTA, the flexibility to apply certain existing grant program proceeds, previously only available for capital expenditures, to be applied for operating expenses or other purposes to address COVID-19 pandemic impacts.

In addition, Federal emergency legislation, the "Coronavirus Aid, Relief and Economic Security Act" or "CARES Act", received final passage by Congress and was signed into law by the President on March 27, 2020. The CARES Act through FTA's formula funding provisions is expected to provide approximately \$3.8 billion to MTA. Funding will be provided at a 100 percent Federal share, with no local match required, and will be available to support operating, capital and other expenses generally eligible under those programs and incurred beginning on January 20, 2020, to prevent, prepare for, and respond to the COVID-19 pandemic, including operating service for essential workers, such as medical personnel and first responders.

MTA is also eligible for FEMA payments in addition to the CARES Act funding. FEMA will cover expenses that are over and above normal costs that are related to COVID-19, such as sanitizing MTA facilities and safety at job sites to ensure COVID -19 regulations are being adhered to.

New York State Fiscal Year 2020-2021 Budget Provisions of Importance to MTA. Several provisions in the State's fiscal year 2020-21 budget (as passed by both the State Assembly and State Senate and signed by the Governor on April 3, 2020 the "State Fiscal Year 2020-2021 Enacted Budget"), are intended to provide significant financial assistance and flexibility to aid MTA in addressing the adverse impacts caused by the COVID-19 pandemic. Among the provisions in the State Fiscal Year 2020-2021 Enacted Budget addressing MTA's needs are the following:

- (i) amends existing law to allow MTA to use monies in the Central Business District Tolling Lockbox Fund (the "CBD Tolling Capital Lockbox Fund") for two years (2020 and 2021) to offset decreases in revenue (i.e. lost taxes, fees, charges, fares and tolls) or increases in operating costs due in whole or in part to the State emergency disaster caused by the COVID-19 pandemic. The CBD Tolling Capital Lockbox Fund currently includes Statewide and City sales tax revenue and City mansion tax revenue that will be used for operations. In the future, CBD tolling revenue will be added when that program is up and running, although CBD tolling revenue may be restricted under Federal law to capital expenses. All revenues deposited in such fund were under prior law only available for capital costs of MTA's 2020-24 Capital Program and successor capital programs, and costs of the Central Business District tolling program. This provision also provides that if MTA receives funds/reimbursements from the Federal government or insurance due to the COVID-19 pandemic, MTA must repay the CBD Tolling Capital Lockbox Fund, but only after it has first fully repaid any COVID-19 pandemic related public or private borrowings, draws on lines of credit; issuances of revenue anticipation notes, internal loans; or use of corpus of MTA's OPEB trust;
- (ii) creates new authorization for MTA to issue up to \$10 billion of bonds for three years (2020-2022) to offset decreases in revenue (i.e. lost taxes, fees, charges, fares and tolls) or increases in operating costs of MTA and its Related Entities due in whole or in part to the State disaster emergency caused by the COVID-19 pandemic (the "Deficit Bonds");
- (iii) amends existing law to increase MTA's statutory bond cap from \$55.497 billion to \$90.1 billion through 2024;
- (iv) commits the State and the City to each pay \$3 billion to fund capital costs of the MTA's 2020-2024 Capital Program, with the following provisions:
 - the State's Director of the Budget will determine the schedule for the City's payments of its \$3 billion share to MTA,
 - if the City does not pay in full any of its scheduled payments, the Director of the Budget shall require the State Comptroller to intercept aid to localities appropriations to the City, or any other revenue source of the City, including sales and use tax, in an amount equal to the City's unpaid balance and deposit it into a newly established State-held fund, the MTA Capital Assistance Fund, and

- the State Comptroller must pay monies deposited in the MTA Capital Assistance Fund to MTA without appropriation,
- (v) requires the City, beginning on July 1, 2020, to pay one-half of MTA's net paratransit operating expenses for four years: 2020, 2021, 2022, and 2023, and provides a statutory mechanism to intercept funds otherwise available to the City to insure payment of the City's share, if necessary. The City's contribution for each of those years is capped in the law as follows:
 - 2020: \$215 million
 - 2021: \$277 million
 - 2022: \$290 million
 - 2023: \$310 million

In addition, the State released its Fiscal Year 2021 Enacted Budget Financial Plan (the "State Fiscal Year 2021 Financial Plan") on April 25, 2020 in connection with the State Fiscal Year 2020-2021 Enacted Budget. The State Fiscal Year 2021 Financial Plan cautioned that the wide-ranging economic, health, and social disruptions caused by the COVID-19 pandemic are having an adverse impact not only on the State's finances but also on aid directed to State authorities and localities, including MTA and the City. The State's aid-to-localities ("ATL") disbursements reductions that will need to be taken in the State Fiscal Year 2021 Financial Plan may materially and adversely affect the financial position of MTA, the City of New York, and other localities. The State Fiscal Year 2021 Financial Plan included \$8.2 billion in recurring reductions in ATL disbursements, resulting in total ATL disbursements of \$61.7 billion in fiscal year 2021, as part of a plan to address the financial impacts of the COVID-19 pandemic. The State's Division of Budget expects to submit a detailed plan itemizing the appropriations and disbursements that will be reduced or withheld in May, 2020. Depending on the programs included in the reduction, the level of targeted reductions achievable, and the availability of unrestricted federal aid received by the State, average programmatic reductions could range from 20 to 50 percent. Prior to this exercise, MTA expected to receive approximately \$3.2 billion in ATL disbursements during the State's 2021 fiscal year which ends on March 31, 2021.

Updated Assessment of 2020 Impacts of the COVID-19 Pandemic and Economic Study Analysis. On April 16, 2020, MTA Chairman and Chief Executive Officer Patrick J. Foye wrote to the New York State Congressional delegation, urging Congressional action to provide an additional \$3.9 billion in Federal grant assistance "to stem the immediate hemorrhaging in the MTA's 2020 operating budget". Such aid would be supplemental to the approximately \$3.8 billion contained in the CARES Act, and would have to be included in any upcoming new Congressional COVID-19 aid package, and is also exclusive of any capital infrastructure stimulus funding to be considered by Congress and the Administration.

The CARES Act funding amounts for MTA derived from a conservative estimate based on the information MTA management had at the time. A clearer picture of the impact of the crisis has emerged over the last few weeks, and now with the aid of a detailed economic study led by McKinsey & Company (the "McKinsey Report"), MTA management projects the full 2020 financial impact of the COVID-19 crisis to the MTA to be between \$7.0 and \$8.5 billion. After the receipt of the expected \$3.8 billion under the CARES Act, the net financial impact in 2020 is estimated to be between \$3.2 and \$4.7 billion. The \$3.9 billion request is the midpoint of this range.

Compared to 2019 results, ridership has now declined 93 percent on the subways, 95 percent on MTA Metro-North Railroad, and 97 percent on the Long Island Rail Road, with equally reduced ridership on buses. Crossings at MTA Bridges and Tunnels facilities are down by an estimated 62% from 2019 figures. Based on the current ridership and reasonable forecasts of a slow return to higher (but not pre-COVID-19 pandemic) levels in 2020, MTA, based upon projections in the McKinsey Report, expects to see combined losses in fare and toll revenues of between \$4.7 and \$5.9 billion in 2020, and additional impacts in 2021. Projections for 2021 are of necessity more speculative at this time and were beyond the scope of the McKinsey Report.

As is provided in the February Plan, MTA relies upon approximately \$6.4 billion in State and local subsidies and dedicated taxes. The financial stress which MTA is experiencing as a result of the COVID-19 pandemic is being similarly felt at all levels of the government and in the social and financial lives of MTA patrons and State and local residents. This can be expected to have a substantial adverse impact on State and local revenues, on dedicated tax collections, and thus on the capacity of the State and local governments to maintain or raise the level of financial support to MTA during this crisis.

McKinsey Report, based upon limited available data, forecasts losses of between \$1.6 and \$1.8 billion in State and local taxes dedicated to MTA in 2020 as a result of the extraordinary economic downturn facing the region and nation.

Finally, MTA is also incurring additional expenses related to ensuring the safety of employees and riders, by disinfecting stations, rolling stock and work spaces to a new, even more costly level. The McKinsey Report estimates these incremental operational expenses for 2020 to be between \$700 and \$800 million (inclusive of a portion of the \$300 million COVID-19 annualized costs estimate referred to in the March 25th Supplement). The dedication of MTA workers has come at the highest cost in illness and loss of life. MTA does not expect those overhead costs to decline, but instead to increase as ridership returns.

The McKinsey Report provided an estimate of the shortfalls discussed below through the end of calendar year 2020, ranging between \$3.2 and \$4.7 billion after accounting for the \$3.8 billion MTA is expected to receive through the CARES Act.

By way of background to the McKinsey Report forecasts, on March 17, 2020, five days before the stay-at-home order went into effect for New York State, MTA projected that it would face a 2020 budget shortfall of at least \$4 billion in fare and toll revenues, based upon then current ridership and bridge and tunnel crossings declines. This estimate explicitly did not take into account the impact of the COVID-19 pandemic on taxes and other dedicated revenue streams that support MTA's operations. Approximately, one month later, it is now clear that the COVID-19 pandemic is more severe and of longer duration than had been anticipated. The impact to MTA's finances is material and leaves a gap that must be filled in order to sustain normal operations. MTA has begun refining the fare and toll revenue loss projections to reflect these changes, as well as projecting losses in the tax and other subsidy revenues that generally make up approximately one-half of MTA's total revenue sources. McKinsey & Company was contracted by MTA to analyze the potential impact of the COVID-19 pandemic on MTA's 2020 calendar year revenues.

As noted above, this analysis did not attempt to capture the impact of the COVID-19 pandemic on MTA finances in 2021. A view of 2021 will need to be developed when the key factors that influence it; the course of the virus, public health responses, including social isolation measures, and the trajectory of the economic recovery, can be seen with greater clarity. The McKinsey Report focused on operating costs and did not make any assumptions related to additional capital expenditures that MTA may incur over the course of the COVID-19 pandemic. It is limited to giving an initial view of additional operating costs.

In general, the McKinsey Report reviewed two scenarios for how revenues may be affected in the full calendar year 2020. The scenarios developed reflected different assumptions for how transit and commuter rail ridership and bridge and tunnel traffic will behave across several variables. The report further analyzed MTA's dedicated revenue streams and the impact of the COVID-19 pandemic on the variety of economic activity that generates much of the dedicated tax component of this revenue stream. The estimated incremental negative revenue impacts on MTA, after accounting for the CARES Act assistance of \$3.8 billion, ranged from \$3.2 billion to \$4.7 billion. The midpoint between these two scenarios, \$3.9 billion, was selected as the basis of MTA's April 16th request to Congress.

There is substantial risk that the higher end of the range could materialize based on uncertainties in the course of the COVID-19 pandemic, the speed of development and mass promulgation of high-volume clinical testing and protocols, the availability of medical supplies and equipment, continued public adherence to protective policies, and Federal policy response.

MTA Liquidity Resources. As of April 28, 2020, MTA had liquidity resources in the approximate amount of \$3.158 billion, consisting of a current running cash balance of \$479 million, internal available flexible funds totaling \$1.157 billion, OPEB resources of \$318 million and commercial bank lines of credit totaling \$1.204 billion (\$1.003 billion of which has been drawn). These funds provide a temporary funding "bridge" to a permanent solution to lost revenues and higher expenses. They must be repaid or replaced. Use of these monies will leave MTA with a significant gap in funding for both the operating budget and capital plan over the longer term and will likely result in additional debt issuance and unfunded operating needs.

There is no assurance that the full level of support or financial assistance discussed above will be forthcoming from any of MTA's Federal partners, or the timing of any payments to MTA. MTA does not believe that it could sustain the reductions necessary to address the impact of the COVID-19 crisis without increases in such assistance. The status of MTA and its Related Entities operations and finances have become dire, and it remains extremely difficult to predict the course of these impacts due to the dynamic nature of the COVID-19 pandemic, including uncertainties relating to its (i) duration, (ii) severity and (iii) ultimate geographic spread, as well as with regard to what actions may be taken by other governmental authorities and health care providers to contain or mitigate its impact.

MTA intends to provide regular updates on EMMA and MTA's website of the continued impacts of the COVID-19 pandemic on MTA, particularly on its operations and finances.

CERTAIN RISK FACTORS

This caption discusses certain risks associated with the investment in or ownership of the public debt securities and other financial instruments of MTA and MTA Bridges and Tunnels (collectively, "bonds" in this caption), but is not intended to be a dispositive, comprehensive or definitive listing of all risks associated with investment in the bonds. Prospective investors in the bonds should carefully consider the following risks and those risks described elsewhere in this ADS and in any related offering document before making an investment decision.

If any of the following events or circumstances identified as risks actually occur or materialize, an investor's or prospective investor's investment could be materially and adversely affected. Additional risks and uncertainties not presently known to MTA or MTA Bridges and Tunnels may also impair such investment. In addition, the order in which the following information is presented is not intended to reflect the relative importance of any such risks.

Although the various risks discussed in this ADS are generally described separately, prospective investors in bonds of MTA or MTA Bridges and Tunnels should consider the potential effects of the interplay of multiple risk factors. Where more than one significant risk factor is present, the risk of loss to an investor may be significantly increased. In addition, certain risks described herein can have multiple effects that are not necessarily limited to the heading or caption under which the risk is described. Prospective investors must consider the full potential effect of each risk.

This ADS also contains forward-looking statements that involve risks and uncertainties. Actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks described below and elsewhere in this ADS.

When making an investment decision with respect to bonds, a prospective investor can have no assurance, based on the information contained herein, that MTA or its Related Entities will have the capability to meet their respective financial obligations under the agreements or instruments to which it is a party.

Continued Severe Impacts from Coronavirus Pandemic and Public Health Threats. An outbreak of disease or similar public health threat, such as the COVID-19 pandemic, or fear of such an event, could have an adverse impact on MTA's and its Related Entities' financial condition and operating results. For a more detailed discussion of the impact on MTA and the Related Entities of the COVID-19 pandemic, see "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES" in this ADS.

The impact on MTA and its Related Entities of the COVID-19 pandemic on their operations and finances is extremely difficult to predict due to the dynamic nature of the COVID-19 pandemic, including uncertainties relating to its (i) duration, (ii) severity and (iii) ultimate geographic spread, as well as with regard to what actions may be taken by various governmental authorities and health care providers to contain or mitigate its impact.

Implementation and Timing of State Funding, Governance, Management Changes and Transformation Plan Initiatives. Each of the State legislative initiatives described in this ADS, including funding authorization and flexibility set forth in the State Fiscal Year 2020-2021 Enacted Budget, the CBD Tolling Program, expansion of design-build contracting powers, and implementation of the Mass Transit Expert Panel (for the purposes of the CBD Tolling Program) and related MTA governance proposals are complex and require time to implement. Without the savings from the Transformation Plan, MTA financial plan results would worsen by \$1.6 billion over the course of the financial plan period, through 2023. Projections of potential financial or operational and management benefits from each of the foregoing are uncertain and difficult to quantify as of the date of this ADS. There can be no assurance that the projected management and Transformation Plan budgetary gains or operational efficiencies will be achieved in whole or in part during the financial plan period (through 2023). See "PART 1. BUSINESS – THE MTA TRANSFORMATION PLAN – COVID-19 Impact on Implementation of Transformation Plan" and "UPDATE REGARDING IMPACT FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES."

Failure to Renegotiate the Paratransit Contract with the City to Achieve Equitable Cost Sharing. MTA is currently covering two-thirds of the paratransit services net operating deficit, and the current financial sharing relationship with the City is unsustainable. The State Fiscal Year 2020-2021 Enacted Budget sets forth an equitable cost sharing arrangement with the City for four years (2020 through 2023). The current MTA financial plan assumes \$360 million in savings over the plan period as a result of a new agreement with the City. No assurances can be given that the City and MTA will reach an agreement covering subsequent periods.

Implementation of the Four Percent Fare/Toll Yield Increases in 2021 and 2023. Combined fares and tolls only cover approximately half of operating costs and a little more than a third of total costs, including capital costs (exclusive of impacts from the COVID-19 pandemic). Moreover, many costs are dependent on pricing factors outside MTA's direct control (e.g., energy, health and welfare and pensions). MTA's current financial plan through 2023 assumes, \$910 million in additional fare and toll revenue from the projected 2021 increase, and another \$283 million from the 2023 increase. If projected fare and toll increases are not implemented, MTA's financial situation will deteriorate, as revenue will not be able to keep pace with inflation and other cost growth.

Maintain Fiscal Discipline over Controllable Overtime. While overtime can be a cost-effective and efficient means for addressing certain assignments, a consistent approach to managing and overseeing overtime usage is necessary. Reports from both the MTA Inspector General and special outside counsel, Morrison and Foerster, emphasized specific recommendations to address existing deficiencies. MTA, through its Overtime Task Force, is putting those recommendations into effect, and MTA's current financial plan through 2023 assumes \$177 million in overtime savings. However, this number may need to be adjusted as a result of necessary extra labor costs needed to address the COVID-19 pandemic impact.

Continuation of the Negotiation of Affordable Labor Contracts. With the approval of the Transport Workers Union ("TWU") contract in 2020, MTA will engage with its remaining labor bargaining partners to reach pattern-based settlements that are consistent with the TWU agreement. There is no assurance that this settlement pattern will be replicated or that other bargaining units will not seek compensation that exceeds the TWU contract. See "PART 6. – EMPLOYEES, LABOR RELATIONS AND PENSION AND OTHER POST EMPLOYMENT OBLIGATIONS" in this ADS.

Cybersecurity Risks. In the course of its daily business, MTA and its Related Entities collect and store sensitive data, including fare and toll collection data, financial information, security information, proprietary business information, information regarding customers, suppliers and business partners, and personally identifiable information of customers and employees. The secure processing, maintenance and transmission of this information is critical to many of MTA and its Related Entities' operations, including operations of the Transit and Commuter Systems and MTA Bridges and Tunnels' facilities. Despite security and other technical measures currently in place and those which may be adopted in the future, information technology and infrastructure may still be subject to attacks by hackers or other breaches, including as a result of error, malfeasance or other disruptions or failures. Any such breach, disruption or other failure could compromise networks, facility operations and the information stored there could be accessed, disrupted, publicly disclosed, lost or stolen. Any such access, disruption, disclosure, theft or other loss of information could result in disruptions to MTA and its Related Entities' operations and financial or other activities, including as they relate to the Transit and Commuter Systems and MTA Bridges and Tunnels' facilities or otherwise, or legal claims or proceedings, including pursuant to laws that protect the privacy of personal information, or regulatory penalties.

While MTA cybersecurity and operational safeguards are periodically tested, no assurances can be given by MTA that such measures will ensure against all potential cybersecurity threats and attacks, and accompanying disruptions and costs.

Respond to Developing Economic Environment. MTA's finances are highly influenced by economic factors. Passenger and toll revenues, dedicated taxes and subsidies (including real estate transaction revenue), debt service, pensions and energy costs are all impacted by the health of the MTA region, State and national economies. If the economic and other assumptions reflected in MTA's current financial plan are unrealized, particularly in the face of the impacts of the COVID-19 pandemic (notwithstanding a gradual recovery and substantial Federal aid), the financial plan's projected results could be materially adversely affected. As noted below, MTA's July Plan will reflect the updated impacts of the COVID-19 pandemic on operations and finances.

Funding of Capital Programs and Operations. MTA and MTA Bridges and Tunnel's funding of their Capital Programs are subject to available funding sources and access to the financial markets. See "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES" in this ADS for a description of the severe impact on Capital Program implementation, including MTA Construction and Development's temporary suspension of the award of new Capital Program construction or consulting contracts and related implementation delays. MTA and MTA Bridges and Tunnels expect to adjust capital program spending as necessary to finance the program consistent with available resources and operating needs.

MTA Bridges and Tunnels' Independent Engineer's Report. As the Independent Engineer for MTA Bridges and Tunnels, Stantec Consulting Services, Inc. ("Stantec") was requested by MTA Bridges and Tunnels to prepare its report entitled "History and Calculation of Traffic, Toll Revenues and Expenses and Review of Physical Conditions of the Facilities of Triborough Bridge and Tunnel Authority," dated April 29, 2020 ("Stantec Report"). The Stantec Report is attached to the Combined Continuing Disclosure Filings as Appendix E and, for convenience, has also been posted on the MTA website under "About the MTA – Financial Information – Investor Information" at www.mta.info. The Stantec Report is included by specific cross-reference in this ADS.

The Stantec Report notes that since March 2020, traffic on MTA Bridges and Tunnels crossings have been increasingly negatively affected by the onset and acceleration of the COVID-19 pandemic and the associated government restrictions and actions that have followed. See "PART 1 – BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES" in this ADS. Stantec could not estimate how low traffic volumes might drop, how long the direct impacts will last, the pace of recovery, or the residual adverse traffic and revenue effects in 2021 and beyond. To address these unknowns, Stantec calculated pro forma traffic and revenue forecasts representing a scenario where the COVID-19 pandemic did not occur (as a reference point) and two broad ranges of possible outcomes of the COVID-19 pandemic ("What-if Scenarios") varying in the duration of the effects and in the length of recovery. These two What-if Scenarios are presented to provide ranges in facility performance. However, these are calculations based on stated assumptions. Stantec did not opine on which, if any, of these outcomes might best represent the actual outcome, nor did Stantec make any formal projections of future traffic or revenues.

The information provided with respect to toll revenues collected by MTA Bridges and Tunnels is based on historical data. The amount of future toll revenues to be collected by MTA Bridges and Tunnels depends upon a number of factors, some of which are not in the control of MTA Bridges and Tunnels, particularly the impacts of the COVID-19 pandemic. Other factors include (1) the general physical condition of MTA Bridges and Tunnels' toll facilities; (2) traffic and toll revenue data, reflecting the 19 toll increases since 1972, including the most recent toll increase effective March 2019; (3) the impact of the E-ZPass electronic toll collection system; (4) the impact of systemwide Cashless Tolling implementation; (5) the toll structure; (6) planned and possible future toll increases; (7) economic, population, employment, and other demographic forecasts in the New York Metropolitan Area; (8) fuel availability and prices; (9) the traffic capacities of the bridges and tunnels and the existing roadway network that feeds the facilities in terms of the potential for future growth of peak versus non-peak period traffic; (10) current and programmed construction activities on MTA Bridges and Tunnels' facilities and the arterial highway network serving the New York Metropolitan Area, including the toll-free Harlem and East River bridges; and (11) mass transit network projects. See the Stantec Report for a more detailed description of such factors.

Risks Associated with Federal Funding Plans. The receipt of capital grants by MTA from the FTA is not assured and is subject to approval by the FTA, the Secretary of Transportation and Office of Management and Budget, as well as appropriation by the U.S. Congress, to the allocation and delivery procedures of the U.S. Department of Transportation ("USDOT") and the FTA, and to compliance by MTA with conditions required by the grants. If federal funding for transit programs is reduced, whether as a result of sequestration or for other reasons, MTA's receipt of FTA grant funding, as well as MTA's substantial recurring revenue from the FTA, could be delayed, not approved or cancelled.

Climate Change. Potential hazards relating to climate change include sea level rise, more severe coastal flooding and erosion hazards and severe storm and wind, all of which may have adverse effects on economic activity. Any such events, if unmitigated, may also have major impacts to the Related Entities' stations, trackway, traction power, train control and maintenance yard/shops, rail tunnels, wayside facilities and bridge and tunnel crossings. The impacts may directly impact patron safety and cause service disruptions and require prolonged recovery.

MTA and the Related Entities are responding to climate change impacts through developing adaption strategies and hardening their infrastructure against such potential hazards. Current efforts include water intrusion mitigation, erosion control, storm drainage treatment, power redundancy, fire suppression, and seismic event mitigation. MTA and the Related

Entities are also working with regional partners of MTA and its Related Entities to plan for regional adaptation needs. No assurance can be given that such measures will be sufficient to protect against all impacts of climate change.

Other Force Majeure Events. Operations of MTA and its Related Entities' transportation facilities, and the amount of fare and toll revenues and the availability of State, City and other subsidies are also at risk from other events of force majeure, such as damaging storms, winds and floods, fires and explosions, spills of hazardous substances, pandemic outbreaks, strikes and lockouts, sabotage, wars, terrorism, blockades and riots. MTA cannot predict the potential impact of such events on the financial condition of MTA and its Related Entities at this time or the degree to which financial losses or costs of remediation could exceed available insurance coverage or federal disaster assistance.

Potential Impact of Changes in Federal Law. MTA's finances are also influenced by federal public transportation provisions, funding levels and federal tax law. The Presidential administration and Congress are considering budgetary and programmatic changes in law relating to federal public transportation and infrastructure finance. Enacted federal tax reform includes changes in personal and corporate tax rates and deductions, which adversely impact MTA's opportunities for federal tax-exempt financing, particularly the prohibition of advance refundings of federal tax-exempt bonds which became effective in 2018. The limitation of itemized deductions for state and local income and property taxes to \$10,000 may also adversely impact the New York region's real estate market and levels of MTA real estate related tax subsidies. Although MTA management is monitoring federal legislative activity, at this time it is not possible to assess the financial or programmatic impacts upon MTA's finances of current federal proposals and enacted tax law changes. For a description of certain federal legislative and administrative actions taken to help MTA address the impact of the COVID-19 pandemic, see "PART 1 – BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES" in this ADS.

Potential Impediments to Access to Capital Markets or Higher Interest Rates Than Forecast. Adverse national and regional economic conditions and MTA financial performance could result in negative ratings actions and constrained access to capital markets, whether from the impacts of the COVID-19 pandemic or otherwise. The current MTA financial plan includes interest rate assumptions consistent with assumptions of the Federal Open Markets Committee ("FOMC") interest rate assumptions. However, recent actions and policy statements on future actions or a sudden and unexpected increase in economic activity may result in inflationary growth beyond the FOMC's inflation target, which in turn could lead to a further increasing of the federal funds rate. Either of the foregoing could lead to an increase in interest rates for MTA capital or cash-flow borrowings which are higher than projected in the current MTA financial plan. See "PART 1 – BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES" in this ADS.

Legislative Action. Legislation is introduced from time to time in the State Legislature which, if adopted, may affect MTA and its Related Entities. MTA cannot predict whether or not these bills will be enacted into law or how such legislation may affect the finances, Capital Programs or operations of MTA and its Related Entities. Under the MTA Act, the State has agreed with the holders of the bonds, notes or other obligations of MTA or the Related Entities, among other things, that it will not limit or alter the rights and powers vested by the MTA Act in MTA and its Related Entities to fulfill the terms of any agreements made by any of them with the holders thereof, or in any way impair the rights and remedies of such holders until such notes, bonds or other obligations are fully met and discharged.

Litigation Risks. Certain current litigation involving MTA and its Related Entities is described in PART 6 "REGULATORY, EMPLOYMENT, INSURANCE AND LITIGATION MATTERS-LITIGATION". No assurance can be given that such litigation or future litigation or legal claims involving MTA or the Related Entities will not arise, that such litigation would not have an adverse effect on the ability of MTA or the Related Entities to perform their respective obligations under applicable agreements to which they are a party, or result in substantial monetary judgments against, or impose burdensome requirements on, MTA or its Related Entities.

PART 2. FINANCIAL INFORMATION

REVENUES OF THE RELATED ENTITIES

The following is a general description of certain revenues generated by the Related Entities. While it is not a complete list of all revenues available, it does cover substantially all of the revenues pledged to pay any one or more of the securities described under "PART 3 PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS." Each MTA or MTA Bridges and Tunnels credit is supported by specific revenue streams. Reference is made to the audited financial statements of the various entities for more information relating thereto. The information in the audited financial statements may differ from the information set forth below in certain respects due to the classification of revenues or timing of receipt thereof. For example, while the Related Entities use a calendar year as their fiscal year, the State has a fiscal year that begins on April 1. Some of the information set forth below and under the caption "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – DEDICATED TAX FUND BONDS" relating to the State subsidies reflects revenues received during the State's fiscal year.

Collections of the different sources of revenues available to the Related Entities have varied, in some cases substantially, for a variety of reasons over the last ten years. Most of the revenues (including fares and tolls, dedicated taxes and miscellaneous concession and other revenues) are affected by general and local economic factors, including population and employment levels, stock market valuations, motor fuel prices and general economic activity, such as retail sales. The real estate-based revenues (i.e., the mortgage recording taxes, the urban taxes for the Transit System and the City "mansion tax"), which are equal to set percentages of the valuations of taxed transactions, are affected by a varying level of commercial and residential real property transactions, as well as, during certain periods, a generally lower value of real estate. In addition, the State's and the City's fiscal condition could affect their ability to subsidize the Related Entities and could affect their willingness to continue to provide revenues at prior or forecasted levels.

Projected revenues contained in this section were made prior to the outbreak of the COVID-19 pandemic, and therefore do not reflect its financial impact on MTA's revenue streams. MTA is continuing to evaluate the repercussions of the COVID-19 pandemic on its revenues. For further information related to the effect of COVID-19 pandemic on the operations of MTA and its Related Entities, see "– UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES".

Fares and Tolls

Ridership and Use of Bridges and Tunnels. The level of fare revenues depends to a large extent on ridership levels on the Transit System, Commuter System and MTA Bus System. Similarly, the level of toll revenues depends to a large extent on use levels on its bridges and tunnels. Those ridership and use levels are affected by a range of factors, including, without limitation, the safety, quality and efficiency of systems operations and financial and economic conditions in the New York metropolitan area.

Fare and Toll Policy. MTA determines the fares charged to users of the Commuter System and the MTA Bus System; MTA New York City Transit and MaBSTOA, together with MTA, determine the fares for the Transit System; and MTA Bridges and Tunnels determines the tolls for the MTA Bridges and Tunnels Facilities. After adopting operating expense budgets and assessing the availability of governmental subsidies (other than in the case of MTA Bridges and Tunnels), each makes a determination of fares necessary to operate on a self-sustaining cash basis in compliance with State law and covenants in the relevant bond resolutions. After taking into consideration the impact of increased fares on riders and increased tolls on bridge and tunnel users and of both on the regional economy, MTA may attempt to reduce costs or obtain additional revenues from other sources, mainly governmental sources, before increasing fares and/or tolls. As a result, even though MTA does not generally need other governmental approvals before setting fares and MTA Bridges and Tunnels does not generally need other governmental approvals before setting tolls, the amount and timing of fare and toll increases may be affected by the federal, State and local government financial conditions, as well as by budgetary and legislative processes. In the case of the New Haven Line, MTA's ability to change fares is subject to the approval of the Connecticut Department of Transportation ("CDOT") pursuant to the terms of the joint service agreement among MTA, MTA Metro-North Railroad and CDOT. At the present time, MTA is exempt from all federal requirements relating to fares charged on interstate travel on the New Haven Line. MTA's obligation to obtain approval of fare increases on the New Haven line from CDOT can also affect the amount and timing of fare increases.

Methods of Payment and Collection. MTA New York City Transit employs an automated fare collection ("AFC") system that utilizes MetroCard payments, as more fully described under "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Transit System (MTA New York City Transit and MaBSTOA) Ridership –

Automated Fare Collection." In addition to in-system sales at station booths and through vending machines, MetroCards are presently sold through out-of-system vendors by MTA Long Island Rail Road, MTA Metro-North Railroad, other entities that use MetroCard, and directly to businesses. In connection with certain of these sales, a sales commission is netted out of the amounts paid to MTA New York City Transit.

MTA New York City Transit offers an Easy Pay Express pre-payment program wherein customers pay for their rides automatically by linking their MetroCard to a credit card or debit card. MTA New York City Transit also has a program for senior citizens wherein their MetroCard usage is determined at the end of the month and they are retroactively charged the least cost based upon their usage.

MTA New York City Transit has integrated its MetroCard system with MTA Bus, NICE Bus (Nassau County), PATH (PANYNJ), JFK Air Train (PANYNJ), Westchester County Bee Line, and Roosevelt Island Tram (Roosevelt Island Operating Corporation of the State of New York).

Several ticket purchase options are available to MTA Long Island Rail Road and MTA Metro-North Railroad customers. Payment methods accepted for ticket purchases at station windows include cash, checks, credit/debit cards and vouchers. Ticket vending machines accept cash and credit and debit cards for the purchase of tickets. MTA's website allows customers from both MTA Long Island Rail Road and MTA Metro-North Railroad to establish individual Mail-and-Ride accounts for the purchase of monthly tickets, which are mailed just prior to the beginning of each month. In 2016, MTA Long Island Rail Road and MTA Metro-North Railroad introduced a mobile ticketing option (eTixTM), which allows customers to establish accounts with credit cards, purchase electronic tickets using their mobile devices and display onboard to train personnel for validation.

MTA Long Island Rail Road and MTA Metro-North Railroad customers may purchase one-way tickets onboard all trains using cash, credit cards and pin-less debit cards.

In May 2019, MTA began the roll out of the "OMNY" (One Metro New York) fare payment system at select subway stations and on all Staten Island buses. Between December 2019 and late 2020, the remainder of the subway system, all buses, and MTA Staten Island Railway are expected to become accessible through OMNY payment, and in early 2021 MTA Long Island Rail Road and MTA Metro-North Railroad is expected to begin accepting OMNY for fare payment. Throughout the expansion, the only fare product to be offered through OMNY is the full fare, pay per ride. OMNY is a design/build project that is expected to be fully functional and complete in 2023. In the interim, additional features will be introduced and layered onto the system, including the introduction of new fare products; new self-service online sales channels; an OMNY Card; and a mobile app with mobile ticketing for MTA Long Island Rail Road and MTA Metro-North Railroad customers. In 2023, it is expected that MetroCard, along with other legacy MTA Long Island Rail Road and MTA Metro-North Railroad fare payment systems, will be fully decommissioned.

MTA Bridges and Tunnels employs an electronic toll collection system ("E-ZPass") at all of its bridges and tunnels. Historically, MTA Bridges and Tunnels' E-ZPass program generally required prepayment on behalf of the customers. Substantially all of the E-ZPass users prepaid with credit cards or checks. As more fully described herein under "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Cashless Open Road Tolling ("Cashless Tolling")," MTA Bridges and Tunnels has converted to a cashless open road tolling system. MTA Bridges and Tunnels launched its "MTA Reload Card" pilot program on February 23, 2012. This program allows customers who wish to replenish their accounts with cash to receive an MTA Reload Card that is directly linked to their E-ZPass accounts. MTA Bridges and Tunnels also offers E-ZPass customers a "Pay per Trip" plan, which enables customers to set up an E-ZPass account without a pre-paid balance. Those interested in this program pay for their tolls each day through Automated Clearing House deductions from their checking accounts. For Cashless Tolling, MTA Bridges and Tunnels introduced a Tolls by Mail program, which covers anyone crossing an MTA Bridges and Tunnels facility without an E-ZPass. Customers who do not have E-ZPass are sent a toll bill which can be paid by cash, check or credit/debit card.

Payment by means other than cash (1) creates potential collection risk and (2) could delay the timing of the actual receipt of payment by the providers. Following the standard industry practice for credit and debit cards, fare and toll payments made by those means will produce cash receipts to the applicable authority and trustee which are net of standard discounts and transaction fees to the merchant processors, card associations and card issuers. Further, (a) the collection of fares and tolls by other governmental entities using an integrated payment system, such as MetroCard or E-ZPass, whereby a customer can purchase a card or pass from any of the entities for use on all of the systems, and (b) the use of the Related Entities' electronic media at commercial establishments, may subject the amounts due to MTA New York City Transit, MTA

Bus and MTA Bridges and Tunnels to multiple liens and claims prior to the time that the fares or tolls are actually earned through use of the applicable facilities. The payment of fares and tolls by non-cash methods, including checks and credit and debit cards, is subject to, among other things, collection risk, including, without limitation, bankruptcy, insolvency and other creditor and debtor rights involving both the user of the facilities and the collection and processing entities.

Historical Fare and Toll Increases. Fares on the commuter rail, subway and bus systems did not increase between 1995 and 2003 and tolls did not increase between 1996 and 2003, both among the longest periods of time without an increase in the history of the systems. During this period, the State increased certain special tax supported operating subsidies and fees in order to assist in the funding of operations and the approved capital programs. Due to general national and regional economic conditions since 2001, fares and tolls have been increased at various times. While ridership of the Transit and Commuter Systems and use of the MTA Bridges and Tunnels Facilities have fluctuated, fare and toll increases have allowed the revenues derived from such sources to generally increase during the last decade. MTA fares and tolls were increased effective in 2009, 2010, 2013, 2015, 2017, 2019 and 2020. In the case of MTA Metro-North Railroad's New Haven line, Connecticut also increased fares for travel between stations in Connecticut and the State, effective 2003, 2005, in each year from 2012-2016, and in 2018. Ridership and fares are more fully described under the captions "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE": "– Transit System (MTA New York City Transit and MaBSTOA) Ridership – *Fares*," "– Commuter System Ridership – *Fares*," "– MTA Bus Ridership – *Fares*," and "- MTA Bridges and Tunnels – Total Revenue Vehicles."

Transit System Fares. Revenues are derived from fares charged to users of the Transit System. Fare revenues on an accrual basis (not including school, elderly and paratransit reimbursement described below) for the past ten years are as follows:

Fare Revenues		Fare Revenues
(in millions)	Year	(in millions)
\$3,319.7	2015	\$4,371.4
3,629.0	2016	4,415.0
3,723.0	2017	4,486.8
4,051.8	2018	4,446.5
4,191.0	2019	4,593.8
	(in millions) \$3,319.7 3,629.0 3,723.0 4,051.8	(in millions)Year\$3,319.720153,629.020163,723.020174,051.82018

The 2020 projected fare revenue, on an accrual basis, as reported in the 2020 Adopted Budget (as defined below under "- 2020-2023 Financial Plan (the "February Plan")") is \$4,697.2 million.

The 2020 projected fare revenue, on a cash basis, as reported in the 2020 Adopted Budget, is \$4,697.4 million.

The projections provided in this ADS were made prior to the COVID-19 pandemic, and therefore do not reflect the effects of the pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES".

The current fare schedule includes a basic bus and subway fare of \$2.75, as well as a variety of discounted fare arrangements (as described in the next paragraph) covering the majority of passenger trips. Special fares are available for senior citizens, persons with disabilities, school children and on certain special services. For a description of historical fare levels and payment and collection methods and discount programs, see "RIDERSHIP AND FACILITIES USE – Transit System (MTA New York City Transit and MaBSTOA) Ridership – *Fares*" and "RIDERSHIP AND FACILITIES USE – Transit System (MTA New York City Transit and MaBSTOA) Ridership – *Automated Fare Collection*."

For MetroCard users only, MTA has continued the elimination of two-fare zones, provision of unlimited-ride 7-day and 30-day subway and bus passes and unlimited-ride 7-day combined express bus and regular bus/subway passes. MTA also offers a program for unlimited-ride 30-day and 7-day express pass holders that enables the holder to replace his or her lost pass at no cost (limit of two per calendar year per holder) if the pass was paid for by credit or debit card. Although these programs decrease revenues per trip, MTA currently projects that, over the next few years, revenues derived from fares charged to users of the Transit System will increase. This is due to MTA following a pattern of 4% biennial fare and toll increases, which is laid out in the 2020-2023 Financial Plan. In 2013, MTA implemented a \$1.00 "green" fee for each new MetroCard bought in the subway system in an effort to reduce the cost attributable to the high volume of MetroCards

produced and discarded. See "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Transit System (MTA New York City Transit and MaBSTOA) Ridership – *Automated Fare Collection*."

MTA New York City Transit may fix and adjust Transit System fares without the approval or consent of any other body or entity. However, as a recipient of federal funding, MTA New York City Transit is obligated to receive public comment prior to raising fares.

Transit System Fare Reimbursements from the City and State. MTA New York City Transit and MaBSTOA are required by law to permit, upon the request of the Mayor of the City, free or reduced fares for one or more classes of users of their facilities upon the agreement of the City to assume the burden of the resulting differential in fares and the associated administrative costs. Pursuant to an ongoing request of the Mayor, MTA New York City Transit and MaBSTOA have instituted free fare programs for certain school children and, as a requirement for obtaining grants from the federal government, have continued a half-fare program for senior citizens and have instituted a half-fare program for eligible disabled persons.

Beginning in 1996, the State and the City each began paying \$45 million annually to MTA toward the cost of the free program for students. In 2009, the State reduced its reimbursement from \$45 million to \$6.3 million but subsequently increased it to \$25.3 million in 2010. The 2010 reimbursement levels were maintained through 2019 by both the State and City. These annual reimbursements from the City and the State covered approximately 31% of the cost of the program in 2019.

MTA Bus Fares. Revenues are derived from fares charged to users of the MTA Bus System that are the equivalent of fares charged on the bus systems operated by MTA New York City Transit. Fare revenues on an accrual basis (not including school and elderly reimbursement) for the past ten years are as follows:

	Fare Revenues		Fare Revenues
Year	<u>(in millions)</u>	Year	<u>(in millions)</u>
2010	\$168.0	2015	\$210.3
2011	179.0	2016	212.5
2012	181.9	2017	217.2
2013	193.0	2018	220.5
2014	203.6	2019	224.8

The 2020 projected fare revenue, on an accrual basis, as reported in the 2020 Adopted Budget is \$225.2 million.

The 2020 projected fare revenue, on a cash basis, as reported in the 2020 Adopted Budget, is \$225.2 million.

The foregoing projections were made prior to the COVID-19 pandemic, and therefore do not reflect the effects of the pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES".

Commuter System Fares. Revenues, on an accrual basis, are derived from fares charged to users of the Commuter System. Fare revenues on an accrual basis for the past ten years are as follows:

	Fare Revenues		Fare Revenues
Year	(in millions)	Year	(in millions)
2010	\$1,049.9	2015	\$1,373.0
2011	1,139.2	2016	1,416.1
2012	1,168.9	2017	1,461.0
2013	1,250.9	2018	1,480.8
2014	1,308.7	2019	$1,525.4^{*}$

^{*} Includes \$756.7 million for MTA Metro-North Railroad and \$768.7 million for MTA Long Island Rail Road.

The 2020 projected fare revenue, on an accrual basis, as reported in the 2020 Adopted Budget is \$1,557.3 million.

The 2020 projected fare revenue, on a cash basis, as reported in the 2020 Adopted Budget is \$1,557.4 million.

These projections were made prior to the COVID-19 pandemic, and therefore do not reflect the effects of the pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES".

Fares are set in accordance with complicated formulae and vary in relation to the distance traveled. Discounts are generally available for travel during off-peak hours, for senior citizens, children and persons with disabilities, and for the purchase of weekly or monthly tickets by commuters. Mail and Ride monthly ticket customers can also receive an additional 2% discount for purchasing a joint 30-day unlimited-ride MetroCard with their monthly commuter ticket.

MTA Bridges and Tunnels Toll Revenues. Revenues are derived from tolls at the MTA Bridges and Tunnels Facilities. Toll revenues on an accrual basis for the past ten years are as follows:

	Toll Revenues		Toll Revenues
Year	(in millions)	Year	(in millions)
2010	\$1,417.0	2015	\$1,808.9
2011	1,501.6	2016	1,869.7
2012	1,491.0	2017	1,911.9
2013	1,645.2	2018	1,975.7
2014	1,676.4	2019	2,071.4

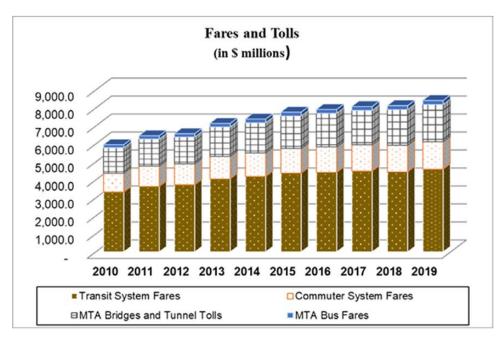
The 2020 projected toll revenue, on an accrual basis, as reported in the 2020 Adopted Budget, is \$2,118.0 million.

These projections were made prior to the COVID-19 pandemic, and therefore do not reflect the effects of the pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES".

The average toll in 2019 was \$6.29, which was \$0.16 higher than the average toll of \$6.13 in 2018. The increase was primarily due to the toll increase implemented on March 31, 2019.

For more information relating to MTA Bridges and Tunnels' tolls, see "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Toll Rates." See also the section in the Stantec Report entitled "TOLL COLLECTION ON THE TBTA FACILITIES."

Combined Transit System, MTA Bus System, Commuter System and MTA Bridges and Tunnels Facilities fares and tolls. The following bar chart shows the level of combined Transit System, MTA Bus System, Commuter System and MTA Bridges and Tunnels Facilities fare and toll revenues for the past ten years.



State and Local General Operating Subsidies

Section 18-b Program. The Section 18-b Program, a statewide mass transportation operating assistance program, is administered by the State Commissioner of Transportation (the "Section 18-b Program"). Section 18-b Program payments to MTA for the Transit System and Commuter System are made quarterly on the basis of specific annual appropriations by the Legislature, rather than pursuant to the formula set forth in the statute that is applicable to other transportation systems throughout the State. The City and the counties served by the Commuter System are required to make matching payments. The level of general operating subsidies paid annually to the Related Entities is not dependent on the level of collection of certain taxes or fees or any statutory formula. Consequently, the amount paid to the Related Entities under the Section 18-b Program is dependent on the willingness and the overall financial ability of the State, the City and such counties to make such payments.

Section 18-b Program payments, on an accrual basis, for the past ten years are as follows:

	Section 18-b		Section 18-b
	Program Payments		Program Payments
Year	<u>(in millions)</u>	Year	(in millions)
2010	\$380.9	2015	\$375.8
2011	380.9	2016	375.8
2012^{*}	375.8	2017	375.8
2013	375.8	2018	375.8
2014	375.8	2019	375.8

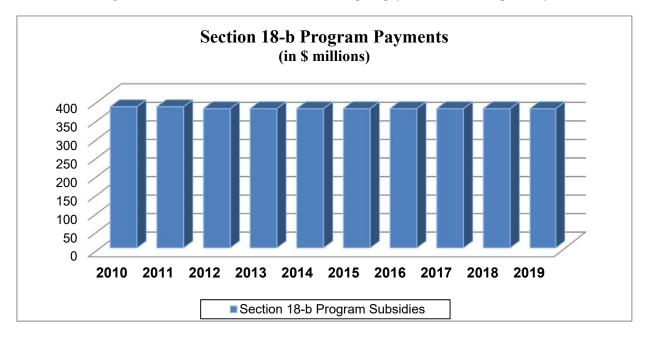
The MTA subsidiary Metropolitan Suburban Bus Authority discontinued its provision of transportation services at the end of 2011, resulting in lower Section 18-b payments in 2012 and each year thereafter.

The 2020 projected Section 18-b Program revenue, on an accrual basis, as reported in the 2020 Adopted Budget, is \$375.8 million.

The 2020 projected Section 18-b Program revenue, on a cash basis, as reported in the 2020 Adopted Budget, is \$375.8 million.

These projections were made prior to the COVID-19 pandemic, and therefore do not reflect the effects of the pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its

Related Entities, see "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES".



The following bar chart shows the level of Section 18-b Program payments made in the past ten years.

The State appropriates substantially all of such Section 18-b Program payments from a separate account (the "Transportation District Account") in a special State fund, the Mass Transportation Operating Assistance Fund (the "MTOA Fund"), the revenues of which are derived from the special taxes described below under "State Special Tax Supported Operating Subsidies." The remainder of such payments is appropriated from the State's General Fund. Appropriation from the Transportation District Account reduces the amount that would otherwise be available to be appropriated to (1) MTA New York City Transit and MaBSTOA and (2) MTA for the Commuter System, from such Account, as described below under "State Special Tax Supported Operating Subsidies — *MTTF Receipts and MMTOA Receipts.*"

Under the Section 18-b Program:

- Whenever MTA New York City Transit or MaBSTOA receives a Section 18-b Program payment from the State, the City is required to make a matching payment in accordance with amounts established by the Legislature. In the event the City fails to make any required payment, the State Comptroller is authorized to withhold an equivalent amount from certain State aid to the City and to pay such amount directly to MTA New York City Transit or MaBSTOA.
- Whenever MTA receives a Section 18-b Program payment from the State for the Commuter System, the City and counties served by the Commuter System are required to make a matching payment in accordance with amounts established by the Legislature. In the event the City and counties fail to make any required payment, the State Comptroller is authorized to withhold an equivalent amount from certain State aid to the City and counties and to pay such amount directly to MTA for the Commuter System.

State Special Tax Supported Operating Subsidies

MTTF Receipts and MMTOA Receipts. The Transit System and Commuter System have historically operated at a deficit and have been dependent upon substantial amounts of general operating subsidies from the State as well as the City. Over time, the ongoing needs of mass transportation systems in the State has led the State to supplement the general operating subsidies with additional operating subsidies supported by State special taxes.

Since 1980, in response to anticipated operating deficits of State mass transit systems, the State has enacted legislation dedicating to the Related Entities specified portions of statewide and regional taxes and fees. Currently, subject to annual appropriation, a specified share of the following revenues is paid to the Related Entities:

- The Mass Transportation Trust Fund Receipts (the "MTTF Receipts") represent the portion of the funds deposited in the State's dedicated mass transportation trust fund that are subsequently paid to MTA by deposit into an MTA dedicated tax fund (the "Dedicated Tax Fund"). The MTTF Receipts are derived from:
 - certain business privilege taxes imposed by the State on petroleum businesses (the "PBT");
 - o a portion of the motor fuel tax on gasoline and diesel fuel; and
 - o certain motor vehicle fees, including both registration and non-registration fees.
- The Metropolitan Mass Transportation Operating Assistance Account Receipts (the "MMTOA Receipts") represent the portion of the funds in the State's MMTOA Account (hereinafter defined) that are subsequently paid to MTA by deposit into the Dedicated Tax Fund. Any MMTOA Receipts for MTA Staten Island Railway and MTA Bus are allocated directly to the City, which is responsible for the MTA Staten Island Railway and MTA Bus deficits. The MMTOA Receipts are derived from:
 - o a 3/8 of one percent regional sales tax;
 - o a regional franchise tax surcharge on certain businesses;
 - o taxes on certain transportation and transmission companies; and
 - o an additional portion of the business privilege tax imposed on petroleum businesses.

See "PART 3 PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – DEDICATED TAX FUND BONDS – MTTF Receipts – Dedicated Petroleum Business Tax" and " – Motor Fuel Tax" for a more detailed description of the MTTF Receipts.

See "PART 3 PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – DEDICATED TAX FUND BONDS – MMTOA Account – Special Tax Supported Operating Subsidies" for a more detailed description of the MMTOA Receipts.

The following table sets forth the amount of MTTF Receipts and MMTOA Receipts received by MTA on an accrual basis in each of the past ten years.

	MTTF Receipts	MMTOA Receipts*	Total [†]
Year	(in millions)	(in millions)	<u>(in millions)</u>
2010	\$602.3	\$1,266.8	\$1,869.1
2011	619.6	1,259.4	1,879.0
2012	600.2	1,351.1	1,951.3
2013	589.8	1,514.7	2,104.5
2014	659.4	1,560.3	2,219.7
2015	616.6	1,560.2	2,176.8
2016	634.1	1,664.0	2,298.1
2017	606.0	1,664.0	2,270.0
2018	632.8	1,682.5	2,315.3
2019	649.1	1,819.0	2,468.1

* Excludes MMTOA share for MTA Staten Island Railway.

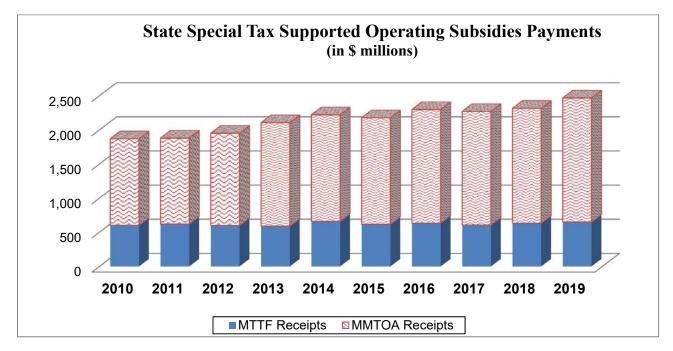
[†] Totals may not add due to rounding.

The 2020 projected MTTF Receipts are \$637.1 million and projected MMTOA Receipts are \$2,138.3 million, on an accrual basis, as reported in the 2020 Adopted Budget.

The 2020 projected MTTF Receipts are \$638.7 million and projected MMTOA Receipts are \$2,138.3 million, on a cash basis, as reported in the 2020 Adopted Budget.

These projections were made prior to the COVID-19 pandemic, and therefore do not reflect the effects of the pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES".

The following bar chart shows the level of State special tax supported operating subsidies payments for the past ten years.



Use of MTTF Receipts and MMTOA Receipts. MTTF Receipts are used first to pay debt service on the Dedicated Tax Fund Bonds described under "PART 3 PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS." To the extent that MTTF Receipts are insufficient, MMTOA Receipts are used to pay the remainder of the debt service on the Dedicated Tax Fund Bonds. After the payment of debt service on the Dedicated Tax Fund Bonds, all MTTF Receipts and MMTOA Receipts are pledged to the payment of debt service on the Transportation Revenue Bonds. All remaining MTTF Receipts and MMTOA Receipts are then allocated to the Transit System and the Commuter System in accordance with the formula provided by statute (85% to the Transit System and MTA Staten Island Railway and 15% to the Commuter System in the case of MTTF Receipts; the relative percentage of that year's State appropriation to the Transit System and the Commuter System, respectively, in the case of MMTOA Receipts; in each case, in order to establish compliance with the statutory formulae, payments allocated to the Transit System and the Commuter System are adjusted to take into account the respective amounts used to pay debt service on Dedicated Tax Fund Bonds and Transportation Revenue Bonds, if necessary, issued for the Transit System and the Commuter System are adjusted to take into account the respective amounts used to pay debt service on Dedicated Tax Fund Bonds and Transportation Revenue Bonds, if necessary, issued for the Transit System and the Commuter System are adjusted to take into account the respectively.

Collections of each of the above-referenced subsidies vary depending on the level of business activity, either statewide or regionally. In addition, all of these subsidies are subject to State appropriation. In 2010, as a result of a reduction in the Federal Medicaid Assistance Percentage Matching to the State, the Legislature again reduced its prior appropriation to MTA by \$16.7 million. Reductions made in 2010 and the prior year were the only times that existing appropriations to MTA had been reduced under circumstances in which the money was derived from "dedicated" MTA taxes and had already been collected by the State. Beginning in its State Fiscal Year 2011-2012 Enacted Budget, the State transferred unappropriated Metropolitan Mass Transportation Operating Assistance ("MMTOA") funds to the State General Debt Service Fund to cover State Service Contract Bonds associated with MTA. This amount was \$165 million in 2011-2012, \$20 million in 2013-2014 and 2015-2016, and \$30 million in 2014-2015. There were no transfers made in 2012-2013,

2016-2017, 2017-2018, 2018-2019 or 2019-2020, and there are no transfers scheduled for future years. There are currently no State Service Contract Bonds outstanding.

Metropolitan Transportation Authority Financial Assistance Fund Receipts

Mobility Tax Trust Account Receipts. In May 2009, Governor Paterson signed legislation (the "May 2009 Legislation") imposing a new payroll mobility tax (the "Payroll Mobility Tax" or "PMT") within the MTA Commuter Transportation District. The tax, which became effective in 2009, was imposed on the payroll expense of every employer who engages in business within the MTA Commuter Transportation District and the net self-employment earnings of individuals that are attributable to the MTA Commuter Transportation District. Revenue from the PMT is payable twice a month directly to MTA, without appropriation, for deposit in the Metropolitan Transportation Authority Financial Fund (the "MTA Financial Fund") created pursuant to the MTA Act.

In December 2011, Governor Cuomo signed legislation that made the following significant changes to the PMT (the "December 2011 Legislation"), effective April 1, 2012.

- employers with payroll expense less than or equal to \$312,500 in any calendar quarter, any public school district, a board of cooperative educational services, a public elementary or secondary school, a school serving students with disabilities of school age and any nonpublic elementary or secondary school that provides instruction in grade one or above, and individuals with net earnings from self-employment attributable to the MTA Commuter Transportation District that do not exceed \$50,000 for the tax year were no longer subject to the tax.
- Reduced the PMT tax from 0.34% imposed within the MTA Commuter Transportation District for certain taxpayers as follows: employers with payroll expense greater than \$312,500 but not greater than \$375,000 in any calendar quarter are subject to a reduced tax rate of 0.11%; employers with payroll expense greater than \$375,000 but not greater than \$437,500 in any calendar quarter are subject to a reduced tax rate of 0.23%. Employers with payroll expense in excess of \$437,500 in any calendar quarter continue to pay a tax rate of 0.34%.

The December 2011 Legislation further expressly provided that any reductions in aid to MTA attributable to these reductions in the PMT "shall be offset through alternative sources that will be included in the state budget" (the "PMT Revenue Offset"). Unlike the revenue from the PMT, the PMT Revenue Offset is subject to appropriation by the State and deposited into the Mobility Tax Trust Account of the Metropolitan Transportation Authority Financial Assistance Fund (the "MTA Financial Assistance Fund") created under the State Finance Law. Revenues in the Mobility Tax Trust Account are transferred monthly to the MTA Financial Fund.

The State Fiscal Year 2015-2016 Enacted Budget included an amendment to the PMT legislation to eliminate the PMT for all public library systems as well as public and free association libraries for taxable periods beginning on or after January 1, 2016.

In addition to the reduction itemized in the previous paragraph, the State Fiscal Year 2017-2018 Enacted Budget also lowered the PMT Revenue Offset appropriation by \$65 million for MTA's 2017 fiscal year. This resulted in an appropriation for the PMT Revenue Offset of \$244.3 million to MTA beginning in 2017 and continuing through future years.

The PMT and PMT Revenue Offset funds in the MTA Financial Fund can be (1) pledged by MTA to secure and be applied to the payment of bonds to be issued in the future to fund capital projects of the Related Entities, or (2) used by MTA to pay capital costs, including debt service of the Related Entities. In the absence of MTA's pledging the PMT revenues to a new bond credit, the PMT revenues are pledged to the payment of debt service on the Transportation Revenue Bonds. Subject to the provisions of any such pledge described in clause (1), or in the event there is no such pledge, the PMT revenues can be used by MTA to pay for costs, including operating costs of the Related Entities. MTA currently expects to issue bonds under a separate bond resolution payable from both the PMT revenues and the MTA Aid Trust Account Receipts described below.

The following table sets forth the amount of PMT receipts and PMT Revenue Offsets on an accrual basis for the past ten years.

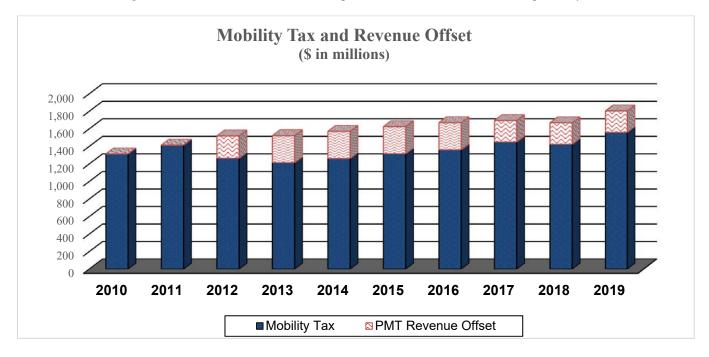
	Payroll Mobility Tax	PMT Revenue Offset
Year	<u>(in millions)</u>	<u>(in millions)</u>
2010	\$ 1,314.0	\$ 0.0
2011	1,415.0	0.0
2012	1,265.3	254.9
2013	1,215.3	307.2
2014	1,262.6	309.3
2015	1,316.9	309.3
2016	1,361.2	309.3
2017	1,450.9	244.3
2018	1,424.9	244.3
2019	1,560.5	244.3

On an accrual basis, the 2020 projected PMT receipts and PMT Revenue Offset, as reported in the 2020 Adopted Budget, are \$1,631.9 million and \$244.3 million, respectively.

On a cash basis, the 2020 projected PMT receipts and PMT Revenue Offset, as reported in the 2020 Adopted Budget, are \$1,631.9 million and \$244.3 million, respectively.

The foregoing projections were made prior to the COVID-19 pandemic, and therefore do not reflect the effects of the pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES".

The following bar chart shows the level of PMT receipts and PMT Revenue Offset for the past ten years.



MTA Aid Trust Account Receipts. The May 2009 Legislation also imposed the following four new taxes and fees (the "MTA Aid Trust Account Receipts"):

- in the MTA Commuter Transportation District, a supplemental motor vehicle license fee of a dollar per sixmonth interval (effective September 1, 2009);
- in the MTA Commuter Transportation District, a supplemental motor vehicle registration fee of \$25 for each year that the registration is valid (effective September 1, 2009);
- a tax of fifty cents on hailed vehicle trips that originate in the City and terminate anywhere within the territorial boundaries of the MTA Commuter Transportation District (effective November 1, 2009); and
- a supplemental tax of 6% on passenger car rentals in the MTA Commuter Transportation District; this was originally 5% but was changed to 6% effective June 1, 2019.

The MTA Aid Trust Account Receipts are payable quarterly directly to MTA, without appropriation, for deposit in the Corporate Transportation Account (the "Corporate Transportation Account") of the Metropolitan Transportation Authority Special Assistance Fund created pursuant to the MTA Act.

The MTA Aid Trust Account Receipts may be pledged by MTA or pledged to MTA Bridges and Tunnels to secure debt of MTA or MTA Bridges and Tunnels. Subject to the provisions of such pledge, or in the event there is no such pledge, such Receipts can be used by MTA for the payment of operating and capital costs of the Related Entities. The MTA Aid Trust Account Receipts are not currently pledged to the payment of debt service on any MTA bonds.

The following table provides historical information relating to MTA Aid Trust Account Receipts on an accrual basis for the past ten years:

State	Supplemental	Supplemental		Supplemental	
Fiscal Year	License Fee	Registration Fee	Taxicab Tax	Auto Rental Tax	<u>Total</u>
2010-11	\$22.3	\$158.0	\$81.1	\$35.0	\$296.4
2011-12	26.0	159.8	86.8	39.0	311.6
2012-13	24.4	156.0	82.9	41.0	308.0
2013-14	12.2	161.9	85.2	43.0	305.0
2014-15	10.3	161.0	82.3	45.0	298.6
2015-16	10.4	167.4	73.1	47.0	297.9
2016-17	10.5	167.5	64.0	49.0	291.0
$2017-18^{*}$	*	191.9	55.9	45.0	292.8
2018-19	*	192.3	51.7	49.0	293.0†
2019-20	*	197.5	46.0	55.6	299.1

MTA Aid Trust Account Receipts (in millions)

Supplemental License Fee and Supplemental Registration Fee amount for State Fiscal Years 2017-2018, 2018-2019 and 2019-2020 are provided by the State as a combined number.

[†] Accrued Actuals for the calendar year 2019 are \$313.2 million.

Source: New York State Division of the Budget.

The 2020 projected MTA Aid Trust Account Receipts, on an accrual basis, as reported in the 2020 Adopted Budget, is \$318.2 million.

The 2020 projected MTA Aid Trust Account Receipts, on a cash basis, as reported in the 2020 Adopted Budget, is \$318.2 million.

These projections were made prior to the COVID-19 pandemic, and therefore do not reflect the effects of the pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES".

Congestion Zone Surcharges

In April 2018, legislation was enacted in the State (the "April 2018 Legislation") providing additional sources of revenues, in the form of surcharges and fines, to address the financial needs of MTA. Among other things, the April 2018 Legislation imposed, beginning January 1, 2019, the following:

- a surcharge of \$2.75 on for-hire transportation trips (the "For-Hire Transportation Surcharge") provided by motor vehicles carrying passengers for hire (or \$2.50 in the case of taxicabs that are subject to the \$0.50 tax on hailed trips that are part of the MTA Aid Trust Account Receipts), other than pool vehicles, ambulances and buses, on each trip that (1) originates and terminates south of and excluding 96th Street in the Borough of Manhattan (the "Congestion Zone"), (2) originates anywhere in the State and terminates within the Congestion Zone, (3) originates in the Congestion Zone while in transit, and terminates anywhere in the State;
- a surcharge of \$0.75 for each person (which, together with the For-Hire Transportation Surcharge, is referred to herein collectively as the "Congestion Zone Surcharges") who both enters and exits a pool vehicle (certain carpool arrangements set forth in the April 2018 Legislation) in the State and who is picked up in, dropped off in, or travels through the Congestion Zone; and
- certain fines relating to bus rapid transit lane restrictions (the "Rapid Transit Lane Fines") captured by the use of stationary and mobile (on-bus) bus lane photo devices on up to ten bus rapid transit routes designated by the NYCDOT.

The Congestion Zone Surcharges do not apply to transportation services administered by or on behalf of MTA, including paratransit services.

The April 2018 Legislation also created the New York City Transportation Assistance Fund, held by MTA, and the following three accounts therein:

- Subway Action Plan Account,
- Outer Borough Transportation Account, and
- General Transportation Account.

Moneys in the Subway Action Plan Account may be used exclusively for funding the operating and capital costs of the subway action plan (such plan developed by MTA New York City Transit and approved by the MTA Board) (the "Subway Action Plan"). Moneys in the Outer Borough Transportation Account may be used exclusively for funding (1) the operating and capital costs of MTA facilities, equipment and services in the counties of Bronx, Kings, Queens and Richmond, and any projects improving transportation connections from such counties to Manhattan, or (2) a toll reduction program for any crossing under the jurisdiction of MTA or MTA Bridges and Tunnels. Moneys in the General Transportation Account may be used for funding the operating and capital costs of MTA. In each case, moneys may be used for various operations and capital needs or for debt service and reserve requirements.

In connection with the enactment of the State Fiscal Year 2019-2020 Enacted Budget, moneys from the Outer Borough Transportation Account were earmarked to establish two additional rebate programs. See "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Toll Rates – Additional Outer Borough Transportation Account Funded Toll Rebate Programs."

The Congestion Zone Surcharges, together with interest and penalties thereon, will be deposited daily to the credit of the State Comptroller in trust for MTA. The State Comptroller will retain such amount as is determined to be necessary for refunds and the State Commissioner of Taxation and Finance will deduct reasonable amounts for costs incurred to administer, collect and distribute such amounts. If sufficient amounts are collected and available, then in accordance with the April 2018 Legislation, on or before the 12th day of each month, after reserving amounts for refunds and reasonable costs, the Commissioner of Taxation and Finance will certify to the State Comptroller the amounts collected in the prior month and the following amounts will be transferred to the following accounts by the 15th business day of each succeeding month (except for the Rapid Transit Lane Fines, which are payable quarterly):

- to the Subway Action Plan Account, without appropriation:
 - o in calendar year 2020 the first \$301 million, and
 - o in calendar year 2021 and thereafter the first \$300 million.
- to the Outer Borough Transportation Account, without appropriation, in each year the next \$50 million; provided that any uncommitted balance at the end of each calendar year shall be transferred to the General Transportation Account (the use of any funds paid into the Outer Borough Transportation Account must be unanimously approved by the members of the MTA Capital Program Review Board appointed upon the recommendations of the Temporary President of the Senate and the Speaker of the Assembly and the member appointed by the Governor); and
- to the General Transportation Account, without appropriation, (1) all excess Congestion Zone Surcharges in each calendar year above the amounts required to be deposited to the Subway Action Plan Account and the Outer Borough Transportation Account, (2) the uncommitted balance at the end of each year in the Outer Borough Transportation Account, and (3) Rapid Transit Lane Fines, including interest and penalties until expiration on September 20, 2020.

Revenues from Rapid Transit Lane Fines bypass the Subway Action Plan Account and the Outer Borough Transportation Account and flow directly into the General Transportation Account. These funds are to be remitted by the City to MTA on a quarterly basis.

As a result of the filing of a lawsuit and temporary restraining order in late 2018, there was a delay in the collection of the For-Hire Transportation Surcharge, which was expected to begin in January, 2019. The temporary restraining order was lifted at the end of January, and collection of the fees began in February 2019.

The following table provides information relating to Congestion Zone Surcharge Receipts on an accrual basis since the onset of the surcharge in 2019:

Congestion Zone Surcharge (in millions)

	Subway Action	Outer Borough	General
Year	Plan Account*	Transportation Account*	Transportation Account [†]
2019	\$336.4	\$0	\$0

* Set by statute.

* Remainder after deposits to Subway Action Plan Account and Outer Borough Transportation Account.

The 2020 projected For-Hire Transportation Surcharges, on an accrual basis, as reported in the 2020 Adopted Budget, is \$385.0 million, with \$301 million for the Subway Action Plan Account, \$50 million for the Outer Borough Transportation Account and \$34 million for the General Transportation Account.

The 2020 projected For-Hire Transportation Surcharges, on a cash basis, as reported in the 2020 Adopted Budget, is \$385.0 million, with \$301 million for the Subway Action Plan Account, \$50 million for the Outer Borough Transportation Account and \$34 million for the General Transportation Account.

These projections were made prior to the COVID-19 pandemic, and therefore do not reflect the effects of the pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES".

MTA Bridges and Tunnels Surplus

General. MTA Bridges and Tunnels provides capital and operating assistance to the Transit and Commuter Systems in three important ways:

- it pays debt service on bonds that were issued to finance Transit and Commuter System capital projects;
- it generates annual MTA Bridges and Tunnels Operating Surplus, as described below, that is distributed to MTA New York City Transit and to MTA for the Commuter System in accordance with a statutorily mandated formula; and
- it generates an annual MTA Bridges and Tunnels Surplus Investment Income, as described below, that is distributed at the discretion of the MTA Board.

In the last ten years, MTA Bridges and Tunnels has not issued new money bonds to finance capital projects for the benefit of the Transit and Commuter Systems.

The following table sets forth for the past ten years MTA Bridges and Tunnels' total support to the Transit and Commuter Systems, consisting of (a) the debt service paid on bonds issued for Transit and Commuter System capital projects, (b) the MTA Bridges and Tunnels Operating Surplus and (c) the MTA Bridges and Tunnels Surplus Investment Income.

	Total Support to Transit and Commuter Systems
Year	(in millions)
2010	\$ 842.6
2011	939.6
2012	892.7
2013	1,004.6
2014	992.8
2015	1,124.9
2016	1,126.1
2017	1,122.6
2018	1,090.0
2019	1,138.7

MTA Bridges and Tunnels Operating Surplus. Section 569-c of the MTA Bridges and Tunnels Act and Section 1219-a of the MTA New York City Transit Act require MTA Bridges and Tunnels to transfer, subject to the pledge in favor of the holders of the Transportation Revenue Bonds, its operating surplus ("MTA Bridges and Tunnels Operating Surplus") to MTA New York City Transit and to MTA for the benefit of the Commuter System in accordance with a statutorily mandated formula hereinafter described.

The MTA Bridges and Tunnels Operating Surplus subject to such transfer is the amount remaining from all tolls and other operating revenues derived from the MTA Bridges and Tunnels Facilities after (1) payment of (a) operating, administration and other expenses of MTA Bridges and Tunnels properly chargeable to such Facilities, and (b) principal of and sinking fund installments and interest on its bonds, including bonds issued under the MTA Bridges and Tunnels Senior Resolution and the MTA Bridges and Tunnels Subordinate Resolution (as defined under "PART 3 PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS", and any other bond resolutions established from time to time to finance additional authorized projects of MTA Bridges and Tunnels, including the CBD Tolling Program, to the extent, if any, paid from such sources, and (2) provision for (x) reserves and for all contract provisions with respect to any such bonds and (y) other obligations, including certain swap payments (both regularly scheduled payments and termination payments), incurred in connection with any of its authorized projects. See "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS." Monies deposited into the CBD Tolling Capital Lockbox Fund are not taken into consideration in the calculation of MTA Bridges and Tunnels Operating Surplus.

The first \$24 million of MTA Bridges and Tunnels Operating Surplus must be allocated to MTA New York City Transit, and any excess is divided equally between MTA New York City Transit and the Commuter System. The foregoing

allocations are adjusted to take into account the proportional amounts of MTA Bridges and Tunnels' debt service reasonably attributable to the bond proceeds used for their respective benefit.

The MTA Chairman is authorized in his discretion to advance to MTA and MTA New York City Transit monthly, from available funds, an aggregate amount not to exceed 90% of the Chairman's estimate of the sum which that month's operations will contribute to the MTA Bridges and Tunnels Operating Surplus that he anticipates will or may be certified and transferred for the fiscal year in which such month falls.

As set forth below in the "MTA Bridges and Tunnels Combined Surplus" chart, the MTA Bridges and Tunnels Operating Surplus has fluctuated in amount over the past ten years. In 2011, the MTA Bridges and Tunnels Operating Surplus increased, due to higher operating revenues and decreased expenses, and a toll increase. In 2012 and 2014, the decrease in MTA Bridges and Tunnels Operating Surplus was primarily the result of higher operating expenses and, in 2012, an increase in the funding of the Necessary Reconstruction Reserve, a reserve established by MTA Bridges and Tunnels primarily for its own capital projects (the "Necessary Reconstruction Reserve"). The balances for the Necessary Reconstruction Reserve were \$374.2 million in 2015, \$425.8 million in 2016, \$416.8 million in 2017, \$410.6 million in 2018, and \$411.5 million in 2019. In 2013, the MTA Bridges and Tunnels Operating Surplus increased primarily due to increased operating revenues. A toll increase became effective on March 3, 2013, and there was a 0.6% increase in traffic as compared to 2012 levels. In 2014, the MTA Bridges and Tunnels Operating Surplus increased primarily due to increased operating revenues and decreased debt service costs. In 2015 and 2016, the MTA Bridges and Tunnels Operating Surplus increased primarily due to additional toll revenues generated by a 4% growth in traffic volume in 2015, in addition to a toll increase implemented on March 22, 2015, and a 3% growth in traffic volume in 2016. In 2017 and 2018, the MTA Bridges and Tunnels Operating Surplus declined due to increased operating and debt service costs in 2017 and a contribution to the MTA Bridges and Tunnels Capital Program in 2018. In 2019, the MTA Bridges and Tunnels Operating Surplus increased due to higher operating revenue, which was a result of higher traffic volume and a toll increase implemented on March 31, 2019.

MTA Bridges and Tunnels Surplus Investment Income. MTA Bridges and Tunnels generates investment income on funds held by it (the "MTA Bridges and Tunnels Surplus Investment Income"), principally from the debt service funds and operating and capital reserves (including the Necessary Reconstruction Reserve) held by MTA Bridges and Tunnels.

Combined Surplus Amounts. The MTA Bridges and Tunnels Operating Surplus and the MTA Bridges and Tunnels Surplus Investment Income (together, the "MTA Bridges and Tunnels Combined Surplus") are used to fund the operating expenses of the Transit System and the Commuter System and/or to finance the cost of certain capital costs and projects of the Transit System and the Commuter System, including payment of debt service on obligations of MTA issued to finance such costs and projects. As more fully described above, MTA Bridges and Tunnels Operating Surplus is, subject to the pledge in favor of the holders of the Transportation Revenue Bonds, distributed to MTA New York City Transit and MTA for the benefit of the Commuter System in accordance with a statutory formula. The MTA Bridges and Tunnels Surplus Investment Income is not subject to the pledge in favor of the holders of the Transportation.

The MTA Bridges and Tunnels Combined Surplus amounts transferred for each of the past ten years on an accrual basis, set forth in the table below, are net of amounts paid for debt service and other obligations described above.

MTA Bridges and Tunnels Combined Surplus

<u>Fiscal Year</u>		MTA New York City <u>Transit Share</u>	MTA Share (Commuter System)	MTA Bridges and Tunnels <u>Combined Surplus</u>
2010 Operating Surplus Investment Income		\$152,026,084	\$277,083,603 146,449	\$429,109,687 146,449
2011	<u>Total</u>	\$152,026,084	\$277,230,052	\$429,256,136
Operating Surplus Investment Income		\$201,544,872	\$326,113,156 85,100	\$527,658,028 85,100
	<u>Total</u>	\$201,544,872	\$326,198,256	\$527,743,128
2012 Operating Surplus		\$189,218,474	\$308,424,309	\$497,642,783
Investment Income	Total	-0- \$189,218,474	<u>136,889</u> \$308,561,198	136,889 \$497,779,672
2013 Operating Surplus		\$246,901,830	\$367,308,419	\$614,210,249
Investment Income		-0-	131,302	131,302
2014	<u>Total</u>	\$246,901,830	\$367,439,721	\$614,341,551
Operating Surplus Investment Income		\$265,569,841 -0-	\$371,984,103 136,988	\$637,553,944 136,988
	Total	\$265,569,841	\$372,121,091	\$637,690,932
2015 Operating Surplus		\$318,434,758 -0-	\$432,281,958	\$750,716,715
Investment Income	<u>Total</u>	\$318,434,758	<u>182,604</u> \$432,464,562	182,604 \$750,899,319
2016				
Operating Surplus Investment Income		\$312,901,028 -0-	\$430,007,919 634,951	\$742,908,948 634,951
	Total	\$612,901,028	\$430,642,870	\$743,543,899
2017		\$210.2 <i>CC</i> 054	¢ 400 77(997	¢740 142 941
Operating Surplus Investment Income		\$310,366,954 -0-	\$429,776,887 1,476,772	\$740,143,841 1,476,772
	Total	\$310,366,954	\$431,253,659	\$741,620,613
2018 Operating Surplus		\$290,134,527	\$411,821,544	\$701,956,071
Investment Income	Total	-0- \$290,134,527	<u>2,602,773</u> \$414,424,317	2,602,773 \$704,558,844
2019 Operating Surplus		\$334,064,042	\$445,011,233	\$779,075,275
Investment Income	<u>Total</u>	<u>-0-</u> \$334,064,042	3,688,754 \$448,699,987	3,688,754 \$782,764,029

Going forward, for 2020 and beyond, MTA Bridges and Tunnels' operating surplus is expected to be severely adversely impacted by the COVID-19 pandemic. See "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES".

Financial Assistance and Service Reimbursements from Local Municipalities

Commuter System Station Maintenance Payments. The City and each of the seven counties in the MTA Commuter Transportation District outside the City are billed an amount fixed by statute for the operation, maintenance and use of Commuter System passenger stations within the City and each county. The amount is adjusted each year for increases or decreases in the consumer price index for wage earners and clerical workers in the New York, Northeastern-New Jersey Consolidated Metropolitan Statistical Area. The Legislature has not made any changes in the base amounts since 2000. Further modifications may be made by the Legislature. In the event the City or any of the counties do not make their payments on a timely basis, the statute provides a mechanism whereby the State Comptroller can withhold certain other payments in order to satisfy the payments to MTA. Consequently, the Commuter System station maintenance payments are stable and generally grow gradually with corresponding annual inflation.

The following table sets forth the station maintenance, operation and use assessments received by MTA on an accrual basis in each of the last ten years:

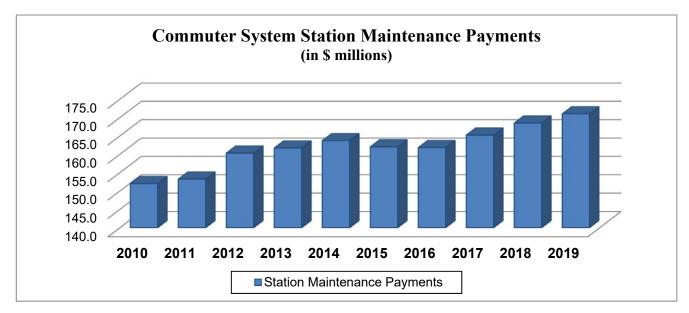
	Payments		Payments
Year	(in millions)	Year	(in millions)
2010	\$152.0	2015	\$162.0
2011	153.2	2016	161.8
2012	160.3	2017	165.2
2013	161.7	2018	168.5
2014	163.7	2019	171.0

The 2020 projected Commuter System Station Maintenance payments, on an accrual basis, are \$178.2 million, as reported in the 2020 Adopted Budget.

The 2020 projected Commuter System Station Maintenance payments, on a cash basis, are \$175.5 million, as reported in the 2020 Adopted Budget.

These projections were made prior to the COVID-19 pandemic, and therefore do not reflect the effects of the pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES".

The following bar chart shows the level of Commuter System station maintenance payments made in the past ten years.



Transit System Service Reimbursements from the City. Policing of the Transit System is being carried out by the New York City Police Department at the City's expense. MTA New York City Transit is responsible for certain capital costs and support services related to such police activities, a small portion of which is reimbursed by the City.

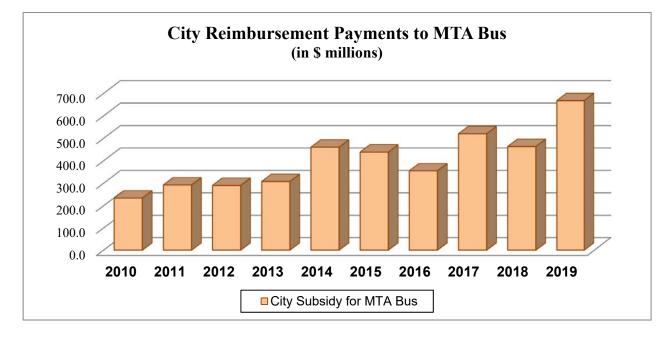
MTA Bus Reimbursements from the City. The City has agreed to reimburse MTA Bus the difference between the actual cost of operation of the City Bus Routes (other than certain capital costs) and all revenues and subsidies received by MTA Bus and allocable to the operation of the City Bus Routes. The annual amounts payable by the City to MTA Bus are subject to review by the City. The amount and timing of payments received from the City could be affected by the financial condition of the City.

As opposed to other revenues and subsidies discussed herein, the MTA Bus reimbursements from the City are reported on a cash basis rather than on an accrual basis. See "PART 4 OPERATIONS – MTA BUS COMPANY."

The following table sets forth the amounts reimbursed by the City for MTA Bus operational costs on a cash basis in each of the past ten years:

	Payments		Payments
Year	(in millions)	Year	<u>(in millions)</u>
2010	\$233.9	2015	\$438.3
2011	292.1	2016	355.0
2012	290.0	2017	519.9
2013	307.5	2018	463.2
2014	460.2	2019	667.6

The following bar chart shows the level of City reimbursement payments to MTA Bus for the past ten years.



Paratransit. Under an agreement with MTA, the City contributes an operating subsidy to support MTA New York City Transit paratransit services equal to the lesser of (1) 33% of the operating deficit, calculated after taking into account paratransit passenger revenue, certain Urban Tax revenues (as defined below under "—Urban Taxes for Transit System"), and MTA New York City Transit administrative expenses or (2) an amount that is 20% greater than the amount required to be paid by the City for the preceding calendar year. Any remaining operating deficit is funded by MTA New York City Transit. See "PART 4 OPERATIONS – TRANSIT SYSTEM – Description of the Transit System – *Paratransit.*"

The following table sets forth the amount of the paratransit system cost that the City funded on an accrual basis in each of the last ten years pursuant to the Paratransit Agreement between the City and MTA dated May 28, 1993.

New York City Contribution			New York City	
			Contribution	
Year	(in millions)	Year	(in millions)	
2010	\$ 73.8	2015	\$126.1	
2011	88.5	2016	133.3	
2012	106.2	2017	134.1	
2013	127.5	2018	150.0	
2014	129.0	2019	170.7	

As described under "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES – *New York State Fiscal Year 2020-2021 Budget Provisions of Importance to MTA*," the City, beginning on July 1, 2020, is required to pay one-half of MTA's net paratransit operating expenses for four years: 2020 (capped at \$215 million), 2021 (capped at \$277 million), 2022 (capped at \$290 million), and 2023 (capped at \$310 million), and provides a statutory mechanism to intercept funds otherwise available to the City to insure payment of the City's share, if necessary. See "PART 1 – CERTAIN RISK FACTORS – *Failure to Renegotiate the Paratransit Contract with the City to Achieve Equitable Cost Sharing.*"

Miscellaneous Revenues

Transit System and MTA Bus. MTA New York City Transit, MaBSTOA and MTA Bus receive revenues from concessions granted to vendors, revenues from advertising and other space rented in transit vehicles and facilities, and fines collected by the Transit Adjudication Bureau.

The following table sets forth the miscellaneous revenues received by MTA New York City Transit, MaBSTOA and, beginning in 2014, MTA Bus, on an accrual basis in each of the last ten years:

Miscellaneous			Miscellaneous	
	Revenues		Revenues	
Year	<u>(in millions)</u>	Year	(in millions)	
2010	\$106.3	2015	\$159.3	
2011	107.8	2016	159.6*	
2012	108.4	2017	153.9*	
2013	116.3	2018	141.6*	
2014	133.6	2019	144.7^{*}	

* Miscellaneous revenues for the Transit System include MTA Bus which consists of \$6.1 million of advertising revenues for 2016, \$4.1 million for 2017, \$3.4 million for 2018 and \$2.8 million for 2019.

Commuter System. MTA Long Island Rail Road and MTA Metro-North Railroad receive revenues from concessions granted to vendors, advertising and other space rented in Commuter System vehicles and facilities, the sale of power and other sundry revenue.

The following table sets forth the miscellaneous revenues (other than rental and concession revenues from Penn Station and Grand Central Terminal, which are not pledged under the Transportation Resolution) received by MTA Long Island Rail Road and MTA Metro-North Railroad on an accrual basis in each of the last ten years:

Miscellaneous Revenues			Miscellaneous Revenues
Year	(in millions)	Year	<u>(in millions)</u>
2010	\$55.5	2015	\$74.2
2011	54.6	2016	73.4
2012	86.5	2017	64.2
2013	64.1	2018	60.1
2014	69.0	2019	54.3*

Includes \$34.3 million for MTA Long Island Rail Road and \$20.0 million for MTA Metro-North Railroad.

Mortgage Recording Taxes

The mortgage recording taxes (MRT-1 and MRT-2) are described below.

General. Certain moneys paid to MTA by the City and counties in the MTA Commuter Transportation District pursuant to certain mortgage recording taxes may be used for the operating and capital costs, including debt service and reserve requirements, of or for MTA, MTA New York City Transit and their subsidiaries. Such taxes do not secure any outstanding MTA or MTA Bridges and Tunnels bonds, provided, however, the MTA Board, in its sole discretion may determine from time to time that specific amounts of mortgage recording taxes be applied to the payment of debt service for specific periods of time. Subject to the preceding sentence, neither MTA nor MTA Bridges and Tunnels currently expects to secure future bonds with mortgage recording taxes.

MRT-1 Receipts. Pursuant to Section 253(2)(a) of the New York Tax Law (the "Tax Law"), a tax is imposed (the "MRT-1 Tax") on recorded mortgages of real property situated within the State, subject to certain exclusions (such net MRT-1 Tax collections remitted to MTA are referred to as the "MRT-1 Receipts"). The tax is currently 30 cents per \$100 of mortgage recorded. The MRT-1 Tax is paid by the property owner taking out the mortgage loan.

MRT-1 Receipts must be applied by MTA,

- first, to meet MTA Headquarters Expenses (as hereinafter defined), and
- second, to make deposits into the Transit Account (55% of the remaining amount) and the Commuter Railroad Account (45% of the remaining amount) of the Special Assistance Fund.

Moneys in the Transit Account are required to be used to pay operating and capital costs of MTA New York City Transit, its subsidiaries, and MTA Staten Island Railway, and moneys in the Commuter Railroad Account, after first making the transfers described below under "*Transfers to State Suburban Transportation Fund from MRT-1 Receipts*," are required to be used to pay operating and capital costs of the commuter railroad operations of MTA, other than MTA Staten Island Railway.

MRT-2 Receipts. Pursuant to Section 253(1-a) of the Tax Law, an additional tax is imposed (the "MRT-2 Tax") on recorded mortgages of real property situated within the State, subject to certain exclusions. The MRT-2 Tax is paid by the institution (or other persons) making the mortgage loan to the property owner(s). The Tax Law requires that the portion of the MRT-2 Tax collected on certain residential dwelling units be remitted to MTA for deposit into the Corporate Transportation Account of the Special Assistance Fund (such net MRT-2 Tax collections remitted to MTA are referred to as the "MRT-2 Receipts").

Moneys deposited into the Corporate Transportation Account from the MRT-2 Tax are applied as follows:

- first, to make deposits into the Dutchess, Orange and Rockland Payment Subaccount described below under "Transfers to Counties from MRT-2 Receipts," and
- second, to make deposits into the Corporate Purposes Subaccount to be used to pay operating and capital costs, including debt service and debt service reserve requirements, if any, of, or incurred for the benefit of, MTA, MTA New York City Transit and their respective subsidiaries.

MRT-1 and MRT-2 Receipts. Under existing law, no further action on the part of the Legislature is necessary for MTA to continue to receive such moneys (i.e., the State is not required to appropriate the moneys to MTA, so the moneys continue to be paid to MTA whether or not the State budget has been adopted). However, the State is not obligated to impose, or to impose at current levels, the MRT-1 Tax or the MRT-2 Tax or to direct the proceeds to MTA as presently provided.

MRT-1 Receipts and MRT-2 Receipts (collectively, "MRT Receipts") are subject to significant volatility from yearto-year. This volatility reflects the discretionary nature of the transactions that lead to the collection of the tax.

The following charts show the historical annual MRT Receipts, on an accrual basis, available for operations and capital costs for the past ten years.

MRT-1 Receipts	Increase/		MRT-1 Receipts	Increase/
(in millions)	(Decrease)	Year	(in millions)	(Decrease)
\$145.2	(4)%	2015	\$320.6	18%
161.8	11	2016	330.1	3
194.0	20	2017	314.4	(5)
255.8	32	2018	316.6	0.7
271.9	6	2019	332.5	5
MRT-2 Receipts	Increase/		MRT-2 Receipts	Increase/
(in millions)	(Decrease)	Year	(in millions)	(Decrease)
\$ 90.6	(3)%	2015	\$113.5	20%
84.0	(7)	2016	130.0	15
93.6	11	2017	138.3	6
109.7	17	2018	131.2	(3)
\$ 94.7	(14)%	2019	135.6	3
	<u>(in millions)</u> \$145.2 161.8 194.0 255.8 271.9 MRT-2 Receipts <u>(in millions)</u> \$ 90.6 84.0 93.6 109.7	(in millions) (Decrease) \$145.2 (4)% 161.8 11 194.0 20 255.8 32 271.9 6 MRT-2 Receipts Increase/ (in millions) (Decrease) \$ 90.6 (3)% 84.0 (7) 93.6 11 109.7 17	$\begin{array}{c cccc} (\underline{\text{in millions}} & (\underline{\text{Decrease}}) & \underline{\text{Year}} \\ \$145.2 & (4)\% & 2015 \\ 161.8 & 11 & 2016 \\ 194.0 & 20 & 2017 \\ 255.8 & 32 & 2018 \\ 271.9 & 6 & 2019 \\ \hline \\ \text{MRT-2 Receipts Increase/} \\ (\underline{\text{in millions}}) & (\underline{\text{Decrease}}) & \underline{\text{Year}} \\ \$90.6 & (3)\% & 2015 \\ \$4.0 & (7) & 2016 \\ 93.6 & 11 & 2017 \\ 109.7 & 17 & 2018 \\ \hline \end{array}$	$\begin{array}{c ccccc} (\begin{tabular}{ccccc} (\begin{tabular}{c} (\begin{tabular}{c} (\begin{tabular}{c} millions) \\ \$145.2 \\ 161.8 \\ 11 \\ 194.0 \\ 20 \\ 2015 \\ \$320.6 \\ 161.8 \\ 11 \\ 2016 \\ 330.1 \\ 194.0 \\ 20 \\ 2017 \\ 314.4 \\ 255.8 \\ 32 \\ 2018 \\ 316.6 \\ 271.9 \\ 6 \\ 2019 \\ 332.5 \\ \hline \end{tabular}$

Deductions for Headquarters Expenses. The general, administrative and operating expenses of MTA, net of reimbursements, recoveries and adjustments ("MTA Headquarters Expenses"), to the extent not paid from other sources, are required to be paid from MRT-1 Receipts prior to making any deposits to the Transit Account or the Commuter Railroad Account. MTA Headquarters Expenses do not include capital expenditures for headquarters operations. Among other uses, MTA pays the following annual amounts as MTA Headquarters Expenses:

- expenses of operating MTA Headquarters, including MTA Police Department, and
- an amount paid to MTA Bridges and Tunnels to fund a toll rebate program for residents of Broad Channel and the Rockaway Peninsula when using E-ZPass on the Cross Bay Veterans Memorial Bridge.

The amount of MTA Headquarters Expenses in any year is neither contractually nor statutorily limited. The amount of MTA Headquarters Expenses in future years may be affected by inflation, expansion or contraction of activities the expenses for which are not reimbursable, non-recurring expense items and other circumstances including changes in MTA's reimbursement practices with respect to the other Related Entities. The amount of MRT-1 Receipts received by MTA each month that is required to be applied to MTA Headquarters Expenses may vary widely based on MTA's cash flow requirements and the timing of reimbursements from the other Related Entities.

Transfers to State Suburban Transportation Fund from MRT-1 Receipts. State law requires MTA in each year to transfer up to \$20 million of MRT-1 Receipts (in equal quarterly installments of \$5 million) deposited in the Commuter Railroad Account to the State Suburban Transportation Fund to pay for or finance certain types of highway capital projects in certain areas of the MTA Commuter Transportation District. In the event the transfer would result in an operating deficit, the amount of the deficit is appropriated to MTA for commuter railroad operating purposes. Due to such a deficit, no transfers have been made since 2008.

Transfers to Counties from MRT-2 Receipts. MTA is required to transfer, in equal quarterly installments, in each year from the MRT-2 Tax in the Corporate Transportation Account to the Metropolitan Transportation Authority Dutchess, Orange and Rockland Fund an annual amount of \$1.5 million for each of the counties of Dutchess and Orange, and \$2.0

million for the county of Rockland. Additionally, MTA must transfer from that Account to such fund for each of these three counties, respectively, an amount equal to the product of (1) the percentage by which such county's mortgage recording tax payment to MTA in the preceding calendar year (calculated as if the 2005 increase in the MRT-1 Tax from 25 cents per \$100 to 30 cents per \$100 did not occur) increased over such payment in calendar year 1989 and (2) \$1.5 million each for Dutchess and Orange Counties and \$2.0 million for Rockland County.

<u>Yea</u> r 2010	<u>County</u> Dutchess Orange Rockland	Additional Amounts \$ 2,204,006 2,109,416 2,819,378 \$ 7,132,800
2011	Dutchess Orange Rockland	\$ 1,943,858 1,685,606 2,684,835 \$ 6,314,299
2012	Dutchess Orange Rockland	\$ 2,198,169 2,000,394 2,703,568 \$ 6,902,131
2013	Dutchess Orange Rockland	\$ 2,027,838 2,357,214 3,459,238 \$ 7,844,290
2014	Dutchess Orange Rockland	\$ 1,842,282 1,703,155 2,637,400 \$ 6,182,837
2015	Dutchess Orange Rockland	\$ 0,102,037 \$ 2,183,911 1,997,223 3,253,259 \$ 7,434,395
2016	Dutchess Orange Rockland	\$ 2,402,397 2,348,958 3,872,577
2017	Dutchess Orange Rockland	\$ 8,623,933 \$ 2,502,821 2,854,947 4,032,653
2018	Dutchess Orange Rockland	\$ 9,390,421 \$ 2,545,853 2,900,396 3,949,750 \$ 0,205,080
2019	Dutchess Orange Rockland	\$ 9,395,989 \$ 2,708,474 3,288,965 <u>4,315,857</u> \$ 10,313,296

The following table shows the amounts transferred to the counties for the past ten years:

For further information related to the impact of the COVID-19 pandemic on the finances and operations of MTA and its Related Entities, see "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES."

Urban Taxes for Transit System

In addition to the special tax supported subsidies described above under "State Special Tax Supported Operating Subsidies," a portion of the amounts collected by the City from certain mortgage recording and real property transfer taxes with respect to certain real property located within the City (collectively, the "Urban Taxes") are, as required by State statute, paid by the City's Commissioner of Finance directly to MTA New York City Transit on a monthly basis. As in the case of mortgage recording taxes described above, the Urban Taxes can change dramatically from year-to-year depending on the level of real estate activity.

The following table sets forth the amount of Urban Taxes received by MTA New York City Transit on an accrual basis in each of the last ten years.

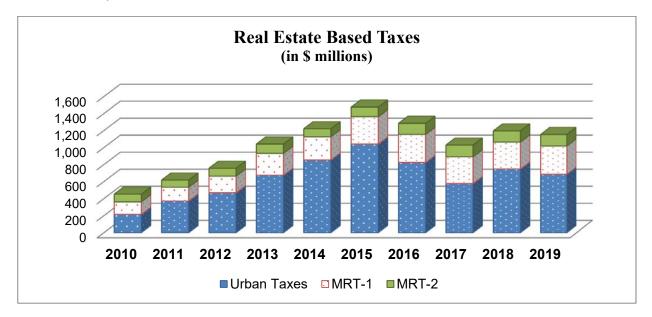
Urban Taxes			Urban Taxes	
Year	<u>(in millions)</u>	Year	<u>(in millions)</u>	
2010	\$214.8	2015	\$1,040.0	
2011	370.1	2016	822.9	
2012	467.4	2017	575.1	
2013	674.2	2018	746.4	
2014	852.9	2019	684.1	

The 2020 projected Urban Tax revenue, on an accrual basis, as reported in the 2020 Adopted Budget, is \$679.6 million.

The 2020 projected Urban Tax revenue, on a cash basis, as reported in the 2020 Adopted Budget, is \$681.0 million.

These projections were made prior to the COVID-19 pandemic, and therefore do not reflect the effects of the pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES".

The following bar chart shows the amount of real estate based taxes received by MTA on an accrual basis for the past ten years. This includes mortgage recording taxes (both MRT-1 and MRT-2) and Urban Taxes received directly by MTA New York City Transit.



Capital Program Funding Sources

The State Fiscal Year 2019-2020 Enacted Budget established new dedicated revenue streams for MTA that included a new Real Property Transfer Tax Surcharge (sometimes referred to as the "Mansion Tax"), effective July 1, 2019, which increases the transfer tax on a sliding scale by one-quarter of one percent of consideration of at least \$2 million, with a combined top rate of 4.15% on the sale of City residential properties valued at \$25 million or above. The State Fiscal Year 2019-2020 Enacted Budget also eliminated the tax loophole that exempted third-party internet marketplace providers from collecting and remitting State sales taxes on transactions conducted on their sites. Sales and compensation use taxes are a large component of the operating subsidies for MTA. In addition to the general Sales and Compensating Use Taxes of 4% collected statewide and the Sales and Use Taxes imposed by each county within New York State of between 3% and 4.5%, counties in the Metropolitan Commuter Transportation District ("MCTD") also collect sales and use taxes at a rate of 0.375% (three-eighths of one percent). This applies to all taxable sales within the counties of Bronx, Kings (Brooklyn), New York (Manhattan), Queens, Richmond (Staten Island), Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk and Westchester. The Sales and Compensating Use Taxes are the second largest component of the MMTOA Account (defined below), which provides general operating subsidies for MTA and other downstate transportation systems. Sales and use taxes accounted for approximate 42% of the total MMTOA revenues in 2019. See "State Special Tax Supported Operating Subsidies — MTTF Receipts and MMTOA Receipts"

As noted above, the State Fiscal Year 2019-2020 Enacted Budget eliminated the tax loophole that exempted these third-party internet marketplace transactions from State sales taxes. Effective June 1, 2019 internet marketplace providers are required to collect and remit State sales taxes (referred to as the "Internet Marketplace Tax") from out of state retailers on their sites, with gross receipts exceeding \$300,000 from sales of tangible property and delivering more than one hundred sales into the State in the previous four quarters. The sales taxes are collected at the normal statewide rate of 4% plus the local sales taxes.

The proceeds from these new streams are deposited into MTA's Central Business District Tolling Program capital lockbox (the "CBD Tolling Capital Lockbox Fund") and are used to support financing for the 2020-2024 Capital Program. The comprehensive package of new resources for the MTA Capital Program also includes a Central Business District Tolling Program which has an implementation date of December 31, 2020. See "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Central Business District Tolling Program."

Monies in the CBD Tolling Capital Lockbox Fund cannot be commingled with any other MTA Bridges and Tunnel monies and will be held free and clear of claims arising under the CBD Tolling Program. The following revenues will be deposited into the CBD Tolling Capital Lockbox Fund:

- (i) all monies MTA Bridges and Tunnels receives from the CBD Tolling Program;
- (ii) revenues of the Mansion Tax; and
- (iii) all Internet Marketplace Taxes (as hereinafter defined).

Funds on deposit in the CBD Tolling Capital Lockbox Fund shall be applied to:

(i) operating, administration and other necessary expenses relating to the CBD Tolling Program, or to NYCDOT pursuant to the MOU; and

(ii) costs of MTA capital projects included in the 2020-2024 Capital Program or any successor capital program.

Such funds in the CBD Tolling Capital Lockbox Fund may be:

(i) pledged by MTA Bridges and Tunnels to pay any bonds issued by MTA Bridges and Tunnels to finance (a) costs of the CBD Tolling Program, including the tolling infrastructure, CBD tolling collection system and CBD tolling customer service center and (b) the costs of any MTA capital projects in the 2020-2024 Capital Program or later capital program; or (ii) used by MTA Bridges and Tunnels to pay capital costs of the CBD Tolling Program and the costs of any MTA capital projects in the 2020-2024 Capital Program or later capital program on a paygo basis; or

(iii) transferred to MTA and either (x) pledged by MTA to pay MTA bonds issued to pay for costs of MTA capital projects in the 2020-2024 Capital Program or later capital program, or (y) used by MTA to pay costs of MTA capital projects in the 2020-2024 Capital Program or later capital program on a pay-go basis.

The State Fiscal Year 2019-2020 Enacted Budget further provides that capital project costs paid from the CBD Tolling Capital Lockbox Fund are subject to the following revenue split:

- eighty percent for MTA New York City Transit, MaBSTOA, MTA Staten Island Railway and MTA Bus capital project costs, with priority given to subway system, new signaling, new subway cars, track and car repair, accessibility, buses and bus system improvements and further investments in expanding transit availability in the outer boroughs;
- ten percent for MTA Long Island Rail Road capital projects, including parking facilities, rolling stock, capacity enhancements, accessibility and expanding transit availability; and
- ten percent for MTA Metro-North Railroad capital projects including parking facilities, rolling stock, capacity enhancements, accessibility and expanding transit availability.

The State Fiscal Year 2020-2021 Enacted Budget amends existing law to allow MTA to use monies in the CBD Capital Tolling Lockbox Fund for two years (2020 and 2021) to offset decreases in revenue (i.e. lost taxes, fees, charges, fares and tolls) or increases in operating costs due in whole or in part to the State emergency disaster caused by the COVID-19 pandemic. See "Part 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES – *New York State Fiscal Year 2020-2021 Budget Provisions of Importance to MTA*".

The following table provides information relating to Mansion Tax and Internet Marketplace Tax receipts on an accrual basis since the onset of the surcharge in 2019:

Capital Program Funding Sources

	Real Property		
	Transfer Tax	Internet	Transfer to
Year	(Mansion Tax)	Marketplace Tax	Capital Program
2019	\$73.9	\$85.1*	\$143.2

* The 2019 Internet Marketplace Tax receipts consisted of the City collections and remittances to MTA. The State portion was not transmitted to MTA in 2019 because the State portion is subject to appropriation by the State Legislature, which did not appropriate the funds in the State Fiscal Year 2019-2020 Enacted Budget. The State appropriated \$150 million for the Internet Marketplace Tax in the State Fiscal Year 2019-2020 Enacted Budget.

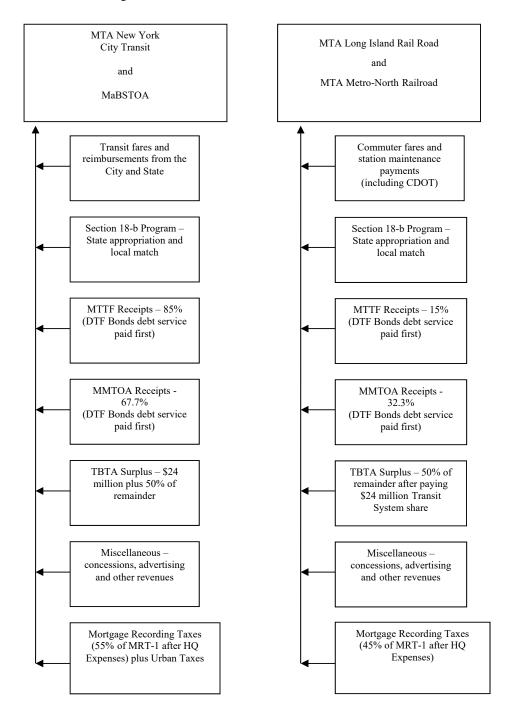
The 2020 projected Capital Program Funding Sources, after the transfer to the capital program, on both an accrual basis and a cash basis, as reported in the 2020 Adopted Budget, is \$31.3 million.

These projections were made prior to the COVID-19 pandemic, and therefore do not reflect the effects of the pandemic. For further information related to the impact of the COVID-19 pandemic on the finances and operations of MTA and its Related Entities, see "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES".

Operating Funding for the Transit and Commuter Systems

The chart on the following page shows the types of revenues and relative percentages of revenue streams that are currently available and required to be used to fund the Transit System (MTA New York City Transit and MaBSTOA) and the Commuter System (MTA Long Island Rail Road and MTA Metro-North Railroad). From time to time, MTA may, in its discretion, additionally subsidize the Transit System and Commuter System operations, or the operations of the other Related Entities, from other available excess moneys, including MTA Aid Trust Account Receipts, MTA Bridges and Tunnels Surplus Investment Income, moneys on deposit in the Subway Action Plan Account, the Outer Borough Transportation Account and the General Transportation Account and mortgage recording taxes. All of the revenues listed on the following chart are revenues that are pledged for the payment of Transportation Revenue Bonds (as described in "PART 3 PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS - TRANSPORTATION REVENUE BONDS"), with the exception of (1) mortgage recording taxes that do not become pledged revenues (by direction of the MTA Board) until, in the case of MRT-1, after the payment of MTA Headquarters Expenses, and (2) concession revenues at Penn Station and Grand Central Terminal. This chart does not include revenues from the PMT, taxes and fees deposited in the MTA Aid Trust Account and moneys on deposit in the Subway Action Plan Account, the Outer Borough Transportation Account and the General Transportation Account which may be applied to fund operating and capital needs of the Transit System and Commuter System in amounts and relative percentages determined by MTA consistent with the applicable statues; to the extent such PMT and General Transportation Account amounts are available to be applied to operating needs of the Transit System and the Commuter System, they constitute revenues that are pledged for the payment of Transportation Revenue Bonds.

The percentages of MMTOA Receipts reflected below for the Transit and Commuter Systems are based upon the State Fiscal Year 2019-2020 Enacted Budget.



FINANCIAL PLANS AND CAPITAL PROGRAMS

2020-2023 Financial Plan (The "February Plan")

General. The February Plan represents MTA management's completion of revisions to the 2020 budget and financial plan for the years 2020-2023 from the draft that was first proposed in July 2019, adjusted in November 2019 and approved by the MTA Board in December 2019. The final 2020-2023 Financial Plan was released by MTA in February 2020. It includes a Final Estimate for 2019, an Adopted Budget for 2020 (the "2020 Adopted Budget") and a financial plan for the years 2021-2023. As discussed under "Subsequent Developments" below, certain elements of the February Plan, which assumed funding consistent with the Governor's Executive Budget released on January 15, 2020, as amended on February 15, 2020 (the "Executive Budget"), have been impacted by events occurring since the February Plan was approved, in particular, by the State Fiscal Year 2020-2021 Enacted Budget and the Coronavirus Pandemic. See "PART I – BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES" herein.

The February Plan was designed to maintain the fiscal stability of the Related Entities and enable all those entities to maintain their respective operations on a self-sustaining basis. The February Plan also continued a program of capital expenditures that would support the ongoing maintenance of MTA's transportation network and provide needed improvements to enhance services to its customers, as well as expand service through a number of capital program initiatives.

A copy of the February Plan, which includes the 2020 Adopted Budget, is posted, for informational purposes only, on MTA's website under "MTA Info – Financial Information – Budget and Financial Statements." The February Plan is not included by specific cross-reference herein.

It should be noted that the year-end results appearing in MTA's audited financial statements are prepared on a GAAP basis, while the financial plan is prepared on a modified accrual basis. The modified accrual format allows the financial plan to show MTA's cash availability, which is the measurement for achieving statutory operating budget balance. Differences occurring between the audited financial statements and the financial plan are caused by the use of these different reporting formats. The most notable difference is the treatment of debt service and depreciation. GAAP financial statements reflect accrued interest costs and non-cash items, such as depreciation, while the financial plan reflects cash transactions, including actual principal and interest payments (i.e., deposits into debt service funds and payments to bondholders) paid out of operating funds. Moreover, cash transactions are reflected in the GAAP balance sheet and accounts receivables or payables, while the financial plan reflects completed cash transactions and does not include accounts receivables or payables.

The February Plan projected year-end cash balances of \$134 million in 2019, \$81 million in 2020, \$273 million in 2021 and \$157 million in 2022 with projected cash deficits of \$130 million in 2023.

The November Plan

The 2019 MTA November Financial Plan (the "November Plan"), which was approved by the MTA Board in December 2019, projected cash balances of \$11 million in 2020 and \$33 million in 2021, with deficits of \$212 million in 2022 and \$426 million in 2023.

Changes to the November Plan

The February Plan incorporates several significant changes to the 2020 Adopted Budget and 2020-2023 Financial Plan which was approved in December.

This plan reflects the approved settlement with Local 100 of the Transport Workers Union ("TWU Local 100"), which represents approximately 37,000 employees at MTA New York City Transit and MTA Bus. The agreement provides for annual wage increases of 2 percent retroactive to May 2019, 2.25 percent in May 2020, 2.5 percent in May 2021 and 2.75 percent in May 2022. Several contractual provisions, including changes in co-payments for emergency room visits and varying tiers of prescription medications, along with improvements in employee availability, result in an average annual net increases of 2.3 percent over the 48-month term of the contract. The November Financial Plan assumed annual 2 percent increases, and the February Plan reflects the net additional expense greater than the 2 percent assumption in the MTA New York City Transit and MTA Bus financial plans, totaling \$91 million over the plan period.

MTA expects the TWU agreement will set the pattern for eventual settlements with the remaining represented workforce. The incremental cost of the pattern settlement above the assumed annual two percent increases already incorporated in agency financial plans is captured below the baseline, and is estimated to increase expenses by \$65 million over the February Plan period.

The Enacted Budget included provisions for additional MMTOA for MTA totaling \$755 million over the February Plan period, along with an improvement of \$11 million in projected PBT receipts in 2020.

The February Plan reflects debt service savings of \$145 million through the February Plan period based on revised cash flow funding assumptions for MTA Bridges and Tunnels' 2020-2024 Capital Program. The February Plan also reflects a significant increase in debt issuance and debt service, but will not impact the MTA operating budget. Financial support for the 2020-2024 Capital Program will include \$7.3 billion of bonds supported by CBD Capital Tolling Lockbox Fund revenues, including Internet Marketplace Tax and Mansion Tax receipts. Debt service is \$742 million over the February Plan period, and will be paid directly from CBD Capital Tolling Lockbox Fund revenues. While this will result in increased debt service, MTA supported debt service will remain below 20 percent of operating revenue during the February Plan period.

The February Plan includes important policy actions that were captured "below-the-line" in the November Plan. Consistent with the MTA budget process, the November and February Plans are formatted to highlight certain policy actions and other adjustments for the benefit of the MTA Board and financial stakeholders. Until these items have been approved by the MTA Board, MTA excludes their financial impact from the "Statement of Operations." These plan adjustments are also referred to as being "below-the-line." With Board approval secured, these items—which have no impact on the bottom line— are now included within the MTA baseline:

- *Fare Evasion Deterrence* With a renewed emphasis to gain control of, and reduce, fare evasion and to address assaults on transit workers, MTA instituted a series of actions estimated to cost \$56 million through 2023.
- *Manhattan DA Forfeiture Fund* The Manhattan District Attorney is partially covering the cost of fare evasion deterrence in the form of a grant that totals \$41 million through 2022.
- Additional Revenue Achieved from Fare Evasion Initiatives Results from initial efforts to mitigate subway and bus fare evasion indicate \$50 million in additional MTA New York City Transit farebox revenue can be expected in 2020, and in subsequent years. As efforts to mitigate fare evasion continue and results are analyzed, further increases in farebox revenue may be realized.
- Improved Overtime Spending Controls Constraints have been implemented to better utilize "controllable" overtime and ensure usage is fiscally responsible. Overtime budgets have been reduced by 5 percent for each Agency, corresponding to a net decrease in the MTA-wide overtime budget of \$44 million annually beginning in 2020.

The February Plan also includes one November Plan "below-the-line" action that has been included within the MTA baseline, but reflects a re-estimate that has a fiscal impact on the bottom line:

Vacancy Savings – MTA identified and eliminated non-represented administrative positions that became vacant through the third quarter of 2019 and had not been filled due to MTA policy, which restricted new hiring. The November Plan estimated savings of \$74 million in 2020, \$83 million in 2021, \$85 million in 2022, and \$87 million in 2023. A more detailed review of the vacant positions re-categorized approximately 6 percent of the vacant positions as non-Administrative, reducing the estimated savings by \$5 million per year.

Three "below-the-baseline" items in the November Plan are no longer being considered:

- *Reduction in 2019 Committed to Capital* MTA anticipated pulling back the \$64 million 2019 contribution to Committed to Capital as a one-time action to balance the budget in 2019. MTA has determined this action is not needed and the \$64 million will remain in Committed to Capital.
- *Reduction in 2020 Committed to Capital* MTA anticipated the need to pull back a \$30 million portion of the 2020 Committed to Capital as a one-time action to balance the budget in 2020. MTA has determined this action is not needed and the \$30 million will remain in Committed to Capital.

• Debt Service Resulting from Reduction in Committed to Capital – To offset the \$94 million in Committed to Capital contributions that would not be available for the capital program, MTA planned to issue bonds for \$94 million, which would increase debt service expenses by an estimated \$7 million per year beginning in 2020. With the \$94 million restored for Committed to Capital, this bonding will not be necessary and the debt service expense will not be incurred.

The following MTA plan adjustments remain "below-the-line" and therefore are not captured within the Related Entity baseline forecasts:

- Drawdown the 2019 General Reserve The 2019 General Reserve of \$165 million, a contingency fund set at approximately one percent of the operating expense budget, was not used in 2019, and these funds will be reserved to cover 2020 expenses.
- *Fare and Toll Increase in March 2021* A \$327 million annualized consolidated farebox and toll increase is assumed for implementation in March 2021, and estimated to yield 4%, for an additional \$279 million in 2021 and \$328 million in both 2022 and 2023. Factoring in the MTA Bus, MTA Staten Island Railway and MTA Bridges and Tunnels adjustments included in "Subsidy Impact of Fare and Toll Increases," the net increase to MTA is projected to be \$272 million in 2021 and \$319 million in both 2022 and 2023, favorable by \$2 million each year from the estimate in the November Plan.
- *Fare and Toll Increase in March 2023* A \$340 million annualized consolidated farebox and toll increase is assumed for implementation in March 2023, and is estimated to yield 4%, for an additional \$291 million in 2023. Factoring in the MTA Bus, MTA Staten Island Railway and MTA Bridges and Tunnels adjustments included in "Subsidy Impact of Fare and Toll Increases," the net increase to MTA is \$283 million in 2023, which is \$1 million favorable from the estimate in the November Plan.
- *Transformation Plan* The savings from the consolidation and the targets identified by AlixPartners in July 2019 were estimated to generate savings, net of implementation costs, of \$11 million in 2019, \$230 million in 2020, \$488 million in 2021, \$535 million in 2022, and \$538 million in 2023. After a review of such proposals and their likelihood of implementation, estimated transformation savings were adjusted. These changes are favorable by \$18 million in 2020, and unfavorable by \$26 million in 2021 and by \$63 million in each of 2022 and 2023.
- Paratransit Subsidy 50/50 Share with the City MTA is proposing a renegotiation of the terms of the
 Paratransit Service agreement to provide a more equitable sharing of costs. In the November Plan, it was
 assumed that such an agreement to equally share the Paratransit net operating deficit will be in place effective
 July 1, 2020, resulting in MTA New York City Transit's cost being reduced by \$47 million in 2020, \$99 million
 in 2021, \$103 million in 2022, and \$111 million in 2023.
- State Aid for the 2015-2019 Capital Program Debt service of \$627 million in the November Plan reflected the addition of \$7.3 billion of planned MTA bond issuance pursuant to the State's funding commitment for the 2015-2019 Capital Program as authorized through legislation enacted in 2016. The additional debt is expected to be funded through operating aid, subject to annual appropriation. In the February Plan, the debt service expense has been lowered to \$499 million over the February Plan period to reflect the revised debt issuance schedule. This revision will have no impact on MTA's financial bottom line.

The February Plan also captures new "below-the-line" items that were not included in the November Plan:

- *Timing of Personnel Actions* The timing of certain personnel actions accelerated for budget purposes have been revised to properly reflect the consolidation of administrative functions, reducing savings in 2020 by \$58 million. However, anticipated ongoing savings are expected to be fully achieved by the end of 2020.
- *TWU Pattern Settlement Over 2 Percent for Remaining CBAs* The recently settled TWU Local 100 contract is assumed to set the pattern for all other collective bargaining agreements. Agency baseline forecasts assume a two percent annual increase, and it is expected the pattern settlements will result in expenses above that amount totaling \$65 million over the February Plan period.
- *Re-estimated MTA New York City Transit Maintenance* MTA New York City Transit maintenance will increase by \$35 million in 2020, the result of increased scope of work.

Risks to the February Plan

For a discussion of risks to the February Plan, see "PART 1 – CERTAIN RISK FACTORS – Respond to Developing Economic Environment - Funding of Capital Programs and Operations".

Subsequent Developments

2019 Actual Cash Results and Cash Balance Projections. MTA's 2019 preliminary closing net cash balance is \$372 million, which constitutes a \$372 million carryover from 2018. This result is \$293 million higher than the final estimate of \$134 million that was included in the February Plan. Results include \$221 million in favorable net cash timing variances that are projected to have an unfavorable impact in 2020. Excluding these timing variances, "real" preliminary operating results were \$72 million favorable; unfavorable results of \$40 million from subsidies are from shortfalls in PMT Revenues Tax and MTA Aid Trust Account Receipts, and were partially offset by favorable collections for Urban Tax and higher surplus transfers from MTA Bridges and Tunnels. These items were not reflected in the February Plan. The July Plan will capture the revised opening cash balance and these projected timing impacts. Given the recent extraordinary circumstances affecting MTA's finances due to COVID-19 pandemic, the financial picture will be drastically different from the February Plan. MTA expects to update or supplement this ADS once the July Plan has been adopted and the July Plan will reflect the material adverse consequences of COVID-19 pandemic on MTA's financial position. See "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES".

Capital Programs – Background and Development

Transit and Commuter Systems. The MTA Act requires MTA to submit to the CPRB, for its approval, successive five-year capital programs; one for the Transit System and MTA Staten Island Railway and another for the Commuter System. The CPRB approved capital programs for the Transit System and MTA Staten Island Railway and the Commuter System for the five-year periods beginning in the years 1982, 1987, 1992, 1995, 2000 and 2005. The projects included in the 1982-2009 MTA Capital Programs have been substantially completed.

MTA and the CPRB have also approved separate five-year MTA Capital Programs covering the periods 2010-2014, 2015-2019 and most recently 2020-2024. These Capital Programs are described in detail below. The 2020-2024 Capital Programs for both MTA and MTA Bridges and Tunnels were presented to the MTA Board and approved September 2019. The MTA Capital Program was proposed to the CPRB on October 1, 2019, as required by law. The CPRB approved the MTA 2020-2024 Capital Program in January 2020.

Funding for the MTA Capital Programs comes from a variety of sources, including bonds, pay-as-you-go monies ("PAYGO"), State, City and MTA Bridges and Tunnels assistance, and federal funds. The federal government supplied approximately 33% of the funds required for the 1982-2009 Capital Programs. Bonds issued to finance the MTA Capital Programs are subject to a statutory ceiling, as further described in "PART 3 – PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS."

There can be no assurance that all the necessary governmental actions to implement any MTA Capital Program will be taken, that funding sources currently proposed or assumed will be available in the amounts or at the times projected, or that the projects included in any MTA Capital Program, or parts thereof, will not be delayed or reduced. MTA regularly evaluates the status of all funding sources and projects and may, from time to time, submit amendments to an MTA Capital Program needed to bring funding sources and expected project costs into balance. If the implementation of an MTA Capital Program or any modification thereof is significantly delayed, MTA's efforts to bring the entire Transit System and Commuter System to a state of good repair and to prevent deterioration of portions of the Transit System and the Commuter System that have already reached a state of good repair may be impeded, with potential negative effects on ridership and fare revenues. See "PART 1 – CERTAIN RISK FACTORS – *Funding of Capital Programs and Operations*".

MTA Bridges and Tunnels Facilities. Beginning in 1989, MTA Bridges and Tunnels undertook its first multi-year capital program totaling \$160 million for the three-year period 1989-1991. The funds for the program were raised from revenues deposited in its own capital reserve fund and the proceeds of MTA Bridges and Tunnels bonds.

Since then, while not required to do so by statute, MTA Bridges and Tunnels has developed its own five-year capital programs covering the same periods as the MTA Capital Programs to enable MTA Bridges and Tunnels to keep its own facilities in good operating condition while also maintaining its role in MTA's unified transportation policy. The MTA Bridges and Tunnels Capital Programs are not subject to approval by the CPRB and bonds issued to finance MTA Bridges and Tunnels Facilities and the CBD Tolling Program are not subject to a statutory ceiling.

Although substantial annual investments in major maintenance have regularly been made and additional expenditures are planned, MTA Bridges and Tunnels expects that capital investments in the rehabilitation or reconstruction and painting of its facilities will continue to be necessary as components approach the end of their respective useful lives and require normal replacement.

Approved 2020-2024 Capital Program

At its September 25, 2019 meeting, the MTA Board reviewed and authorized a submission to the CPRB of the MTA 2020-2024 Capital Program totaling approximately \$51.5 billion, as well as a five-year capital program for MTA Bridges and Tunnels for the years 2020-2024 (the "2020-2024 MTA Bridges and Tunnels Capital Program") totaling approximately \$3.3 billion, along with revised 2015-2019 and 2010-2014 MTA Capital Programs, which were not required to be submitted to the CPRB for approval.

The MTA 2020-2024 Capital Program was proposed to the CPRB on October 1, 2019, as required by law. The CPRB approved the MTA 2020-2024 Capital Program in January 2020.

2019 Changes to MTA's Capital Planning. In 2019 several important changes to MTA's overall capital program occurred.

- The State Fiscal Year 2019-2020 Enacted Budget required that, among other things, MTA use a design-build methodology for all contracts over \$25 million. Any deviations to this will require a formal waiver from the State Division of Budget.
- The State Fiscal Year 2019-2020 Enacted Budget further required MTA to engage in a full capital program audit which it did by procuring the services of the audit firm Crowe LLP. A briefing was provided to the MTA Board and the public at MTA's December Board meeting and a final report was made available to the public in early January 2020.
- Pursuant to the Transformation Plan, MTA is in the process of reorganizing the capital program under the new MTA Construction and Development Company, headed by Chief Development Officer Janno Lieber. See "PART 1. BUSINESS – THE MTA TRANSFORMATION PLAN" and "PART 4. OPERATIONS – MTA CONSTRUCTION AND DEVELOPMENT COMPANY (formerly known as MTA CAPITAL CONSTRUCTION COMPANY)." Henceforth, projects previously identified as MTA Capital Construction will be referenced as "Network Expansion."

Effect of COVID-19 Pandemic. The COVID-19 pandemic since early March 2020, has severely impacted the New York Metropolitan region affecting the operations of MTA and its Related Entities, the various revenue streams that support them and the delivery of their respective capital programs. Service has been temporarily reduced, and passenger volume and revenue has dramatically fallen. The full effects of the COVID-19 pandemic on ridership, tolls, revenues and capital program are not yet determined, nor is the effect on the ability of MTA to support its full MTA 2020-2024 Capital Program. Additionally, the State Fiscal Year 2020-2021 Enacted Budget permits MTA to use monies in the CBD Tolling Capital Lockbox Fund for two years (2020 and 2021) to offset decreases in revenue (i.e. lost taxes, fees, charges, fares and tolls) or increases in operating costs due in whole or in part to the State emergency disaster caused by the COVID-19 pandemic. See "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC" for additional detail on impacts on capital program implementation, including, particularly, "– *Capital Program Procurement and Construction Contract Delays.*"

MTA 2020-2024 Capital Program

The MTA 2020-2024 Capital Program includes \$51.472 billion of investments, and the MTA Bridges and Tunnels Capital Program includes \$3.327 billion. The MTA 2020-2024 Capital Program focuses on rebuilding the system to promote

safe and reliable service. Enhancements are targeted toward making the system more accessible for all riders and increasing the quality and frequency of service. Network expansion projects extend the reach of the network to address regional needs for more capacity to ease congestion and promote regional growth.

The approved program is organized into a portion that was subject to CPRB approval and an MTA Bridges and Tunnels portion, including the new Central Business District Tolling Program, that are not subject to CPRB review.

MTA 2020-2024 Capital Program All-Agency Summary (\$ in millions)

	2020-2024 Capital Program Amount <u>(in millions)*</u>
MTA New York City Transit, MaBSTOA	
and MTA Staten Island Railway	\$35,389
MTA Long Island Rail Road	3,737
MTA Metro-North Railroad	3,558
MTA Bus	871
MTA Interagency Program	119
MTA Network Expansion	7,798
Total	\$51,472
MTA Bridges and Tunnels	<u>\$3,327</u>
Total Capital Program	\$54,799
Numbers may not total due to rounding	

* Numbers may not total due to rounding

2020-2024 Capital Program Funding. The combined funding sources for the 2020-2024 Capital Program include, as subsequently approved by the CPRB in January 2020, \$15 billion in capital from CBD Tolling Program sources, \$10 billion in capital from new revenue sources (State and City sales taxes and Mansion Tax), \$9.792 billion in MTA bonds and PAYGO, \$3 billion in funding from the State, \$3 billion in funding from the City, \$7.500 billion in federal formula funding, \$2.905 billion in federal New Start funding for Second Avenue Subway Phase Two, \$0.275 billion in federal flexible funding, and \$3.327 billion in MTA Bridges and Tunnels self-funded dedicated funds.

	2020-2024
	Capital Program Amount
	(in millions)
Capital from Central Business District Tolling Sources	\$15,000
Capital from New Revenue Sources	10,000
MTA Bonds & PAYGO	9,792
Federal Formula*	7,500
State of New York Capital	3,000
City of New York Capital	3,000
Federal New Starts (Second Avenue Subway, Phase Two)*	2,905
Federal Flexible	275
CPRB Program Subtotal [†]	\$51,472
MTA Bridges and Tunnels (Self -Funded)	3,327
Total [†]	<u>\$54,799</u>

Subject to future federal appropriation and guidance.

As of December 31, 2019. Totals may not add due to rounding.

2020-2024 Transit Core Program. This 2020-2024 Capital Program totaling \$35.389 billion embodies the major capital investment strategies and priorities of the program:

• Accelerated investments in state-of-the-art signal systems, and associated fleets and infrastructure, to transform the reliability and capacity of the subway system;

- Accelerated investments in accessibility for customers with disabilities;
- Accelerated state of good repair investments in critical subway infrastructure and stations;
- An enhanced, zero-emission bus fleet to serve a reimagined route network.

The following table represents the capital program by category of work for the Transit System and MTA Staten Island Railway under the 2020-2024 Transit Capital Program.

	Transit Authority
	2020-2024
	Transit Core Program
	(in millions) [*]
Subway Cars	\$6,057
Buses	1,820
Passenger Stations	9,204
Track	2,558
Line Equipment	412
Line Structures	2,384
Signals & Communications	7,119
Power	2,600
Shops & Yards	563
Depots	821
Service Vehicles	354
Miscellaneous/Emergency	1,123
MTA Staten Island Railway	373
Total [†]	\$35,389

* Does not include MTA Network Expansion Projects related to the Transit System, which are described below under the "MTA Network Expansion" section.

† Total may not add due to rounding.

Among the projects included in the Transit Core component of the 2015-2019 MTA Capital Program, as approved, are the following:

<u>Subway Cars</u> - \$6,057 million. For the B Division, MTA New York City Transit will purchase 640 cars to complete the replacement of the R46 fleet, and purchase an additional 437 cars for fleet growth, including for Second Avenue Subway Phase Two. These cars will be purchased via options to the ongoing R211 contract. These investments will provide a sufficient number of railcars compatible with new signal technology. For the A Division, car investments need to be accelerated to align with signal modernization that is planned for the 2020-2029 period. MTA New York City Transit will purchase approximately 900 cars to replace a portion of the R62/62A fleet (36-39 years old). The purchases will be coordinated to support the rollout of advanced signal technology on the A Division. Production of the new cars is anticipated to extend into the 2025-2029 capital program.

<u>Buses</u> - \$1,820 million. MTA New York City Transit is purchasing 1,548 buses, including 1,088 standard buses, 345 articulated buses, and 115 express buses. 1,454 of the buses to be purchased will replace buses that have reached the end of their useful life, and the other 94 buses will provide fleet growth. 375 of the standard buses and 100 of the articulated buses will feature all-electric propulsion. These purchases, in concert with the electric buses purchased under the MTA Bus program, are projected to yield an annual reduction of over 37,000 tons of carbon emissions.

<u>Passenger Stations</u> - \$9,204 million. Overall, the 2020-2024 Capital Program will perform component or renewal work at approximately 175 stations, representing over 35% of all stations in the system, with a total investment of \$2.3 billion. The program addresses the most significant component repairs to ensure a safe, reliable environment, and renewing stations where the approach is cost-effective. An additional \$1.4 billion will be devoted to elevator and escalator replacement, because elevators and escalators are essential part of accessing transit for many customers.

Additional ancillary investments in stations (\$385 million) include:

- The construction of a new customer connection between Livonia Avenue station on the Canarsie (L) line and Junius Street station on the New Lots (3) line, to be coordinated with ADA investments;
- Purchase of turnstiles and other fare collection equipment, including wider turnstiles/gates for improved access for customers with disabilities;
- Water condition remediation and other miscellaneous station investments.

This 2020-2024 Capital Program's plan for MTA New York City Transit and MTA Staten Island Railway includes accessibility investments at up to 70 selected subway stations, including any stations accelerated into earlier programs, for a total commitment not to exceed \$5.2 billion in the 2020-2024 Capital Program. These projects will increase the percentage of total stations that are accessible to approximately 43%.

Track - \$2,558 million. The 2020-2024 Capital Program includes:

- Replacement of nearly 60 miles of mainline track to maintain a state of good repair, largely consistent with prior programs;
- Replacement of approximately 250 mainline switches, accelerated to coordinate with signal modernization; and
- New investments in continuously welded rails will address approximately 20 miles in the 2020-2024 Capital Program. Continuously welded rails will reach 90% coverage of all possible locations.

Line Equipment - \$412 million. MTA New York City Transit will undertake upgrades up to tunnel lighting to meet current standards, replacement fan components at various locations, rehabilitation pump rooms at various locations, and back-flushing of deep wells on up to 3 lines.

Line Structures - \$2,384 million. MTA New York City Transit will undertake the following projects:

- Nearly \$650 million for subway component repairs, to be focused on locations with the highest concentrations of priority defects;
- Extensive rehabilitation or replacement of elevated structures on up to five subway lines, to address priority conditions identified by MTA New York City Transit engineering assessments;
- Continue the installation of netting beneath elevated structures;
- Paint more than 16 miles of elevated structure on various elevated lines; and
- Over \$50 million for emergency exit rehabilitation.

<u>Signals & Communications</u> -\$7.119 billion. MTA New York City Transit plans to spend \$5.936 billion on Signal projects and \$1.183 billion on communications projects.

Signal projects will include:

- Contracts to install modernized signals on segments of six lines, covering approximately 133 track miles and 33 interlockings:
- All railcars purchased in the 2020-2024 Capital Program will be provided with necessary equipment to operate in upgraded territories. Funding is also included to provide compatible equipment for work train locomotives; and
- Various system-wide signal component upgrades and other investments to improve the reliability of existing signals.

Communications projects will include:

- PA and Customer Information System upgrades at approximately 76 stations on the B Division. New state-ofthe-art PA and Customer Information System systems with clearer audio, digital signage, and remote announcement capabilities will improve communication with customers, under both normal operations and in the event of a service disruption;
- Various network investments, including the completion of Connection-Oriented Ethernet, which has been prioritized in coordination with security projects that require additional bandwidth;
- Upgrades to the LiftNet elevator and escalator monitoring system to provide customers and maintenance personnel with more reliable and timely notification of outages;
- System-wide rollout of passenger identification closed circuit television at stations that do not already have the technology, and security enhancements in under-river tunnels and other strategic locations; and
- Normal replacement of selected phone and radio system equipment and communications cables, to address known failures and operational liabilities.

<u>Power</u> - \$2,600 million. MTA New York City Transit expects to spend \$2,600 million on for normal replacement and state of good repair investments in traction power, including comprehensive renewals of up to six substations, targeted component repairs or replacement of equipment at various substations, rehabilitation of up to 11 circuit breaker houses, upgrades to power cables and related assets system-wide, and power improvements on up to seven lines to improve reliability and support higher train throughput made possible by signal modernization.

<u>Shops and Yards</u> - \$563 million. MTA New York City Transit expects to spend \$563 million on repair projects to address deficient shop components at various Department of Car Equipment ("DCE") maintenance and Maintenance of Way support shops, as well as both DCE overhaul facilities; larger-scale investments at the Livonia Maintenance Shop and the Atlantic Avenue Power Cable Shop; replacement of more than two miles of yard and non-revenue track and more than 15 yard switches; and upgrades to fencing and lighting at one yard.

<u>Depots</u> - \$821 million. MTA New York City Transit will undertake projects benefitting bus depots, including modifications necessary to accommodate an electric bus fleet, repairs to address deficient shop components, the reconstruction of the Jamaica Bus Depot, modifications necessary to accommodate the ongoing rollout of Automated Bus Lane Enforcement, and continued investment in miscellaneous depot equipment, including bus lifts and facility elevators.

<u>Service Vehicles</u> - \$354 million. MTA New York City Transit plans to purchase locomotives and flat cars to replace older models; selected other classes of work train cars, such as tampers, crane cars, signal supply cars, and a track geometry car; and approximately 200 rubber-tire vehicles.

Miscellaneous/Emergency - \$1.123 billion. The Miscellaneous/Emergency category includes:

- employee facility repairs at various locations,
- investments to support the implementation of the 2020-2024 Capital Program, including funding for environmental remediation, Enterprise Asset Management consultant support services, insurance, and scope development and design for future projects;
- funding for environmental remediation, consultant support services, insurance, and scope development and design for future projects;
- investments in information technology and fire safety systems;
- environmental and system safety items, engineering services, insurance;
- other program reserves to support the entire 2020-2024 Capital Program; and
- nearly \$200 million for other miscellaneous investments.

<u>MTA Staten Island Railway</u> - \$373 million. As part of the total investment in accessibility of up to 70 stations, up to three MTA Staten Island Railway stations will be made accessible to customers with disabilities, with elevators and/or ramps providing stair-free access to station platforms, to fulfil the goal of ensuring that no customer is more than two stations away from an accessible station. Repairs will be made at up to eight stations, to address specific stairs and platform and mezzanine components system-wide. Mainline track and switch replacement will be made at locations system-wide. MTA New York City Transit will also undertake comprehensive rehabilitation of up to two elevated structures and overcoat painting at up to six additional bridges.

2020-2024 Commuter Core Program. MTA Long Island Rail Road and MTA Metro-North Railroad together constitute the MTA's Commuter Core program. Each railroad's 2020-2024 capital program is discussed separately below. MTA Network Expansion projects that might benefit each railroad are discussed separately in the MTA Network Expansion section below.

The following table represents the capital program by agency and category of work for the Commuter System under the 2020-2024 MTA Capital Program, as approved.

	2020-2024
	Commuter Core Program
MTA Long Island Rail Road	(in millions)*
Rolling Stock	\$242
Stations	910
Track	1,018
Line Structures	343
Communications and Signals	364
Shops and Yards	203
Power	426
Miscellaneous	231
Total [†]	\$3,737
MTA Metro-North Railroad	* • • •
Rolling Stock	\$853
Grand Central Terminal, Stations and Parking	1,129
Track and Structures	1,021
Communications and Signals	182
Power	202
Shops and Yards	23
Miscellaneous	148
$Total^\dagger$	\$3,558

* Does not include MTA Network Expansion Projects related to the Commuter System which are described below under the "MTA Network Expansion" section.

[†] Total may not add due to rounding.

MTA Long Island Rail Road

Among the projects included in the Commuter Core Program component of the 2020-2024 MTA Capital Program are the following projects for MTA Long Island Rail Road:

<u>Rolling Stock</u> - \$242 million. This program will purchase 12 revenue locomotives and 17 coaches to support service to MTA Long Island Rail Road's non-electrified territory and address peak period service demands. In addition to the major rolling stock purchases, the MTA Long Island Rail Road is purchasing eight new "green" work locomotives, which will replace older technology locomotives with the latest environmentally-friendly models.

Stations - \$910 million.

Stations and Buildings - \$807 million. The program focuses investment around those stations with the worst rated platforms. Replacement of platforms will be paired with platform extensions where applicable and with ADA elevators,

tactile strips and braille signage. In addition, replacement and upgrade of the MTA Long Island Rail Road's Mets-Willets Point Station will include platform, track and station infrastructure upgrades, including new elevators and a seamless, direct access from the Station to the proposed LaGuardia AirTrain Station, to support full-time service. The design and construction of this project will be closely coordinated with the PANYNJ.

Stations with concentrations of poorly rated components will be identified for the 2020-2024 Capital Program which will renew station buildings and replace platform signage, shelters sheds, pedestrian overpasses, railings and lighting. In addition, elevators and escalators reaching the end of their useful life will be replaced and ticket vending machines and ticket selling equipment will be upgraded as part of the overall MTA-wide OMNY new fare payment program.

Parking - \$28 million. The 2020-2024 MTA Capital Program includes funds for the final stage of the Ronkonkoma Parking Garage Rehabilitation.

Penn Station and Grand Central Terminal - \$74 million. Platform level renewal and upgrade for Penn Station will include staircase replacement, platform surface and tactile renewal, architectural column cladding and ceiling treatments, upgraded LED lighting, new signage, and other targeted investments. Also planned for Penn Station is the replacement of aging air handlers for the HVAC system, upgrades to the radio antenna system, and targeted replacement/upgrade of the complex's various building systems. The 2015-2019 Capital Program began elements of this overall renovation process.

With completion of East Side Access bringing MTA Long Island Rail Road into Grand Central Terminal, an allowance has been identified to address various needs of the new MTA Long Island Rail Road section of Grand Central Terminal. This includes elements such as back of house fit-outs, safety and security equipment, and other station components.

Track - \$1,018 million.

Annual Track Rehabilitation Program - \$683 million. This portion of the track program will include replacement of and upgrades to up to 32 miles of wood ties with new concrete ties, along the busiest segments of the network, including segments of the Main Line, Atlantic Branch, Port Washington Branch, Port Jefferson Branch, and the Babylon Branch. Right of Way investments will include addressing various culvert, drainage, track stability, and retaining wall state of good repair needs, along with the installation of high security fencing. Rehabilitation of yard track systems, including the installation of switch heaters, rehabilitation of walkways, replacement of switches, as well as other track work, will also be included. Finally, this portion of the program includes equipment to be purchased to support the delivery of the Track Rehabilitation Program, such as new ballast cars, a crane, a tamper, and a new track geometry car.

Other Track Improvements – \$335 million. In support of anticipated service demand following the opening of East Side Access, the MTA Long Island Rail Road continues to undertake a multi-phase effort to modernize and improve the infrastructure in Jamaica. The 2020-2024 program will focus on replacing, upgrading and modernizing the signal system which serves the Jamaica area. In addition, the Jamaica E Yard Extension will construct a new closed-deck rail bridge over 150th Street to allow for increased train capacity in the Jamaica Complex.

Finally, Amtrak Territory Investments provides funding for MTA Long Island Rail Road's Baseline Capital Contribution to the Northeast Corridor pursuant to the Passenger Rail Investment and Improvement Act and other major investments in the Penn Station and East River Tunnel including the continuation of the total track replacement work in the East River Tunnels.

Line Structures - \$343 million.

Bridges – \$269 million. Bridge rehabilitation and bridge replacement will include rehabilitation or replacement of up to ten bridges which address both railroad bridge and highway bridge investment needs, including replacement of the Cherry Valley Road Bridge and the Webster Avenue Highway Bridge. MTA Long Island Rail Road also will rehabilitate three bridges located in Brooklyn and five bridges in Nassau and Suffolk counties.

MTA Long Island Rail Road will consider undertaking a systemwide viaduct condition assessment by third party structural engineers, followed by renewal and replacement of selected viaducts, based upon structural condition prioritization.

A similar systemwide bridge assessment will be undertaken for all MTA Long Island Rail Road-owned bridges and associated line structures.

MTA Long Island Rail Road will continue the bridge painting program established in the 2005-2009 program, and will continue with drainage improvements and waterproofing projects.

The MTA Long Island Rail Road also plans to demolish abandoned and out-of-service structures, including the Main Line Cut-Off and Montauk Cut-Off structures, as well as Cabin M Bridge, all in Long Island City.

Tunnels - \$75 million. The 2020-2024 Capital Program will continue structural renewal and improvements on the Atlantic Branch in Brooklyn and Queens by addressing structural components of the Atlantic Avenue Tunnels, including completing tunnel hatchway work, progressing reconstruction of deteriorated tunnel floor beams, and rehabilitating the Bedford Avenue Tunnel Portal. Also included are tunnel systems replacement and upgrades to include waterproofing, drainage, and lighting, as well as fire life safety systems.

Communications and Signals - \$364 million.

Communications – \$75 million. The Communications program includes upgrading fiber optic network, cyclical replacement of communication pole lines and other communications components, replacement and upgrades to radio system components, and improving radio coverage in-line with regulatory mandates. Also included is the roll-out of Help Points at MTA Long Island Rail Road branch line stations and terminals, implementing new communications system technology, as well as station technology upgrades and the installation of new cameras at MTA Long Island Rail Road grade crossings. Finally, a new Customer Information Technology project has also been established.

Signals – \$289 million. Signals projects will modernize and upgrade segments of MTA Long Island Rail Road's signal systems. Including:

- Replacement of and upgrades to aging signal equipment near Babylon Station, including switches, signals, cables and other signal system components,
- Construction of a new signal system between Hunt to Post on the Port Jefferson Branch, including two new signal system designs,
- Upgrades to and modernization of the signal system within the Babylon to Patchogue segment of the Montauk Branch,
- The implementation of centralized train control, which will enable the MTA Long Island Rail Road to monitor all trains from a centralized location improving operations, communications and the ability to respond to service disruptions,
- A design effort for new interlockings and strategic sidings on the Montauk Branch,
- Signal improvements to Divide Interlocking in Hicksville, and
- A significant signal replacement program in the 2020-2024 Capital Program, which targets relays, cables, batteries, switch machines, huts, and signals for replacement and upgrading.

Shops and Yards - \$203 million. Shops and Yards investments will support future service increases and planned fleet growth, while upgrading the facilities for undertaking critical fleet inspections, repairs, maintenance and cleaning, and thus supporting fleet reliability and maintaining interior and exterior fleet appearance, including in Morris Park, Ronkonkoma, Hillside and West Side Shop. Also included is the second phase of enhancing Maintenance of Equipment facilities at Mid-Suffolk Yard in Ronkonkoma and progressing an environmental review for a new East End Maintenance Shop.

Additional Shops and Yards investments include Port Washington Track extensions, as well as design the replacement of the Morris Park Turntable. Mentor contracts will be awarded through the SBDP supporting execution of Shops and Yards projects.

Investments will be made to employee facilities to enhance the operational facilities for the MTA Long Island Rail Road's Engineering, Maintenance of Equipment, Stations, Transportation, and Training facilities, address various structural, mechanical, electrical, plumbing and other systems within these employee facilities. The investments include rehabilitation of the Atlantic Terminal facilities, systems renewal at the Jamaica Corporate Building, continued upgrades to fire protection systems at the Hillside Support Facility, component renewal at numerous employee facilities in Nassau, Suffolk and Queens counties, and paving work at various locations targeting parking lots, sidewalks and roadways. This program will also include renewal of the Boland's Landing platform which is located at an employee-only station. Finally, construction fit-out of a new consolidated employee facility along with construction of improved space for signal employee training operations has also been included. Employee Facilities also includes an allowance towards third party contracts awarded under the SBDP.

<u>Power</u> - \$426 million. The 2020-2024 Capital Program will replace as many as five traction power substations in Queens and Nassau County. In addition to replacing substations and substation components, MTA Long Island Rail Road will also target various traction power components for replacement and upgrade. Also, yard lighting and amenities will be addressed at Hillside Yard and other priority locations.

Power investments also include completing the final phase of the Atlantic Avenue Tunnel Lighting replacement and upgrade between Dunton and Woodhaven and the replacement of station and building electrical systems and platform lighting.

The electrification of the Central Branch is also included in the 2020-2024 Capital Program.

<u>Miscellaneous</u> - \$231 million. The Miscellaneous category includes security investments (security camera replacement systemwide, improvements to access control and physical perimeter hardening at key locations, upgrades for three security command centers, a modern centralized video storage solution system, a physical assessment of right-of-way to enhance security, and a project to enhance security in the Atlantic Avenue Tunnels in Brooklyn and Queens), an allowance for future environmental remediation, along with projects for program administration, insurance, Enterprise Asset Management, program development, the MTA Long Island Rail Road's contribution to the MTA's Independent Engineer and administration of the SBDP.

MTA Metro-North Railroad

Among the projects included in the Commuter Core Program component of the 2020-2024 MTA Capital Program are the following projects for MTA Metro-North Railroad:

<u>Rolling Stock</u> - \$853 million. MTA Metro-North Railroad will replace the worst-performing M-3 railcars in the 2020-2024 Capital Program and continue in the next capital program to replace the remainder of the existing M-3 fleet, and provide for growth, and will complete the replacement of the Genesis dual-mode locomotive fleet, which provides East of Hudson service.

Grand Central Terminal, Stations & Parking - \$1,129 million

Grand Central Terminal Renewal Projects - \$651 million. The 2020-2024 MTA Capital Program includes priority repairs to the Grand Central Terminal trainshed to preserve safe operations, as well as initial phases of trainshed replacement, with critical construction work undertaken in the first section while design work prepares MTA Metro-North Railroad for construction of the next section to be completed as part of the 2025-2029 Capital Program. The Park Avenue Tunnel project will construct four additional emergency exits in two new locations, improving egress from six to ten exits along in this critical tunnel running under the streets of Manhattan.

Additional repairs to Grand Central Terminal building will include completing escalator replacement, replacing a key freight elevator in the terminal, replacing fire and sprinkler standpipe infrastructure, repairing leaks in the terminal building, renewing elements of the vast systems of utilities in Grand Central Terminal and allocating funds for the SBDP.

Outlying Stations Projects - \$340 million. Station upgrades may include new platforms, new lighting, improved customer information systems, new platform canopies, modernized passenger waiting areas, and improved mobility access for customers. Upgrades may include new elevators and/or ramps. Priority component repairs at select stations along the

Upper Hudson and Upper Harlem Lines will improve the condition of these stations and provide an enhanced customer experience, including station repairs such as platforms and edges, railings, and stairs.

In cooperation with its operating agencies, MTA is developing OMNY, an MTA-wide, integrated fare payment system. As part of this effort, the machines and equipment serving MTA Metro-North Railroad's current ticket selling system, which has surpassed its useful life, will be replaced as part of the New Fare Payment Equipment project. Component investments in stations are also planned to be undertaken as part of the SBDP.

Parking Projects - \$138 million. The Southeast Parking project includes upgrading and expanding the existing parking to a new parking structure east of the existing station.

Track and Structures - \$1,021 million

Track - \$262 million. Track investments provide for the replacement of ties and rail along with cyclical rail surfacing on the Hudson, Harlem and New York portion of the New Haven Lines, the replacement of interlocking switches and turnouts, the cyclical replacement of switches and stick/jointed rail in the platform areas, the multi-phased rock slope remediation program to stabilize rock slope at priority locations, the phased rebuild of the retaining wall near the Marble Hill Station.

Structures - \$573 million. The Structures program includes the start of the multi-program, multi-phased replacement of the deteriorated Park Avenue Viaduct. The 2020-2024 Capital Program will advance the first phase to replace critical sections of the existing viaduct that will improve its reliability and lower the risk of service disruptions. Investments in undergrade and overhead bridges on all three East of Hudson lines also continue in this program. The Undergrade Bridge Program includes the design and/or repair or replacement of undergrade bridges at priority locations on the Hudson, Harlem and New Haven Lines. The bridge program includes the design and/or repair or replacement of bridges at priority locations primarily sited on the New Haven Lines in the State.

Other structure improvement projects include Railtop Culverts, Bridge Walkways, Replace Timbers on Undergrade Bridges, Hudson Line Tunnels Inspection, and Right-of-Way Fencing. Component investments in structures are also planned to be undertaken as part of the SBDP.

West of Hudson Infrastructure - \$187 million. West of Hudson projects include repairs to both Moodna and Woodbury viaducts, evaluation of potential ways of improving service for West of Hudson customers, such as the use of passing sidings and a new midpoint yard to provide capacity improvements on the Port Jervis Line. Phased investments will support future additional off-peak and reverse peak passenger service on the line. Projects in this program will include the design and construction of a new passing siding near Tuxedo. At the same time, MTA Metro-North Railroad continues to make state of good repair investments to address the deteriorated West of Hudson infrastructure, including the cyclical program to maintain track assets, undergrade bridge repairs and rock slope remediation. Component investments in structures are also planned to be undertaken as part of the SBDP.

<u>Communications and Signals</u> - \$182 million. The 2020-2024 Capital Program includes replacement of the existing wayside signal and communication systems and infrastructure between Croton-Harmon and Poughkeepsie Signal System. In addition, priority component investments will address needs and obsolescence in MTA Metro-North Railroad's Communications Infrastructure System.

Other communications and signals projects include PBX Replacement, Voice Recorder Replacement, Station PA System, Radio Systems, Fire Alarm and Suppression Systems, CCTV, Grade Crossing Improvements, Hot Box and Dragging Equipment, Replace High Cycle Relays, and Track Circuit Reliability.

<u>Power</u> - \$202 million. Power investments in this program include constructing two new power substations and design for three additional substations on the Harlem Line. New Haven Line power investments include construction of a permanent substation at Pelham and replacement of two traction power substations. On the Hudson Line, an allowance is included for the preliminary estimate to electrify portions of Track 1 on the Hudson Line. The program to replace motor-alternator sets at all six sites with a signal substation continues as well with one site to be designed and constructed.

Power investments also include replacement of deteriorated components. Other projects include replacement of motor-alternator power supplies for signal power, substation rehabilitation, upgrade of New Haven Line power feeders, replacement of signal power transformers and section switches and transformer rehabilitation work.

Shops and Yards - \$23 million. In this program, MTA Metro-North Railroad will replace and upgrade the aged, deteriorated Automotive Fuel Systems located at Harmon, North White Plains, and Brewster. Planning work needed for a new yard on the New Haven Line to support existing non-Penn Station Access New Haven Line service and operational needs is also scheduled to begin in this program. Component shops and yards investments are also planned to be undertaken as part of the SBDP.

<u>Miscellaneous</u> - \$148 million. MTA Metro-North Railroad has included allocations in this category to support two MTA-wide initiatives: administration and support for the SBDP Program and support for the MTA-wide Enterprise Asset Management initiative. Projects are included to support MTA managed insurance coverage for Railroad Protective Liability insurance and Owner Controlled Insurance, as well as MTA Metro-North Railroad scope development and program management and implementation costs.

MTA Bus

The MTA Bus 2020-2024 Capital Program totals \$871 million and includes the purchase of 874 buses, including 545 standard buses, 79 articulated buses, and 250 express buses. 782 of these new buses will replace existing buses, including some that will be up to 15 years old at the time of their retirement, and the other 92 buses will provide fleet growth. 25 of the standard buses will feature all-electric propulsion. Deficient components at up to five MTA Bus depots will be addressed, targeting structural elements, heating/ventilation, and electrical systems. Continued investment will be made in miscellaneous depot equipment, including bus lifts. The first MTA Bus depot will be modified to support an electric fleet with power upgrades, the chargers, and other improvements necessary to maintain this fleet. Overall, MTA Bus will invest \$871 million, including \$722 million for fleet renewal and nearly \$149 million for depot improvements and program support.

MTA Interagency. The total for the MTA Interagency Program budget is \$119 million.

<u>MTA Police Department</u> - \$39 million. MTA Police Department's investment strategy remains consistent with past capital programs with one deviation: this capital program does not include an allocation for the dedicated MTA Police Department public safety radio system. That project is funded in prior capital programs and is well into construction. Investments in the 2020-2024 Capital Program focus on long-standing goals of achieving a state of good repair at the various district offices. In this program, particular focus is placed on the Mount Vernon District Office which will either be rehabilitated or replaced. In addition to facility needs there are allocations to provide for the normal replacement of communications equipment and systems as they reach the end of their useful lives. Equipment will be upgraded or replaced in-kind depending on the requirements and evolution of technologies. Finally, the program includes an allocation to address several smaller needs in the areas of other facility requirements, large vehicle replacements (not including patrol cars) and program administration.

<u>MTA Planning Initiatives</u> - \$60 million. Projects in Core and Corridor planning and other Capital Planning initiatives areas directly provide for the activities needed to support efforts required to invest in the future. Specific activities funded in these projects include:

- Upgrade MTA ridership and transportation models to identify current and future regional mobility needs and to evaluate impacts of transit network disruptions and closures;
- Update regional travel surveys to understand our customers' uses of the system, remain eligible for New Starts funding, and inform the Capital Programming process; and
- Strategic planning evaluations responding to short- and long-term policy questions, such as data informing the impacts of possible fare policy revisions and analyses of regional demographic, economic, and travel trends.

Improvements to capital program planning will emphasize enhanced operational safety MTA-wide for customers and employees. Additionally, MTA will develop pilot studies in support of these and additional strategic initiatives.

In addition to the above activities, planning investments might include specific initiatives to evaluate new directions for investing in the State's future. These initiatives might very well lead to future capacity projects depending on their outcomes.

MTA Network Expansion

The total Network Expansion budget is \$7.998 billion, allocated to East Side Access, Penn Station Access, Second Avenue Subway Phase Two, the MTA Long Island Rail Road Mainline Expansion Project, Regional Investments and miscellaneous projects.

	Funding in		
	Funding in Prior	2020-2024	
MTA Network Expansion Projects	Capital Program(s)*	Capital Program*	Project Total*
East Side Access	\$10,335	\$798	\$11,133
Regional Investments	601	540	1,141
Penn Station Access	452	1,131	1,583
Second Avenue Subway, Phase Two	1,735	4,555	6,290
MTA Long Island Rail Road Mainline			
Expansion (3rd Track)	2,050	539	2,589
Miscellaneous	280	235	515
Total [†]	\$15,453	\$7,798	\$23,251
* In millions.			

[†] Numbers may not total due to rounding.

East Side Access - \$789 million. The 2020-2024 MTA Capital Program will fund \$798 million to complete East Side Access and begin revenue service by December 2022. Key initiatives to control both cost and schedule have been implemented to deliver this critical regional asset. Key elements include:

- \$349.6 million: Rescheduled work from 2010-2014 and 2015-2019 Capital Programs, including additional Rolling Stock reserves, Real Estate reserves, the construction of the 48th Street Entrance, Harold Interlocking Force Account, Force Account Systems Testing, Utilities Reserves, Construction Management, Arts for Transit, Caverns and Concourse Detailing, Materials Warranties, training reserves and Test Trains;
- \$328.7 million: Ongoing 3rd Party Construction, Force Account, Design, Construction Phase Services, Project Management, Construction Management, Real Estate and OCIP needs; and
- \$119.9 million: East Side Access project contingency to support remaining project risks.

For a description of the East Side Access Project, see "PART 4. OPERATIONS – MTA CONSTRUCTION AND DEVELOPMENT COMPANY (formerly known as MTA CAPITAL CONSTRUCTION COMPANY) – East Side Access."

<u>Second Avenue Subway, Phase Two</u> - \$4,555 million. The 2020-2024 Capital Program budgets \$4.555 billion for Second Avenue Subway, Phase Two. This includes \$1,650 million in MTA local funding and \$2,905 million in potential federal New Starts funding, noting that the federal application process is still ongoing. Combined with the \$1,735 million programmed in the 2015-2019 Capital Program, the budget brings MTA's total proposal for Phase Two to \$6,290 million. Project costs are to be shared approximately 50/50 between federal and local sources. Any potential Full Funding Grant Agreement approval or funding is, however, subject to further discussion with the FTA.

Implementation of the full Second Avenue Subway Phase Two will span several capital programs. The 2020-2024 Capital Program includes budgets for elements supporting Second Avenue Subway Phase Two: additional construction reserves - \$3,700 million; and additional reserves for Program Management, Construction Management, Project Support and Real Estate - \$855 million.

For a description of the Second Avenue Subway project, see "PART 4. OPERATIONS – MTA CONSTRUCTION AND DEVELOPMENT COMPANY (formerly known as MTA CAPITAL CONSTRUCTION COMPANY) – Second Avenue Subway."

<u>Penn Station Access</u> - \$1.131 billion. After entering into a Memorandum of Understanding with Amtrak in February 2019, allowing MTA to advance design, construct and run service on the Hell Gate Line, a Notice to Proceed was issued to the General Engineering Consultant on February 12, 2019.

Recent progress includes the commencement of preliminary design in which alternative track alignments are being developed. The Design Phase Agreement with Amtrak was executed in August 2019. Additionally, a revised Environmental Assessment is being finalized in advance of securing Congestion Mitigation/Air Quality funding for the project.

A pre-design estimate was developed with a total project cost of \$1.583 billion. Reductions to the total cost will be targeted during preliminary design, incorporating cost containment principals.

The 2020-2024 Capital Program contains \$1.131 billion, which will fully fund completion of the Penn Station Access Project. It also includes the replenishment of \$243 million, which MTA Long Island Rail Road is borrowing in the 2015-2019 Capital Program to advance the purchase of M-9 railcars for fleet growth related to future East Side Access service assumptions. All elements of project management, design, construction management, insurance, and real estate necessary to support construction are also funded.

Funds totaling \$452 million have been allocated in the MTA's 2015-2019 Capital Program. The balance of funds required to complete the project is included in this program.

For a description of the Penn Station Access project, see "PART 4. OPERATIONS – MTA CONSTRUCTION AND DEVELOPMENT COMPANY (formerly known as MTA CAPITAL CONSTRUCTION COMPANY) – Penn Station Access."

MTA Long Island Rail Road Expansion Project - \$538 million.

The MTA Long Island Rail Road Expansion Project entails the following major components, which will be performed across both the 2015-2019 Capital Program as well as the 2020-2024 Capital Program:

- Installation of a third Main Line track from the Floral Park to Hicksville stations;
- Elimination of seven grade crossings to provide grade-separated crossings or, in two cases, full closures to vehicular traffic;
- Modification of overpasses, signal systems, substations, culverts, interlockings, crossovers, sidings, track bed, power systems, communications and signals;
- Construction of retaining walls along portions of the corridor;
- Installation of sound attenuation walls along portions of the corridor;
- Relocation of utilities including electric, signal, communications, gas, water, and sewer systems;
- Modification of/improvement to passenger rail stations, platforms, overpasses, ramps, and parking, including ADA enhancements and construction of new parking facilities at selected stations; and
- Construction of new pedestrian overpasses with elevators and ADA-compliant pedestrian underpasses.

The total project budget remains \$2.589 billion. Construction completion remains scheduled for 4th Quarter 2022 and substantial completion of the Design-Build contract remains scheduled for April 2023. The \$538.5 million included in the 2020-2024 Capital Program will fully fund completion of the MTA Long Island Rail Road Expansion Project. This will allow the following critical activities to occur:

- Award the Design-Build "Completion" option and restore contingency used to advance critical grade crossing work which provided schedule benefits for the project and accelerated safety improvements;
- Award two one-year options for the Program Management Consultant; and
- Completion of all MTA Long Island Rail Road related force account work.

All other elements of project management, design, construction management, insurance, and real estate necessary to support construction are also funded.

Regional Investment - \$540 million.

Regional Investments include work at Harold Interlocking. The introduction of East Side Access service will result in an additional 24 trains in the peak hour traveling through this already busy interlocking. The work includes MTA Metro-North Railroad bringing trains from the Hudson Valley and Connecticut through Harold Interlocking and Sunnyside Yard to Penn Station. Recognizing the long term regional benefit of building an operationally "robust" complex through Harold Interlocking that would accommodate the future needs of the MTA Long Island Rail Road, Amtrak, NJ Transit and MTA Metro-North Railroad, Regional Investments will provide critical operational flexibility for all the railroads to meet their long-term service plans. The investments include: an East Bound Re-route, which eliminates existing train conflicts between Amtrak and MTA Long Island Rail Road and increases speeds heading east and north; a Westbound Bypass, which will allow Amtrak and MTA Metro-North Railroad to travel through the Harold complex without conflicting with trains heading into or out of Penn Station; and a Loop Track Interlocking, which allows flexibility for access to both Penn Station and the Mid-day Storage yard and increases capacity and speeds for Amtrak and NJ Transit entering Sunnyside Yard.

Regional Investments also include the purchase of a small number of MTA Long Island Rail Road cars to support East Side Access growth.

The 2020-2024 Capital Program restores work which had been rescheduled as part of the 2015-2019 Capital Program amendment approved in May 2018. These include the following:

- Work included as part of FRA's High Speed Intercity Passenger Rail Program grant, including the completion of the Westbound Bypass, construction of the Eastbound Re-route, associated force account as well as ongoing Loop & T Interlocking force account; and
- Purchase of a small number of MTA Long Island Rail Road cars to support East Side Access growth.

Eastbound Re-route work would be completed in advance of the rehabilitation of the East River Tunnel #2 (scheduled to begin in the first half of 2023). The completion of the Westbound Bypass would then follow during the rehabilitation of East River Tunnel #2. This is the optimal sequence to reduce the overall Regional Investments schedule, provide the operational flexibility benefits necessary in Harold Interlocking and avoid further cost increases.

All elements of project management, design, construction management, and insurance necessary to support construction are also funded.

The scope of the Regional Investments project remains unchanged. Funds totaling \$600.7 million have been allocated in the MTA's 2010-2014, and 2015-2019 Capital Programs. The additional \$540.5 million included in the 2020-2024 Capital Program would complete the Eastbound Re-route and Westbound Bypass, as well as restore Rolling Stock funds for the M-9As. The Amtrak Car Washer and balance of Loop & T Interlocking work is anticipated to be included in a future 2025-2029 Capital Program.

Miscellaneous - \$235 million.

The 2020-2024 Capital Program includes \$135 million to manage MTA Construction and Development's 2020-2024 Capital Program, as well as projects included in other agency Capital Programs, including the L-Train Canarsie Tunnel and the Penn Station MTA Long Island Rail Road Train Hall Renovation projects.

This budget will support the following:

- MTA Network Expansion-wide personnel (including integrated consultant staff), including Legal, Procurement, Program Controls, Finance and Human Resources;
- MTA Network Expansion's share of 2 Broadway occupancy costs;
- Allocations for MTA consolidated services;

- MTA New York City Transit procurement and capital payments staff supporting MTA Construction and Development projects;
- Other personnel and office related costs;
- Incidental project costs not eligible for federal reimbursement;
- Independent Engineering Oversight services; and
- Additional Program Support.

MTA Bridges and Tunnels

2020-2024 MTA Bridges and Tunnels Capital Program. This investment program provides for \$3.327 billion in capital commitments, which is expected to be financed with MTA Bridges and Tunnels bonds and PAYGO.

	2020-2024 Capital
	Program
Category of Project	(in millions)
Structures	\$1,005
Roadway & Decks	830
Transportation Systems Management Operations	65
Utilities	217
Building & Sites	91
Miscellaneous	210
Structural Painting	406
Sub-total	<u>\$2,824</u>
Miscellaneous (Central Business District Tolling Program)	<u>\$ 503</u>
Total*	\$3,327

* As of September 25, 2019. The total may not add due to rounding.

- Among the major MTA Bridges and Tunnels projects included are the following:
- Verrazzano-Narrows Bridge ("VNB") \$789 million. Brooklyn approach ramps will be reconstructed while
 reconfiguring the non-standard left-exit Belt Parkway off ramps into right-hand exits with shoulders meeting
 current design standards which will improve traffic flow and traffic safety. The Belt Parkway will be widened
 between its east-bound VNB merge ramp and the Bay Parkway exit to eliminate its substandard traffic merge,
 thereby reducing traffic congestion and improving motorist safety. In addition, two-way tolling will be installed
 in the eastbound direction and a safety fence will be installed on the upper and lower level suspended spans.
- Robert F. Kennedy Bridge \$604 million. The next phase of work includes suspended span structural repairs and upgrades to address flagged conditions, meet modern load criteria for trucks, meet seismic standards, and eliminate wind vulnerabilities, structural upgrades at the anchorages, installation of fire standpipe systems, the construction of new Randall's Island access ramps to improve traffic flow within the Randall's Island Interchange, and upgrades to the fender protection system at the Harlem River Lift Span. In addition, design will be performed for a new ramp from the Major Deegan to the Bronx Approach to eliminate weaving and improve traffic flow and safety, as well as the widening of the south-bound FDR from the Robert F. Kennedy Bridge to 116th street to improve traffic flow just downstream of the Robert F. Kennedy Bridge which will improve traffic flow and safety on the bridge.
- Throgs Neck Bridge \$207 million. Work focuses on providing fenders to protect the bridge towers and anchorages from accidental marine vessel collisions as well as marine security threats. Structural painting of the suspended span towers will also be performed.
- Bronx-Whitestone Bridge \$55 million. Work will address the electric service reliability and redundancy issues
 at the Bronx-Whitestone Bridge facility by replacing the electrical system components and upgrading the power
 distribution system including interconnecting the electric power distribution system of the Bronx-Whitestone
 Bridge Service Building with the bridge service feeds, along with a corresponding upgrade of the standby

generator to provide reliable backup power for the entire Bronx-Whitestone Bridge facility and tolling equipment.

- Hugh L. Carey and Queens Midtown Tunnels \$51 million. These facilities underwent considerable restoration following Superstorm Sandy. The current work will rehabilitate the ventilation and service buildings at both tunnels.
- Central Business District Tolling Program ("CBD Tolling Program") \$503 million. On April 11, 2019, legislation was signed into law enabling the MTA Bridges and Tunnels to implement the nation's first ever CBD Tolling Program as part of the State Fiscal Year 2019-2020 Enacted Budget. The planning, design, construction, operations and maintenance of the CBD Tolling Program is the responsibility of MTA Bridges and Tunnels though it will also require the involvement of several federal and regional agencies and stakeholders. The CBD Tolling Program will reduce congestion and enhance mobility in Manhattan's Central Business District (south of and inclusive of 60th street), while minimizing the footprint of the new system while making the technology/infrastructure "fit" within the urban landscape. The construction and implementation costs for the CBD Tolling Program are being funded through a variety of distinct financing sources all of which will eventually be reimbursed through net operating revenues generated through the program when it is operational.

See APPENDIX E hereto for the Stantec Report.

Approved 2015-2019 Capital Program

The MTA Act required that MTA submit to the CPRB for its approval, on or before October 1, 2014, proposed fiveyear capital programs for the Transit System and MTA Staten Island Railway (the "2015-2019 Transit Capital Program") and for the Commuter System (the "2015-2019 Commuter Capital Program" which, together with the 2015-2019 Transit Capital Program, and prior to their approval by the CPRB, are referred to collectively herein as the "Proposed 2015-2019 MTA Capital Program") for the years 2015-2019. At its September 24, 2014 meeting, the MTA Board reviewed and authorized a submission to the CPRB of the Proposed 2015-2019 MTA Capital Program totaling approximately \$29.0 billion, as well as a five-year capital program for MTA Bridges and Tunnels for the years 2015-2019 (the "2015-2019 MTA Bridges and Tunnels Capital Program" which, together with the Proposed 2015-2019 MTA Capital Program, are referred to collectively herein as the "Proposed 2015-2019 Capital Program") that was not required to be submitted to the CPRB for approval totaling approximately \$3.1 billion. On October 2, 2014, the CPRB vetoed the Proposed 2015-2019 MTA Capital Program without prejudice.

On October 28, 2015, the MTA Board reviewed and authorized a revised submission to the CPRB of the Proposed 2015-2019 MTA Capital Program totaling approximately \$26.1 billion, as well as the 2015-2019 MTA Bridges and Tunnels Capital Program totaling \$2.9 billion. The revised capital program provided for \$29.0 billion in capital expenditures: \$15.8 billion for ongoing repairs of, and replacements to, the Transit System operated by MTA New York City Transit and MaBSTOA and the rail system operated by MTA Staten Island Railway; \$5.2 billion for ongoing repairs of, and replacements to, the commuter system operated by MTA Long Island Rail Road and MTA Metro-North Railroad; \$4.5 billion for the expansion of existing rail networks for both the transit and commuter systems to be managed by MTA Construction and Development; \$0.3 billion for MTA Interagency and MTA Police Department; \$0.4 billion for MTA Bus initiatives; and \$2.9 billion for the ongoing repairs of, and replacements to, MTA Bridges and Tunnels facilities. Submission to the CPRB for review of the revised Proposed 2015-2019 MTA Capital Program was approved by the MTA Board in October 2015. The revised 2015-2019 MTA Bridges and Tunnels Capital Program, as approved by the MTA Board in October 2015, was not subject to the CPRB's approval.

Discussions were immediately undertaken with stakeholders, including the Governor, the Legislature, and the Mayor of the City, which continued into the State budget process, to ensure the Proposed 2015-2019 Capital Program met their concerns. Limited changes to the program were proposed by MTA in collaboration with these stakeholders. For a description of the City's commitment to provide funding for the Proposed 2015-2019 Capital Program, subject to appropriation, see the paragraph "*Funding*" below in this heading. The Proposed 2015-2019 Capital Program was revised to include an additional \$500 million in proposed federal New Starts funding (described below) for Phase Two of the Second Avenue Subway project (see "PART 4. OPERATIONS – MTA CONSTRUCTION AND DEVELOPMENT COMPANY – Second Avenue Subway"), increasing such project's funding allocation in the Proposed 2015-2019 Capital Program to \$1.035 billion, and increasing MTA Construction and Development's portion of the program to \$5 billion. This proposed federal funding was subject to further discussion with the FTA, and subject to future provision of additional local funding

required for the New Starts application process. The Proposed 2015-2019 Capital Program, as revised, also included changes to advance station enhancement work at MTA Metro-North Railroad, MTA Long Island Rail Road, and MTA New York City Transit in support of regional mobility initiatives. No other changes were made to the plan that was approved by the MTA Board in October 2015 and no projects were removed from the plan. With the foregoing exception, these limited changes did not affect the agency overall allocations approved by the MTA Board in October 2015. The overall Proposed 2015-2019 Capital Program total was \$29.5 billion, of which \$26.6 billion was subject to review by the CPRB. On April 20, 2016, the MTA Board reviewed and authorized submission of the revised Proposed 2015-2019 MTA Capital Program totaling \$26.6 billion to the CPRB. Submission of this revised program to the CPRB occurred on April 21, 2016. That program was approved on May 23, 2016 by the CPRB (as approved, the "2015-2019 MTA Capital Program" and, together with the 2015-2019 MTA Bridges and Tunnels Capital Program, the "2015-2019 Capital Program"). The MTA Board, at its February 23, 2017, meeting also approved certain amendments to the 2015-2019 Capital Program, which were approved by the CPRB on March 30, 2017.

In May 2017, the MTA Board approved an amendment to increase the total 2015-2019 MTA Capital Program from \$29.575 billion to \$32.457 billion. The CPRB portion of the program increased from \$26.719 billion to \$29.517 billion. Changes to the program included the following: (a) updates to agency core programs to include critical projects such as station enhancement work, bus fleet amenities, train arrival information, and investments at Penn Station, as well as adjustments to update project budgets and schedules; (b) the inclusion of a new regional mobility project to expand the MTA Long Island Rail Road's Main Line; (c) additional required funding to meet needs for Second Avenue Subway's Phase Two; and (d) a new Cashless Tolling^{*} ("Cashless Tolling") program of projects at MTA Bridges and Tunnels with corresponding program rebalances to accommodate this initiative. The CPRB portion was deemed approved on July 31, 2017.

In addition to the approved July 31, 2017 amendment, in December 2017 there were two separate actions approved by the MTA Board which impacted the MTA's 2015-2019 Capital Program. First, \$100 million was transferred from MTA Long Island Rail Road's 2015-2019 program to the MTA Construction and Development MTA Long Island Rail Road Mainline Expansion Project to support the expansion project's budget at award. Second, the MTA Board approved a Subway Action Plan of \$348.5 million to address needs in the MTA New York City Transit subway system. Unlike the first item, this second action represented an increase to the overall 2015-2019 Capital Program. These MTA Board amendments to the program did not require CPRB approval.

At its April 25, 2018, meeting, the MTA Board approved amendments to the 2015-2019 Capital Program. These amendments increased the 2015-2019 Capital Program by \$813 million from \$32.457 billion to \$33.270 billion increasing the 2015-2019 MTA Capital Program from \$29.517 billion to \$30.334 billion, and reducing the 2015-2019 MTA Bridges and Tunnel Capital Program from \$2.940 billion to \$2.936 billion. Changes to the 2015-2019 Capital Program addressed the following: (a) the addition of a fully funded Subway Action Plan; (b) updated project assumptions reflecting the cost estimates and timing of ongoing projects and emerging needs; (c) consolidation of all budgets for City sponsored stations within the MTA New York City Transit stations program; (d) reallocating funds within the East Side Access project; (e) reallocating funds within Regional Investment programs; (f) a transfer of funds from the 2015-2019 MTA Bridges and Tunnels Capital Program to the 2010-2014 MTA Bridges and Tunnels Capital Program; and (g) elements with 10% increases for transit and commuter projects that require CPRB approval. CPRB approval was obtained on May 31, 2018.

At its September 25, 2019 meeting, the MTA Board approved amendments to the 2015-2019 Capital Program. The amendment increased the overall 2015-2019 Capital Program from \$33.270 billion to \$33.913 billion. The CPRB portion of the program increased from \$30.334 billion to \$30.977 billion and MTA Bridges and Tunnels' program was unchanged at \$2.936 billion. The amendment contained: (1) modifications based on updated project assumptions that reflect the cost estimates and timing of ongoing projects and emerging needs, notably the addition of new projects to make four MTA New York City Transit stations accessible; (2) envelope increases, accompanied by new projects, recognizing the addition of external funding, notably several MTA Long Island Rail Road projects: the Elmont Station project funded by \$105.5 million from Empire State Development Corporation and two Penn Station New York (PSNY) – 33rd Corridor projects, funded by \$424 million from the State, to complete the new MTA Long Island Rail Road entrance and transform the MTA Long Island Rail Road main corridor; (3) a net reduction in the MTA Construction and Development budget of \$132 million due to \$111 million of MTA New York City Transit administrative budget transfers from three prior capital programs into MTA New York City Transit in 2015-2019, more than offset by an interagency reallocation of \$243 million, to be repaid in the 2020-2024 program, from MTA Construction and Development to the MTA Long Island Rail Road reflecting relative timing of

^{*} Formerly described as "Open Road Tolling" or "ORT".

project needs; (4) transfers of scope to MTA Bridges and Tunnels' 2010-2014 Sandy Program to utilize surplus budgets there, freeing up budget for other 2015-2019 projects; and (5) elements with 10% increases which required CPRB approval.

The FTA's discretionary Capital Investment Grant ("CIG") program provides funding for fixed guideway investments such as new and expanded rapid rail, commuter rail, light rail, streetcars, bus rapid transit and ferries, as well as corridor–based bus rapid transit investments that emulate the features of rail. There are four categories of eligible projects under the CIG program: New Starts, Small Starts, Core Capacity and Programs of Interrelated Projects. New Starts projects are new fixed guideway projects or extensions to existing fixed guideway systems with a total estimated capital cost of \$300 million or more, or that are seeking \$100 million or more in CIG program funds. New Starts applications are evaluated and rated by the FTA in accordance with statutorily defined criteria at various points in the development process. In order to be eligible to receive a New Starts grant, the project must go through a multi-step, multi-year process and receive at least a "Medium" overall rating from the FTA, in addition to other requirements. There can be no assurance that the FTA will award a New Start grant to Phase Two of the Second Avenue Subway project.

MTA and the other Related Entities have advanced funds using PAYGO monies to advance certain elements of the 2015-2019 Capital Program prior to its approval by the CPRB.

2015-2019 Funding. The combined funding sources for the last MTA Board approved 2015-2019 Capital Program include \$8,474 billion in MTA bonds, \$2.936 billion in MTA Bridges and Tunnels dedicated funds, \$9,064 billion in funding from the State, \$7.445 billion in federal funds, \$2.667 billion in funding from the City, \$2.145 billion in PAYGO capital, and \$1.182 billion from other sources.

	2015-2019
	Capital Program Amount
	(in millions)
Federal Formula, Flexible, Misc.*	\$ 6,704
Federal Core Capacity [*]	100
Federal New Starts [*]	500
Federal High Speed Rail	122
Federal security	19
City of New York Capital	2,667
State of New York Capital	9,064
MTA Bonds (Not including MTA Bridges and Tunnels)	8,474
PAYGO	2,145
Asset Sales / Leases	959
Other MTA Sources	223
MTA Bridges and Tunnels Bonds & PAYGO	<u>2,936</u>
Total [†]	<u>\$33,913</u>

Subject to future federal appropriation and guidance.

As of December 31, 2019. Totals may not add due to rounding.

2015-2019 MTA Capital Program.

General. The following is a general description of the 2015-2019 MTA Capital Program initially adopted by the MTA Board on May 20, 2016 and approved by the CPRB on May 23, 2016, amended by the MTA Board on April 25, 2018 with approval from the CPRB on May 31, 2018, and further amended on September 25, 2019 and approved by the CPRB in February 2020. Following the description of the 2015-2019 MTA Capital Program is a description of the 2015-2019 MTA Bridges and Tunnels Capital Program, which is not subject to CPRB approval. The 2015-2019 MTA Capital Program consists of the following components:

- Transit Core Program;
- Commuter Core Program;
- MTA Bus Capital Program;
- MTA Interagency Program; and

• MTA Network Expansion.

The following table shows, for each of the agencies or programs in the 2015-2019 Capital Program, the totals and the amounts committed, expended and completed:

As of December 31, 2019 (in billions)				
Agency MTA New York City Type it McDSTOA	Total	Committed	Expended	Completed
MTA New York City Transit, MaBSTOA and MTA Staten Island Railway	\$16.742	\$13.111	\$6.489	\$4.220
MTA Metro-North Railroad and MTA Long Island Rail Road	6.096	4.302	2.354	0.346
MTA Network Expansion	7.520	4.861	2.815	0.174
MTA Bus	0.376	0.263	0.044	0.007
MTA Bridges and Tunnels	2.936	2.438	0.949	0.457
MTA Interagency Program	0.243	0.097	0.030	0.001

2015-2019 Transit Core Program. The following table represents the capital program by category of work for the Transit System and MTA Staten Island Railway under the 2015-2019 Transit Capital Program as amended by the MTA Board on September 25, 2019 and approved by the CPRB in February 2020.

	Transit Authority
	2015-2019
	Transit Core Program
	(in millions) [*]
Subway Cars	\$ 1,486
Buses	1,201
Passenger Stations	4,894
Track	1,801
Line Equipment	182
Line Structures	847
Signals & Communications	2,981
Power	736
Shops & Yards	381
Depots	278
Service Vehicles	351
Miscellaneous	1,127
MTA Staten Island Railway	476
Total [†]	<u>\$16,742</u>

* Does not include MTA Network Expansion Projects related to the Transit System, which are described below under the "*MTA Network Expansion*" section.

[†] Total may not add due to rounding.

Among the projects included in the Transit Core component of the 2015-2019 MTA Capital Program, as approved, are the following:

<u>Subway Cars</u> - \$1,486 million. 440 new 60-foot R-211 railcars and 20 new open-gangway prototype subway cars will be ordered to replace the R-46 class on the B division that are reaching the end of their useful lives. The contract's base was approved by the MTA Board late in 2017. Options to exercise for the purchase of additional R-211 railcars will be addressed in a future capital program.

Buses - \$1,185 million. A total of 2,069 new buses will be purchased, including 60 electric buses.

<u>Passenger Stations</u>. \$4,894 million was approved for station renewal and component work, accessibility investments, structural reconfiguration of stations, and improvements in fare collection, signage, escalators, and elevators as follows:

- Station Renewal, Enhancement and Component Investments \$1,786 million. Additionally, the new enhanced station initiative will revamp the design guidelines for subway stations, and then put them in place using design-build procurement to deliver the projects more quickly.
- Accessibility for Customers with Disabilities \$1,664 million. MTA New York City Transit continues to
 implement a program pursuant to State and federal law to install and make 100 stations fully accessible to
 persons with disabilities. With investments made through the end of the 2010-2014 Capital Program, full ADA
 accessibility at 89 key stations will be complete or in progress. The 2015-2019 MTA Capital Program includes
 ADA investments at the remaining 11 key stations. In addition to the 100 key stations, investments made
 through the end of the 2015-2019 Capital Program also include ADA accessibility at an additional 45 stations,
 including ten additional stations funded in the 2015-2019 Capital Program.
- Other Station Improvements \$382 million. MTA New York City Transit proposes \$30 million in access improvements at the Times Square-42nd Street Shuttle station (in concert with ADA accessibility improvements) and will revamp the shuttle's appearance and operations to make the station more accessible and improve customer circulation. Also included is \$75 million for the next phase of access improvements at Grand Central-42nd Street associated with the proposed development of the MTA Madison Avenue property. Mezzanine work at 8th Avenue/Sea Beach including the reopening of a second entrance, and new street stairs at Bedford Avenue and 1st Avenue/Canarsie are also included in the program.
- Fare Collection \$477 million. MTA New York City Transit will continue the implementation of the next generation of fare payment equipment, including the use of contactless "tap and go" technology. Implementation of such equipment is expected to provide MTA with efficiencies in terms of cost and operation, thus improving the overall customer experience. The contract was awarded to the Cubic Transportation Systems, Inc. ("Cubic") in November 2017 as a design-build contract. The budgets for the Fare Control Area Improvements project and the New Fare Payment System, Phase Two project have been combined into one project. Additional project support across MTA is anticipated to be addressed in a future capital program.
- Station Escalators and Elevators \$586 million. The 2015-2019 MTA Capital Programs includes replacement of 43 escalators and 63 elevators. Elevator work reflects the growing need for normal replacement investment in units initially installed for the purpose of wheelchair access.

<u>Track</u>. The 2015-2019 MTA Capital Program includes \$1,801 million for normal replacement of 72 miles of track and 127 mainline switches. The work includes the replacement of concreted subway track and prefabricated panel track on elevated and open-cut/at-grade structures. Additionally, as part of the mainline track program, traditional bolted rail will be replaced with continuously welded rail at critical locations to prevent the occurrence of broken rails. Cost-saving strategies, such as the Scheduled Component Replacement program and solid-cast polymer tie blocks, will also continue to be applied where appropriate.

Line Equipment. MTA New York City Transit expects to spend \$182 million for line equipment investments, including: tunnel lighting on various lines; one new fan plant; replacement of fan components at various locations; and rehabilitation of various pump rooms.

Line Structures. MTA New York City Transit expects to spend \$847 million for component repairs, painting, line structure rehabilitation, and other enhancements, including: rehabilitation of an underground tunnel on the 4th Avenue line (funding was split between the 2010-2014 Capital Program and the 2015-2019 Capital Program); component repairs to correct structural defects in underground tunnels and elevated structures throughout the system; replacement of a viaduct structure and bridge on the Myrtle line; overcoat painting of elevated structures on the Dyre, Jerome, Flushing, and Myrtle lines; repairs to elevated structures on the White Plains Road and Rockaway lines; protective netting at various elevated stations locations; and rehabilitation of emergency exits at various locations throughout the subway system.

Signals and Communications. MTA New York City Transit expects to spend \$2,332 million for mainline signal modernization investments and \$649 million for communication system improvements, for a total of \$2,981 million.

• Signal Modernization. The 2015-2019 signals program will modernize 73.2 track miles of signals by implementing Communications-Based Train Control ("CBTC") on the 8th Avenue and Culver lines and completing phase two of CBTC on the Queens Boulevard line (the first phase was funded in the 2010-2014 Capital Program and covered the furnishing of both rolling stock and wayside equipment). Additionally,

automatic signal components on the Fulton and Crosstown lines will be upgraded to extend their useful lives. Also planned are several system-wide signal improvement projects, such as control line modifications and speed enforcement system replacements. Six B Division interlockings are proposed for modernization, including two on the 8th Avenue line, three on the Culver line, and one on the Queens Boulevard line. These projects are expected to improve the quality, reliability, and safety of subway service in addition to preparing lines for the roll-out of CBTC.

Communications. The 2015-2019 communications program will install information kiosks ("Help Points") at 244 stations, thus completing the rollout of these kiosks to all stations system-wide. The program will also continue the rollout of an integrated service information management system for the B Division, which will enable MTA New York City Transit to provide real-time train arrival information on the B Division. Additionally, MTA New York City Transit will continue to upgrade the SONET/ATM network and replace key communications infrastructure including copper cables, fiber optic cables, antenna cables, and Private Branch Exchange switches. Improvements are also included to communication rooms, which protect and consolidate communications equipment. The program also includes the replacement of the UHF T-Band radio system, in compliance with a Federal Communications Commission ("FCC") mandate to vacate the currently-used portion of spectrum. Other investments include the replacement of Public Address Customer Information Screen electronic equipment on the Canarsie line. Lastly, investments are included to pilot and begin the rollout of Track Intrusion Detection and Platform Safety Technology to reduce the occurrence of passenger injury from intrusion onto the right-of-way.

<u>Power</u>. MTA New York City Transit expects to spend \$736 million for normal replacement and state of good repair investments in traction power, including: renewal of three substations and four substation enclosures; replacement of frequency converters and switchgear at various locations; rehabilitation of six circuit breaker houses and various circuit breaker house enclosures; replacement of negative cables on a segment of the 4th Avenue line; and supervisory system improvements, including upgrades to the Supervisory Control and Data Acquisition ("SCADA") system on certain subway lines and the replacement of control and battery cables at various substation control zones. MTA New York City Transit also expects to spend \$479 million in power system improvements to support higher train throughput on lines enhanced by CBTC.

Shops and Yards. The 2015-2019 Transit Capital Program includes \$381 million for maintenance and rehabilitation of yards. \$306 million is allocated for priority repairs at various shops and facilities.

<u>Depots</u>. Additional investments of \$278 million are planned for projects benefitting bus depots, including modifications to accommodate articulated buses and roof and HVAC work.

Service Vehicles. The 2015-2019 MTA Capital Program expects to invest \$351 million in non-revenue service vehicles, including \$57 million to purchase new work trains and new rubber tire vehicles.

<u>Miscellaneous</u>. The 2015-2019 MTA Capital Program includes \$1.128 billion for miscellaneous investments. The program support components included in this category are in scale with previous capital programs. This investment includes insurance, engineering services, scope development, and the MTA independent engineer to support miscellaneous technical needs of the program. Among the engineering work is a study of the extension of the Eastern Parkway line to provide service on the 3 and 4 lines along Utica Avenue in Brooklyn. The study will be coordinated with the City and may examine extension options, supporting land use changes, and financing strategies. The 2015-2019 MTA Capital Program includes funds to undertake critical station improvements at key locations including Broadway Junction, Flushing Main Street, Vernon-Jackson Avenues, 86th Street Lexington Avenue, Sutphin/Archer/JFK, 149th Street-Grand Concourse, Jamaica Center Parsons/Archer, Marcy Avenue, Union Street and Fordham Road. Activities will include but are not limited to studies, planning, design and construction.

Other investments include improvements and repairs at assorted facilities, including the consolidated revenue facility, Livingston Plaza, the Rail Control Center, Power Control Center, and many employee facility rooms located within passenger stations. An additional \$65 million is included for other passenger security measures. Various management information system projects are also included, such as data storage and server enhancements at 2 Broadway and an MTA-wide initiative for Enterprise Asset Management ("EAM"). MTA New York City Transit will address various environmental and safety needs, such as asbestos monitoring and removal, fire alarm system replacement at various facilities, and environmental soil remediation.

<u>MTA Staten Island Railway</u>. The 2015-2019 MTA Capital Program budgets \$477 million for MTA Staten Island Railway, including significant investments in railcars, \$258 million, and the power system, \$82 million. MTA Staten Island Railway's R-44 railcar fleet, which has reached the end of its useful life, is being replaced. To provide improved and reliable traction power for the new fleet, three new power substations will be constructed to increase the power supply on the line. Additionally, following a successful pilot, a capital project to support the rollout of customer information signs that will provide real-time train arrival information at all stations is included in the program. Other MTA Staten Island Railway work includes mainline track replacement, radio system enhancement, and component repairs at various stations.

2015-2019 Commuter Core Program. The following table represents the capital program by agency and category of work for the Commuter System under the 2015-2019 MTA Capital Program, as amended by the MTA Board on September 25, 2019 and approved by the CPRB in February 2020.

	2015-2019
	Commuter Core Program
MTA Long Island Rail Road	(in millions) [*]
Rolling Stock	\$ 612
Stations	1,181
Track	817
Line Structures	124
Communications and Signals	365
Shops and Yards	228
Power	140
Miscellaneous	164
$Total^\dagger$	<u>\$3,631</u>
MTA Metro-North Railroad	
Rolling Stock	\$ 379
Stations	511
Track and Structures	441
Communications and Signals	348
Shops and Yards	473
Power	99
Miscellaneous	213
Total [†]	<u>\$2,465</u>

* Does not include MTA Network Expansion Projects related to the Commuter System which are described below under the "*MTA Network Expansion*" section.

[†] Total may not add due to rounding.

MTA Long Island Rail Road

Among the projects included in the Commuter Core Program component of the 2015-2019 MTA Capital Program are the following projects for MTA Long Island Rail Road:

<u>Rolling Stock</u>. Rolling stock has a total budget of \$612 million. This project will continue the purchase of new M-9 electric cars, which was initiated in the 2010-2014 Capital Program. This continued fleet purchase will allow for the replacement of the MTA Long Island Rail Road's remaining M-3 electric fleet (88 cars), which faces a number of service reliability challenges and dated system technology. In addition, a key system improvement component is the procurement of up to 76 new M-9 growth cars, which will prepare MTA Long Island Rail Road for future service to Grand Central Terminal by expanding the size of the MTA Long Island Rail Road electric fleet. An award was made in late 2017 for the 88 replacement cars and 22 cars for growth. 54 additional growth electric cars are to be addressed in the 2020-2024 Capital Program.

Stations. This program (\$1.181 billion) includes initiatives to increase customer satisfaction by providing a comfortable and safe station environment. These projects invest in many station components, including platforms, staircases, shelters, waiting rooms, escalators, elevators, and station parking.

Station Rehabilitation - \$110 million. Maintenance, rehabilitation, and upgrades at several stations. Work at the Nostrand Avenue Station will include demolition and replacement of both platforms, replacement of staircases, canopies, railings, station lighting, along with security and communication systems. Two new elevators will be installed, making this station wheelchair accessible. Accessibility is also being added at the Murray Hill Station.

A new station at Elmont (\$106 million) will provide Main Line service and connect sports fans to the new Belmont Park Arena from either direction.

At the Mets-Willets Point Station, MTA Long Island Rail Road will design at a cost of \$10 million future infrastructure upgrades to support full-time service and accommodate large volumes of railroad customers. The station will feature direct access from the MTA Long Island Rail Road Station to the proposed LaGuardia Air Train Station.

Enhanced Station Initiative, 17 Stations - \$154 million. This effort will target features to improve station aesthetics and the customer experience. Enhancements may include art components, safety/security, improved/renewed signage, passenger amenities, lighting, railings and staircases and customer information systems. This project will utilize the services of a consultant to advise on industry best practices as a means to enhance station aesthetics, amenities, and passenger experience and improving stations through design innovation, all with minimal disruptions to customers.

New Fare Payment System - \$9 million. The \$9 million allocated to advancing the MTA-wide new fare payment system will support MTA-wide efforts to allow customers to use a single smart card, or cell phone with a smart chip to ride the entire MTA network. The primary contract was awarded in October 2017 through MTA New York City Transit's procurement department. The award was made to Cubic.

Penn Station Investments - \$761 million. Investments in support of MTA Long Island Rail Road's busiest station focus on customer improvements, including widening and modernizing the 33rd Street corridor, 33rd Street and 7th Avenue entrance directly into the MTA Long Island Rail Road 33rd Street corridor, creating a new entrance from completing the Moynihan Train Hall build-out, replacing elevators and escalators, and rehabilitating stairs, platform lighting and other station components.

Parking - \$5 million. The 2015-2019 MTA Capital Program includes rehabilitation work at existing commuter parking facilities which are in need of capital renewal based on condition. Rehabilitation of the Ronkonkoma Parking Facility has been identified as priority for these funds.

Small Business Mentoring - \$5 million. Various contracts supporting the station program are expected to be awarded through the MTA Small Business Development Program ("SBDP"). This proposal reflects anticipated programmatic savings of an average of 12 percent among selected station projects in this category. Savings are expected as a result of intensive coordination of track outages amongst multiple capital projects to maximize "piggy backing" opportunities, mid-day station closures for construction (where feasible) and leveraging of contributions from municipalities and private development towards construction of new MTA Long Island Rail Road stations.

<u>Tracks</u>. The \$817 million track program includes \$373 million for track rehabilitation (\$359 million) and right of way improvements (\$14 million), as well as \$444 million for other track improvements. The track rehabilitation program consists of replacement of track components, based upon component age and condition. Elements of the Track Program include installation of wood ties (mechanized), rail, wood switches, concrete switches, field welds, surfacing, drainage, rail profiling and track stability along the right-of-way, grade crossing investments and new construction equipment to support track projects.

Right-of-Way Improvements - \$14 million. MTA Long Island Rail Road will also make various right-of-way improvements, including rehabilitation of retaining walls, along with work to address drainage and culvert deficiencies along the right-of-way. In addition, high security fencing will be installed at sites which have been identified as priority. In addition, abandoned structures will be removed along certain rights-of-way.

Jamaica Capacity Improvements – Design of Phase Two - \$43 million. Building upon the Phase One work undertaken in the 2010-2014 Capital Program, MTA Long Island Rail Road applied implementation efficiencies to the schedule for this latest phase, reducing the 2015-2019 investment while continuing to modernize the track level infrastructure both east and west of Jamaica station, installing higher speed switches and creating more streamlined track routes through the

Jamaica complex. This effort will address design for selected state of good repair needs, by replacing and upgrading track, signal and switch components, many of which have exceeded their useful lives and are in need of modernization. Future phases of the Jamaica Capacity Improvements project are expected to be included in upcoming capital programs.

Amtrak Territory Investments - \$68 million. This project provides funding for MTA Long Island Rail Road's contribution to the North East Corridor pursuant to the Passenger Rail Investment and Improvement Act and other major investments in the Penn Station and East River Tunnel joint use territory. This includes the continuation of the total track replacement work in the East River Tunnels that began in the 2010-2014 Capital Program.

Main Line Double Track Phase Two - \$334 million. The MTA Long Island Rail Road's Main Line from Farmingdale to Ronkonkoma is largely single track, with double tracking only at stations and selected passing sidings. This results in a very fragile operation, where it is very challenging to recover from adverse operational conditions and service disruptions. Infrastructure challenges also create timetable limitations, particularly for off-peak trains. To address these challenges and to enhance service reliability and train service opportunities along this very critical corridor, the MTA Long Island Rail Road is currently constructing a full second track. The first phase, covering Ronkonkoma to Central Islip, included in the 2010-2014 Capital Program, was completed in 2018. Phase Two in the 2015-2019 MTA Capital Program completes the double track, by constructing the Central Islip to Farmingdale segment; this phase was completed in 2019.

Line Structures. This \$124 million category includes multiple projects:

The Bridge Program provides for rehabilitation of bridges, including:

- Buckram Road and Springfield Boulevard \$24 million. The proposal includes a full replacement of the Buckram Road Bridge. For Springfield Boulevard, the rehabilitation plan consists of girder repairs, diaphragm and stiffener renewal, and deck and under-deck rehabilitation.
- Main Line Bridges \$22 million. A key element of this project is the replacement of the Post Avenue Bridge in Westbury. Not only is this century-old bridge deteriorated and in need of full replacement, but due to its limited clearance, it is subjected frequently to vehicular strikes, particularly from trucks. The program development project in the 2010-2014 Capital Program funded the preliminary design for replacement of this bridge. The project will provide a new bridge with increased clearance, which will improve safety and reduce the operational impacts associated with bridge strikes.
- Bridge Painting/Waterproofing \$13 million. MTA Long Island Rail Road will continue the bridge painting program established in the 2005-2009 Capital Program. In addition to painting, waterproofing is a key aspect of the MTA Long Island Rail Road's strategy to bring the line structures category into a state of good repair.

This Bridge Program will also include renewal and rehabilitation of other bridges to be identified on the Main Line.

Communications and Signals.

Communications - \$53 million. The 2015-2019 MTA Capital Program includes a \$34 million project to continue the multi-program effort to upgrade and build out the fiber optic network. This program also includes continued replacement of communications poles and hardware and deteriorated copper cable infrastructure at various locations along MTA Long Island Rail Road right-of-way. In addition, to comply with FCC requirements, MTA Long Island Rail Road will continue system migration to a narrow-band radio frequency by upgrading and replacing radios, radio equipment and infrastructure.

Signals - \$312 million. The 2015-2019 MTA Capital Program includes funds to advance MTA Long Island Rail Road's long-term signal strategy. MTA Long Island Rail Road has included a \$30 million signal replacement project to renew and upgrade existing signal component equipment at locations throughout the MTA Long Island Rail Road system.

Targeting one of the most critical needs for signal investment, the \$40 million Babylon Interlocking Renewal project will replace and upgrade aging signal equipment in the vicinity of Babylon Station, including switches, signals, cables and other signal system components.

On October 16, 2008, Congress passed the Rail Safety Improvement Act of 2008 which requires, among other things, the implementation of a Positive Train Control ("PTC") system on all non-exempt commuter railroad main-line

tracks. PTC is a technology that is capable of preventing train-to-train collisions, over-speed derailments, and injuries to workers as the result of unauthorized incursions by a train into a work zone. In 2013, a System Integrator contract was awarded by MTA Metro-North Railroad and MTA Long Island Rail Road to design PTC systems and to furnish PTC onboard kits and wayside kits. In late 2018, an Alternative Schedule and revised PTC implementation plan were submitted to the FRA. MTA Long Island Rail Road and MTA Metro-North Railroad met all 2018 federal compliance requirements to request an Alternative Schedule, which extends full project implementation to December 31, 2020. Beneficial use for PTC for both the MTA Long Island Rail Road and MTA Metro-North Railroad is now expected to occur in December 2020. Full PTC implementation is contingent upon the Systems Integrator meeting their schedule commitments and mitigating project risks. Full PTC implementation is also contingent upon no new quality or equipment reliability issues.

The \$40 million Babylon to Patchogue project will upgrade and modernize the signal system within this segment of the Montauk Branch. In conjunction with other capital projects which are underway, this will provide for a modernized, speed control signal system between Babylon and Montauk.

This program also continues efforts towards Centralized Train Control, with a total of \$10 million to advance to migration into the central control facility in Jamaica, thereby creating a greater concentration of the MTA Long Island Rail Road's train dispatching and supervision functions within a single location.

Shops and Yards.

Yard Improvements - \$48 million, led by an upgrade to the Mid-Suffolk Yard (\$56 million) to prepare for future capacity needs. This project will complete work started in the 2010-2014 Capital Program to construct a new electric train storage yard on the Main Line in central Suffolk County. This is required to increase train storage capacity for MTA Long Island Rail Road in support of service to Grand Central Terminal.

The MTA Long Island Rail Road will also undertake environmental review, land acquisition and preliminary design in support of a new electric fleet storage yard on the Huntington/Port Jefferson Branch, in order to address current and future shortages of train storage capacity on this branch. Efforts undertaken in this capital program would support construction of a new yard in a future program.

Shop Improvements - \$118 million. Shop improvements include a \$102 million project at Morris Park to replace and renew facilities utilized to maintain diesel locomotives – this includes maintenance bays and associated work areas, employee facilities, parts storage and wayside power for storage tracks.

This program also continues efforts to replace and upgrade aging and deteriorated shop equipment, as part of the Reliability Centered Maintenance program to maintain MTA Long Island Rail Road's fleet. A \$16 million Rolling Stock Support Equipment project reflects this ongoing shop investment initiative.

Improvements totaling \$3 million are also planned for the facilities at Hillside and Holban. Work includes renewal of doors, electrical systems, flooring, restrooms, site work, and building systems. A \$5 million Fire Protection Improvements project will replace and upgrade fire alarm and fire suppression systems at selected employee facility locations.

Shops and yards investment efforts in support of the above projects, to be undertaken as part of the SBDP, total \$14 million. This includes replacement/renewal of building components within MTA Long Island Rail Road's employee facilities.

<u>Power</u>. Power has a total budget of \$140 million. The 2015-2019 MTA Capital Program will replace traction power substations in Queens and Nassau County that have reached the end of their useful lives. These substations have been identified as priority replacements, both due to their age and condition, as well as their critical location at high traffic locations along the Babylon Branch. The substations identified for replacement in this program include Meadowbrook and Ocean Avenue with a contract option to replace Bellmore. The total cost of these substation replacements is estimated to be \$47 million.

MTA Long Island Rail Road's substations and breaker houses are rapidly aging and require investment in order to protect service reliability and address deteriorating substation components. MTA Long Island Rail Road will be rolling out substation renewal and substation component programs, which target specific components at particular locations.

Components to be replaced/renewed as part of this effort include: high voltage cable, control cable, ballast, remote terminal units, substation roofs, motor generators, along with transformers. The total cost of these projects is estimated to be \$39 million.

Miscellaneous.

Environmental Remediation - \$2 million. The environmental remediation effort within this program is the completion of chlordane remediation at selected substation locations. This project will complete the soil remediation efforts at these contaminated locations, addressing those sites not remediated in the 2010-2014 Program.

EAM Reserve - \$8 million. Funds have been allocated for a new MTA-wide initiative, EAM. The MTA Long Island Rail Road's program contains \$8 million towards this effort.

Pursuant to an MTA Board action in December 2017, \$100 million was transferred to the MTA Construction and Development project "MTA Long Island Rail Road Expansion Project" to support that project's budget at award. The \$100 million was a transfer of budgets for similar work to be carried out as part of the MTA Long Island Rail Road Expansion Project.

MTA Metro-North Railroad

Among the projects included in the Commuter Core Program component of the 2015-2019 MTA Capital Program are the following projects for MTA Metro-North Railroad:

<u>Rolling Stock</u>. MTA Metro-North Railroad has allocated \$379 million to begin replacement of the Genesis locomotive fleet (\$257 million), to address reliability issues. Also, \$116 million was allocated to address additional M-8 fleet purchases in concert with the CDOT. 66 units were purchased to address New Haven Line growth.

<u>Stations</u>. Stations has a budget of \$537 million. Included in the 2015-2019 MTA Capital Program is the continuing renewal of the historic Grand Central Terminal complex including the 75 acre trainshed complex, as well as stations on the Hudson and Harlem Lines, and parking and strategic facilities. The Grand Central Terminal complex consists of the terminal building plus the multi-level, subsurface trainshed.

Grand Central Terminal Renewal Projects - \$178 million. Major work continuing from the 2010-2014 Capital Program includes the ongoing structural work on the Grand Central Terminal trainshed and the elevator renewal program. In 2013, a structural assessment of the trainshed was completed that indicated \$1 billion of investments (including priority replacement work) are necessary in order to bring the trainshed to a state of good repair and improve the condition and safe operation of the tunnel and trainshed. In addition, this program will replace the PA and Central Control and Grand Central Terminal's Visual Information Systems ("VIS").

- Grand Central Terminal Trainshed/Tunnel Structure (including Roof Expansion Joints) \$68 million. The project will increase the level of investment needed following an in-depth inspection and assessment of the 75 acre trainshed condition completed in 2013 under the 2010-2014 Capital Program. MTA Metro-North Railroad will begin a systematic block by block reconstruction of the trainshed as well as continue the spot priority repair program. Work in this capital program includes the design and superstructure replacement under Park Avenue Northbound and Southbound in the locations determined to be the highest priority.
- Grand Central Terminal VIS Replacement \$60 million. The purpose of this project is to replace the Grand Central Terminal VIS including central control, cable plant and information displays with a more robust infrastructure that will improve communications, increase reliability and provide for future growth for new types of information to be displayed. Existing system components have reached the end of their useful lives and pose vulnerability in the event of failure. It is expected that CDOT will provide supplemental funding for this important project.
- Small Business Mentoring Grand Central Terminal \$6 million. The 2015-2019 MTA Capital Program includes an allocation of \$5 million for Grand Central Terminal investment efforts in support of the above projects, to be undertaken as part of the SBDP.

Enhanced Station Initiative, five Stations - \$136 million. The focus of this project is to improve customer comfort and convenience at select stations by refining underlying station aesthetics through design innovation. Types of Station Enhancement elements could include artistic lighting of the historic station buildings or architectural enhancement of the station building components to improve public perception. MTA Metro-North Railroad has identified five stations for these improvements: Harlem-125th Street, Riverdale, Crestwood, White Plains and Port Chester. These improvements will be coordinated with work under the phased Customer Communications project which will deploy customer information technology providing real-time performance information including departure time and destination, status, and track assignments.

Harlem Line Stations Improvements - \$20 million. The 2015-2019 MTA Capital Program will rehabilitate components at the Hartsdale and Scarsdale stations, addressing those elements of the stations that are either in poor condition or that are at or beyond the end of their useful life. Station elements to be addressed include platforms, overpasses, and canopies.

Customer Communications - \$94 million. This project, being designed in the 2010-2014 Capital Program, is part of a larger phased initiative to deploy the latest customer information technology, providing real-time performance information including departure time and destination, status, and track to customers and employees. Improvements will include replacement of obsolete PA and VIS equipment, integration of existing customer communication systems, implementation of fiber connectivity, and upgrades to CCTV systems.

These initiatives are intended to provide a higher level of service to MTA Metro-North Railroad customers in a phased rollout east of the Hudson River. Customer service initiatives will be coordinated with work under the Station Enhancements project at Harlem-125th Street, Riverdale, Crestwood, White Plains and Port Chester. CDOT will provide supplemental funding for this important project. In addition, MTA Metro-North Railroad will work with the CDOT to install these capabilities in Connecticut and with New Jersey Transit on the west of the Hudson River territory as well.

New Fare Payment System - \$6 million. The \$6 million is allocated to advance the MTA-wide new fare payment system in support of the MTA-wide efforts to allow customers to use a single smart card, or cell phone with a smart chip to ride the entire MTA network. The primary contract was awarded to Cubic Transit Systems in October 2017 through MTA New York City Transit's procurement department.

Strategic Facilities - \$14 million. The \$14 million Strategic Facilities project will improve parking and access to MTA Metro-North Railroad trains through parking expansion at location(s) to be determined with possible candidates for such facilities considered based on available land, demonstrated need and Transit Oriented Development where possible. Transit Oriented Development initiatives, joint use of parking facilities and access provided in partnership with developers can enhance MTA Metro-North Railroad's opportunities to expand rail access, grow ridership, reduce capital costs, increase revenues and establish a more sustainable, mixed use station area. To progress these projects, MTA Metro-North Railroad will look to partner and coordinate with various third party groups such as counties, local towns, communities and private organizations, as well as State agencies such as the New York State Department of Transportation ("NYSDOT").

Small Business Mentoring - Stations and Strategic Facilities - \$25 million. The 2015-2019 MTA Capital Program includes an allocation of \$25 million for station component and strategic facilities investments in support of the above projects, to be undertaken as part of the SBDP.

Track and Structures.

Cyclical Track Program - \$75 million. This project provides for the replacement of ties and rail along with cyclical surfacing on the Hudson, Harlem and New York portion of the New Haven Line. The project has been expanded and enhanced to ensure that MTA Metro-North Railroad's track is maintained in a constant state of good repair so that the track structure does not deteriorate and ensures conformance to Federal Railroad Administration ("FRA") track standards. The project includes the phased replacement of 119 pound rail in order to maintain a safe right-of-way, improve performance, reliability and condition. The scope of work for this project includes the purchase of rail, ties, track ballast and other track materials associated with installation.

Turnout Replacement - Mainline/High Speed - \$45 million. This project provides for the replacement of interlocking switches at select locations throughout the MTA Metro-North Railroad territory in the State as they reach the end of their useful life. The scope of work for this project includes, for some locations, turnout replacement in kind; and for

select locations, improving existing standard turnouts with high-speed turnouts. High-speed turnouts will result in reduced travel time for MTA Metro-North Railroad customers and greater operational flexibility for the railroad.

Grand Central Terminal Switch Renewal - \$25 million. This project is a continuation of the switch replacement in Grand Central Terminal along with the stick/jointed rail that currently exists at the platform areas. This project provides for the removal of existing switches and the annual renewal of switches within the terminal and tracks in the platform areas.

Turnout Replacement – Yards and Sidings - \$5 million. This project provides for the normal replacement of turnouts as they reach the end of their useful life, and for the construction of track improvements at various yard and siding locations in the State.

West of Hudson Track Improvements - \$16 million. This project will replace rail and ties, as well as perform surfacing on selected track areas on the Port Jervis Line.

Undergrade and Overhead Bridge Program - \$138 million. The focus of these projects is the repair and replacement of bridges over or supporting the railroad's right-of-way, which are approaching the end of their useful lives, or do not meet current loading standards. The project funding levels were increased in this program to progress work towards a state of good repair. The undergrade bridge program includes the design and/or repair or replacement of up to thirty structures on the Hudson, Harlem and New Haven Lines based on detailed evaluation of needs and efficiencies identified during design and construction activities. MTA Metro-North Railroad will continue its work to undertake intensive coordination of track outages amongst multiple capital projects to maximize outage opportunities. The overhead bridge program includes the replacement of bridges on the New Haven Line as well as funds for ongoing long-term bridge repairs.

Harlem River Lift Bridge - \$10 million. This project continues a rehabilitation program initiated in the 2010-2014 Capital Program. The work includes repairs to cracked piers that support the critical moveable bridge which provides the only access into Manhattan for all MTA Metro-North Railroad trains traveling to and from Grand Central Terminal.

Moodna and Woodbury Viaducts – West of Hudson - \$14 million. This project continues the state of good repair work on the Moodna and Woodbury viaducts on the Port Jervis Line. The project includes the total replacement of ties on both viaducts, approximately 3,000 ties on Moodna and 600 ties on Woodbury.

Undergrade Bridge Program – West of Hudson - \$15 million. This project includes the replacement of three bridges on the Port Jervis Line, as well as repairs to two additional bridges. This project provides for the continuing renewal of structures determined as top priorities based on condition surveys.

Other Track and Structures Projects - \$91 million. Additional projects in the 2015-2019 MTA Capital Program for track include work to maintain the system infrastructure as safe and reliable. Work includes cyclical insulated joints, rock slope remediation, rebuilding retaining walls, improvements to system-wide drainage and purchase of maintenance of way equipment.

Structures improvements to maintain reliability and that contribute to progress towards a state of good repair include bridge preservation rehabilitation, railtop culverts, bridge walkways, replace timbers on undergrade bridges, Hudson Line tunnels inspection, catenary painting and DC substation/signal house roof replacement and right-of-way fencing.

Additional West of Hudson infrastructure improvements needed to progress Port Jervis Line state of good repair include track improvements and rock slope remediation.

Small Business Mentoring – Structures - \$6 million. The 2015-2019 MTA Capital Program includes an allocation for line structure component investments in support of the above projects, to be undertaken as part of the SBDP. This proposal reflects anticipated programmatic savings of an average of 9% among selected track and structures projects.

Communications and Signals.

Network Infrastructure Replacement - \$44 million. This project will upgrade the fiber optic communication system infrastructure. The current system is approaching the end of its useful life. If not addressed, this will leave current communication infrastructure without replacement or support from the vendor. In order to meet future demands for such

projects as security system upgrades along with passenger station and information upgrade projects, the next generation in Optical Transport Dense Wave Division Multiplexing is needed. The 2015-2019 MTA Capital Program includes \$42 million for the project to address this need in New York territory. CDOT will provide supplemental funding for this project.

Croton-Harmon to Poughkeepsie Signal System - \$101 million. The existing wayside signal and communication systems and infrastructure located on the Hudson Line from Croton-Harmon to Division Post in Poughkeepsie have reached the end of their useful life. This project will begin replacement of the existing wayside signal and communication systems and infrastructure including communication and signal central instrument locations and fiber optic and copper cable system.

Positive Train Control - \$122 million. As more fully described above under "<u>MTA Long Island Rail Road</u> – <u>Communications and Signals</u> – Signals - \$312 million," in 2013, a System Integrator contract was awarded by MTA Metro-North Railroad and the MTA Long Island Rail Road to design PTC systems and to furnish PTC on-board kits and wayside kits. The 2015-2019 MTA Capital Program includes \$122 million for MTA Metro-North Railroad for the continued funding of this project and in the State. CDOT participation will supplement this funding to support PTC investments in Connecticut.

West of Hudson Signal Improvements - \$21 million. Establishes cab signaling on the Port Jervis line.

Harlem Wayside Communication and Signal Improvements - \$52 million. Installs express cable from Woodlawn to Southeast stations on the Harlem Line.

Other Communications and Signals projects - \$9 million. The remainder of the communications and signals projects include Replace Signal Office Equipment/SCADA Office, PBX Replacement, Upgrade Grade Crossings, Replace High Cycle Relays and Fire Suppression Systems.

Shops and Yards.

Harmon Shop Improvements - \$432 million. The Harmon shop replacement program consists of investments to support the fleet of electric and diesel hauled rail cars and provide improved productivity. This program funds the designbuild of the new Running Repair and Support Shop facility that will complete the replacement of the functionally and physically obsolete existing facility. As a result of realized implementation efficiencies, a portion of the work previously planned was accelerated to the 2010-2014 MTA Capital Program. The 2010-2014 Capital Program phase is complete while the next phase, included in the 2015-2019 MTA Capital Program, is now underway.

Brewster Yard Improvements – Design - \$48 million. The \$48 million project will provide design services for the expansion of Brewster Yard. This yard, adjacent to Southeast station and at capacity, will need to be expanded in order to accommodate longer trains anticipated following the M-3 fleet replacement. Construction of the yard expansion will be programmed in a future capital program.

Other Improvements - \$26 million. Other projects will include the Harmon Wheel True Facility and West of Hudson Yard Improvements, including environmental and design for a new midpoint yard and passing sidings on the Port Jervis Line to support West of Hudson service and ridership.

Small Business Mentoring – Shops & Yards - \$8 million. The 2015-2019 MTA Capital Program includes an allocation of \$10 million for shop and yard component investments in support of the above projects, to be undertaken as part of the SBDP.

Power.

Harlem/Hudson Power Rehabilitation - \$15 million. This project will continue the multi-program phasing of component rehabilitation of MTA Metro-North Railroad's 49 substations.

Harlem/Hudson Power Improvements - \$25 million. This project will continue the multi-program phasing of improvements recommended in the Traction Power Study completed under the 2000-2004 Capital Program. These improvements are required to support future growth in ridership and service and to reduce equipment failures due to low voltage conditions. This project also includes funding to complete a new substation on the Upper Harlem Line.

Substation Improvements (\$11 million) are being performed at certain substations while replacements at others are in design (\$3 million).

Design of Park Avenue Tunnel Power Initiatives - \$4 million. This project will do design for power investment, including third rail component work, tunnel lighting and the tunnel alarm, to be constructed in another program.

Harlem/Hudson Power at 86 St and 110 St - \$10 million. This is a new project to complete power substation construction already ongoing. It addresses constructability issues which have delayed the overall project completion.

<u>Miscellaneous.</u> In addition to the usual projects in this category, e.g. insurance, support services, and program administration, this category also includes MTA Metro-North Railroad's contribution of \$37 million for a new, unified trash facility being constructed as part of the East Side Access project.

Finally, MTA Metro-North Railroad has included an allocation of \$13 million in this category to support the MTAwide EAM initiative.

In October 2017, \$47.8 million was added to the MTA Metro-North Railroad capital program from CDOT for administrative assets. This money was added directly to existing projects across the MTA Metro-North Railroad 2015-2019 Capital Program. The breakout of this additional money from CDOT is reflected in this most recent capital program amendment.

MTA Bus

The 2015-2019 MTA Capital Program of \$376 million includes \$263 million for bus purchases, \$91 million for facility and equipment projects, and \$22 million for program administration and engineering support. A total of 335 new buses will be ordered for the normal replacement of buses approaching the end of their useful lives. Also included are component repairs at five depots: Spring Creek, College Point, LaGuardia, Baisley Park, and JFK. The development and rollout of new technology systems such as on-board audio/visual information for customers, automated passenger counters, and a depot bus location system are also included. The program also includes \$35 million to support the development of a new bus radio system.

MTA Interagency. The total for the MTA Interagency Program budget is \$243 million. The three components of the MTA Interagency Program are described below:

<u>MTA Mentoring Program Administration - \$59 million</u>. As a part of the amendment, SBDP reserves at each of the agencies were transferred to MTA Interagency to create a new, centralized reserve for supporting the overall SBDP program. \$30 million came from MTA New York City Transit, \$9 million from MTA Long Island Rail Road, \$7 million from MTA Metro-North Railroad, \$7 million from MTA Construction and Development and \$6 million from MTA Bridges and Tunnels.

<u>MTA Police Department - \$39 million</u>. MTA Police Department's 2015-2019 Capital Program includes projects to invest in facilities, vehicles and communications systems. \$29 million of this supports the Public Safety Radio project which is ongoing and also funded in two other capital programs (the 2005-2009 Capital Program and the 2010-2014 Capital Program).

<u>MTA Planning Initiatives - \$145 million</u>. The MTA Planning Initiatives budget includes funds for research and analysis to sustain various planning initiatives.

- Core Planning Support \$10 million.
- Corridor Planning Support \$10 million.
- Demolition of the Madison Avenue Headquarters \$25 million.
- Capital Program Support \$100 million.

MTA Network Expansion.

The total Network Expansion budget is \$7.520 billion, allocated to East Side Access, Penn Station Access, Second Avenue Subway Phase Two, the MTA Long Island Rail Road Mainline Expansion Project, Regional Investments and program support.

East Side Access - \$2.821 billion. The 2015-2019 MTA Capital Program continues the construction of the East Side Access project to enable revenue service by December 2022. Elements of project management, design, construction management, and insurance necessary to support construction, as well as support to testing and commissioning are also funded.

The scope of the East Side Access project remains substantially unchanged. Funds totaling \$10.178 billion have been allocated in the MTA's 1995-1999, 2000-2004, 2005-2009, 2010-2014 and 2015-2019 Capital Programs. Some scope and associated budgets were transferred from the 2015-2019 program to the 2010-2014 program as a part of the July 2017 amendments to those programs. These transfers did not change the current \$10.178 billion East Side Access budget. However, based upon a recently completed review of the East Side Access project, the estimated cost to complete the project exceeded the \$10.178 billion budget by \$955 million. This estimated cost increase required funding from the 2015-2019 Capital Program and the 2020-2024 Capital Program. The amendment to the 2015-2019 Capital Program, approved by the MTA Board on April 25, 2018, addressed the 2015-2019 Capital Program cost increases of \$157 million, which amount was transferred from the Regional Investments program (sources were from both the 2010-2014 Capital Program and the 2015-2019 Capital Program). The expected revenue service date for the East Side Access project remains December 2022.

<u>MTA Long Island Rail Road Mainline Expansion Project - \$2.050 billion</u>. This project, which will be managed and delivered by MTA Construction and Development, will construct a third track on MTA Long Island Rail Road's main line between Floral Park and Hicksville. Station work, right of way work and grade crossings are some of the scope included in this project. The design-build award was approved by the MTA Board in December 2017. Additional project support is expected to be included in the 2020-2024 Capital Program.

<u>Second Avenue Subway, Phase Two - \$1.735 billion</u>. Implementation of the full Second Avenue Subway Phase Two will span several capital programs. The project includes the following: Preliminary Engineering, Design and Environmental Studies - \$135 million; Construction Management, Project Support and Real Estate - \$130 million; and Early Construction and project reserves - \$1,470 million.

<u>Penn Station Access - \$452 million</u>. The 2015-2019 MTA Capital Program includes design and construction of infrastructure and completion of specifications for rolling stock to operate MTA Metro-North Railroad service on the New Haven Line into Penn Station via Amtrak's Hell Gate Line. \$243 million previously included for Penn Station Access in the 2015-2019 MTA Capital Program was loaned to the MTA Long Island Rail Road to advance the purchase of its M9 fleet. The \$243 million was restored to the overall, multi-capital program budget of Penn Station Access as part of the 2020-2024 Capital Program.

<u>Regional Investments - \$203 million</u>. The 2015-2019 MTA Capital Program includes a new program-wide contingency established from project deferrals to support ongoing and upcoming work of \$153 million and the East Bound Re-route of \$9 million. Additional money will be required in the 2020-2024 Capital Program to continue Regional Investments. As part of the April 2018 amendment, a portion of the budget was transferred to East Side Access to address needs in that project. Needs for Regional Investments will be addressed in future capital programs starting with the 2020-2024 Capital Program.

East Side Access Risk Reserve - \$131 million. The 2015-2019 MTA Capital Program includes an executive reserve established outside of the East Side Access program as a risk contingency of \$131 million.

<u>Miscellaneous - \$129 million</u>. The 2015-2019 MTA Capital Program includes \$83 million for miscellaneous functions, administrative duties and independent engineering services throughout the 2015-2019 Capital Program period. \$29 million is also included as a reserve to support Second Avenue Subway Phase One.

See "PART 1 – CERTAIN RISK FACTORS – Respond to Developing Economic Environment - Funding of Capital Programs and Operations".

MTA Bridges and Tunnels

2015-2019 MTA Bridges and Tunnels Capital Program. This investment program provides for \$2.936 billion in capital commitments, which is expected to be financed with MTA Bridges and Tunnels bonds and PAYGO.

	2015-2019
	Capital Program
Category of Project	(in millions)
Structures	\$ 824
Roadways & Decks	823
Toll Plazas & Traffic Mgmt.	624
Utilities	407
Buildings & Sites	32
Miscellaneous	73
Structural Painting	153
Total [*]	<u>\$2,936</u>

As of September 25, 2019. The total may not add due to rounding.

Among the major projects included are the following:

- *Throgs Neck Bridge* \$315 million. Replacement of the suspended span deck with a new deck including upgrade of the lighting system to energy-efficient LED luminaries and installation of a dry fire standpipe system;
- *Verrazzano-Narrows Bridge ("VNB") \$265 million*. Rehabilitation of the upper level approach ramps to and from the VNB on Staten Island and Brooklyn. Phase I includes Staten Island upper level approach, Lily Pond Avenue exit ramp, Staten Island and Brooklyn upper level anchorage spans, Brooklyn upper level westbound approach;
- *Robert F. Kennedy Bridge \$135 million.* Design-build construction of a new Harlem River Drive ramp directly connecting the RFK Harlem River lift span with the northbound Hudson River Drive; miscellaneous structural rehabilitation and structural painting of the structures, facility-wide;
- Hugh L. Carey Tunnel \$88 million. Design-build rehabilitation of the tunnel ventilation systems;
- *Henry Hudson Bridge \$213 million*. Design-build rehabilitation and retrofit of the concrete skewbacks which support the bridge arch, replacement of the concrete pedestals which support the bridge approach structures and lower level north abutment pilaster (construction underway); replacement of the upper and lower level toll plaza structure and the lower level approach structure including roadway lighting (construction underway);
- Rockaway Facilities \$66 million. Design-build repair/replacement of the pier fender systems at Cross Bay and Marine Parkway bridges;
- Queens Midtown Tunnel \$39 million. Design-build rehabilitation of the tunnel controls and communication systems; and
- *Cashless Tolling \$502 million*. Transition all MTA Bridges and Tunnels toll operations to a cashless open road tolling system. This project achieved beneficial use in 2017.

While maintaining the overall investment strategy for the completion of critical project work, the 2015-2019 MTA Bridges and Tunnels Capital Program also completed initiatives under the New York Crossings Project ("NYCP"), a transformational plan to improve the overall customer experience at all MTA Bridges and Tunnels crossings. In October 2016, Governor Cuomo announced the project, which, included an aggressive one-year schedule for implementing open road, cashless tolling at all MTA Bridges and Tunnels crossings, enabling a free flow of traffic through overhead gantries with vehicle classification, license plate image cameras and E-ZPass sensors. For vehicles without an E-ZPass, a "Tolls by Mail" invoice is sent to the vehicle's registered owner. Cashless Tolling reduces customer travel time and idle time, thus saving energy and lowering carbon emissions. The NYCP schedule included an accelerated 2016 roll-out of cashless tolling at the Henry Hudson Bridge, with remaining MTA Bridges and Tunnels crossings completed in 2017. See ""PART 5.

STATISTICAL INFORMATION - RIDERSHIP AND FACILITIES USE - Cashless Open Road Tolling ("Cashless Tolling")."

Design and construction of the new toll collection systems and toll plaza reconfigurations at all seven bridges and two tunnels was completed within the program. In addition to implementation of Cashless Tolling, the 2015-2019 MTA Bridges and Tunnels Capital Program includes major structural projects to ensure state of good repair, meet current codes, and enhance customer safety.

- The funding for the NYCP work carried out in the 2015-2019 MTA Bridges and Tunnels Capital Program is in the amount of \$501.7 million. The approved May 2017 amendment to the 2015-2019 MTA Bridges and Tunnels Capital Program is a result of a review and reprioritization of agency needs and adjusted the 2015-2019 MTA Bridges and Tunnels Capital Program to reflect the inclusion of new, high priority initiatives principally related to the implementation of Cashless Tolling.
- The approved amendment increased the 2015-2019 MTA Bridges and Tunnels Capital Program by a net \$84 million, consisting of \$90 million transferred from the 2010-2014 Capital Program to support Cashless Tolling and \$6 million moved to the MTA Interagency portion of the 2015-2019 Capital Program to consolidate administrative costs of the MTA Mentoring Program.

2010-2014 Capital Program

The MTA Board, at its meeting on September 23, 2009, reviewed and authorized for submission to the CPRB a fiveyear Proposed MTA Capital Program (the "Proposed 2010-2014 Capital Program") for the Transit and Commuter Systems for the 2010-2014 period, totaling approximately \$25.6 billion. The Proposed 2010-2014 Capital Program was submitted to the CPRB for its review in October 2009, as required by law and was vetoed without prejudice by the CPRB on December 30, 2009, allowing the Legislature to review funding issues in their 2010 session.

On September 23, 2009, the Board of MTA Bridges and Tunnels approved a Capital Program for the 2010-2014 period that provided for commitments of approximately \$2.508 billion designed to keep its facilities in good operating condition. At its April 28, 2010 meeting, the MTA Board reviewed and authorized a revised five-year Capital Program for 2010-2014 for MTA Bridges and Tunnels totaling \$2.452 billion. This revised 2010-2014 MTA Bridges and Tunnels Capital Program represented a substantial increase over the \$1.2 billion in the prior 2005-2009 MTA Bridges and Tunnels Capital Program.

At its April 28, 2010 meeting, the MTA Board reviewed and authorized a resubmission of the five-year Proposed 2010-2014 Capital Program for the Transit and Commuter Systems (the "Revised Proposed 2010-2014 Capital Program submitted to that the Proposed 2010-2014 Capital Program submitted to the CPRB in October 2009. The Revised Proposed 2010-2014 Capital Program was subsequently submitted to the CPRB for its approval and was deemed approved by the CPRB on June 1, 2010 (as subsequently amended and revised, the "2010-2014 Capital Program"). Included in the 2010-2014 Capital Program, as initially approved, was approximately \$18.1 billion for core investments for the ongoing replacement needs of the existing Transit System and Commuter System and MTA Bus. Also included in the 2010-2014 Capital Program was \$5.7 billion to finance a portion of the costs of the East Side Access and the Second Avenue Subway projects. The 2010-2014 Capital Program included \$13.9 billion of identified funding — including \$6.0 billion of new bonding authorized by the May 2009 State legislation providing for the Payroll Mobility Tax and other additional revenues — leaving a \$9.9 billion funding gap. The new bonding, in combination with other identified revenues, provided for two years of program funding.

2010-2014 Capital Program Amendments

On December 21, 2011, the MTA Board approved an amendment to the 2010-2014 Capital Program addressing funding needs for the last three years of the program of projects through a combination of efficiency improvements and real estate initiatives, participation by funding partners and innovative and pragmatic financing arrangements. As part of a commitment to continually review the program to identify savings, this amendment provided for a reduction of the program's costs by another \$2 billion by applying a variety of further initiatives to be rolled out over the last three years of the program, with the expectation that such savings would be achieved without eliminating any of the benefits of the projects in the five-year program approved in June 2010. The efficiencies include eliminating 15% of capital program administrative staff, improving productivity of work along the right-of-way, maximizing component replacement over full-asset renewal or

replacement and reviewing every project as it moves into implementation through the Gates Review Process, an MTA process designed to ensure that projects are designed for the least cost to deliver the intended benefit. The revised program for the Transit and Commuter Systems provided for \$22.195 billion in capital expenditures: \$11.649 billion for the core projects for the Transit System operated by MTA New York City Transit and MaBSTOA and the rail system operated by MTA Staten Island Railway; \$3.860 billion for the core projects for the Commuter System operated by MTA Long Island Rail Road and MTA Metro-North Railroad; \$5.739 billion for the expansion of existing rail networks for both the Transit and Commuter Systems to be managed by MTA Construction and Development; \$0.335 billion for the security program including MTA Police Department, \$0.315 billion for MTA Interagency Program, and \$0.297 billion for MTA Bus initiatives. On March 27, 2012, the amended 2010-2014 Capital Program was approved by the CPRB as submitted.

On December 19, 2012, the MTA Board approved an additional amendment to the 2010-2014 Capital Program to add projects for the repair and restoration of MTA agency assets damaged as a result of Superstorm Sandy, which struck the region on October 29, 2012. The amended program provides for additional \$3.977 billion in Superstorm Sandy recovery-related capital expenditures. On January 22, 2013, the amended program was deemed approved by the CPRB as submitted. On July 24, 2013, the MTA Board approved a further amendment to the 2010-2014 Capital Program for the Transit and Commuter systems to include specific revisions to planned projects and to include new resilience/mitigation initiatives, totaling \$5.674 billion in response to Superstorm Sandy. On August 26, 2013, the CPRB deemed approved the amended 2010-2014 Capital Program for the Transit and Commuter systems as submitted. On July 28, 2014, the MTA Board approved a further amendment for the Transit and Commuter systems to include specific revisions to planned program for the Transit and Commuter systems as submitted. On July 28, 2014, the MTA Board approved a further amendment for the Transit and Commuter systems to include specific revisions to planned program for the Transit and Commuter systems as submitted. On July 28, 2014, the MTA Board approved a further amendment to the 2010-2014 Capital Program for the Transit and Commuter systems and the Transit Core Program. These amendments did not modify the overall program budget. On September 3, 2014, the CPRB deemed approved the amended 2010-2014 Capital Program for the Transit and Commuter systems as submitted.

On December 21, 2011, the MTA Board reviewed and authorized an amended 2010-2014 Capital Program for MTA Bridges and Tunnels totaling \$2.079 billion. This revised 2010-2014 Capital Program for MTA Bridges and Tunnels represented a \$0.374 billion decrease to the previously approved plan in line with the MTA-wide initiative described above. On December 19, 2012, the MTA Board approved an amendment to the 2010-2014 Capital Program for MTA Bridges and Tunnels, adding \$0.778 billion for the repair and restoration of assets damaged as a result of Superstorm Sandy. On July 24, 2013, the MTA Board approved a further amendment to the 2010-2014 Capital Program for MTA Bridges and Tunnels, adding \$0.096 billion for new storm-related resilience/mitigation initiatives. On July 28, 2014, the MTA Board approved a further amendment to the 2010-2014 Capital Program for MTA Bridges and Tunnels, adding \$0.096 billion for new storm-related resilience/mitigation initiatives. On July 28, 2014, the MTA Board approved a further amendment to the 2010-2014 Capital Program for MTA Bridges and Tunnels, adding \$0.096 billion for new storm-related resilience/mitigation initiatives. On July 28, 2014, the MTA Board approved a further amendment to the 2010-2014 Capital Program for MTA Bridges and Tunnels, adding \$0.096 billion for new storm-related resilience/mitigation initiatives. On July 28, 2014, the MTA Board approved a further amendment to the 2010-2014 Capital Program for MTA Bridges and Tunnels, 2017, the MTA Board approved the latest modification to the 2010-2014 Capital Program for MTA Bridges and Tunnels. The amendment decreased the overall program by \$0.108 billion from \$0.874 billion to \$0.766 billion. The repair and restoration allocation decreased by \$0.157 billion from \$0.778 billion to \$0.621 billion and released reserves following actual commitments and revised estimates to complete ongoing and remaining work. The amendment also reprogrammed \$0.049 billion from the repair and restoration allocation for resiliency and mitigati

On May 24, 2017, the MTA Board approved an additional amendment to the 2010-2014 Capital Program providing for a reduction of funding related to Superstorm Sandy-related restoration of \$2.959 billion, consisting of a reduction in restoration by \$183 million and mitigation by \$2.777 billion, reflecting the reduced availability of funding. The amendment was designed to align overall budget allocations with essential project needs and funding and to prioritize needs and update the timing and costs of projects. The amended Superstorm Sandy program provides full funding for all priority needs in such program. MTA has also established \$240 million of programmatic Superstorm Sandy restoration reserves for MTA New York City Transit (\$194 million), MTA Metro-North Railroad (\$24 million) and MTA Long Island Rail Road (\$22 million) to support ongoing and future restoration projects. Partially offsetting these reductions is a \$3 million increase in the security portion of the program.

As a part of the May 24, 2017 amendment, select budget allocations for the East Side Access project, Regional Investments and East Side Access rolling stock, which are all common to both the 2015-2019 Capital Program and 2010-2014 Capital Program, discussed above under "–Approved 2015-2019 Capital Program," were administratively transferred to the 2010-2014 Capital Program. Such transfers consolidated the budgets for rolling stock, the East Side Access management reserve and select Regional Investment and Harold Interlocking budgets to re-organize projects to increase transparency and improve budget management. The overall multi-capital program budgets for the East Side Access project (at the time \$10.178 billion) and Regional Investments (at the time \$758 million) remained unchanged. The resulting \$464 million

increase to the 2010-2014 MTA Construction and Development network expansion program was supported by surpluses identified in the 2010-2014 Capital Program and other MTA capital programs.

The approved amendment transferred \$90 million from the 2010-2014 Capital Program to the 2015-2019 Capital Program to support Cashless Tolling projects at MTA Bridges and Tunnels facilities. The reduction to the 2010-2014 Capital Program included \$32 million that had been added in the previous amendment, and results in a net reduction of \$61 million in MTA Bridges and Tunnels core program (from \$2.078 billion to \$2.018 billion).

Updates were made to project timing and cost estimates within the core and network expansion programs to reflect current assumptions and prioritizations. As a result of the amendment, numerous elements are more than 10% over budgeted elements that had been previously approved by CPRB.

The amendment decreased the 2010-2014 Capital Program funding by \$2.780 billion to \$32.021 billion, primarily to align the budgets related to Superstorm Sandy with reduced funding assumptions. The remaining federal, insurance and MTA local funds fully support each MTA agency's highest repair and resiliency priorities. The proposed funding plan also reflects the administrative transfer of funding between approved capital programs - particularly New Starts and MTA local funding for the East Side Access project and Second Avenue Subway - to match actual/planned fund source usage by program. The amendment also transfers available MTA local funds from prior capital programs to support the East Side Access project, Regional Investment, the East Side Access project Rolling Stock Reserve and various core agency projects. The remaining adjustments reconcile the funding plan with actual receipts of funds.

The previously discussed amendment required the approval of the CPRB. MTA initially submitted the amendment to the CPRB for approval on May 31, 2017. The amendment was approved by the CPRB on July 31, 2017.

At its April 25, 2018, meeting, the MTA Board revised the 2015-2019 MTA Bridges and Tunnels Capital Program, in part, by transferring \$4.14 million to the 2010-2014 MTA Bridges and Tunnels Capital Program. Such amendment does not require CPRB approval. The increase in the 2010-2014 MTA Bridges and Tunnels Capital Program is meant to address several projects' updated cost estimates at completion as the remaining ongoing projects in the 2010-2014 MTA Bridges and Tunnels Capital Program approach completion.

In September 2019 the MTA Board approved a further amendment to the 2010-2014 Capital Program (the CPRB portion was fully approved in February 2020). This amendment reduced the overall MTA Capital Program from \$32.021 billion to \$31.704 billion. This amendment contained (1) overall increases to the MTA Security / Disaster Recovery projects (Sandy) primarily due to adjusting projects to match funding assumptions; (2) administrative budget transfers from this program to the 2015-2019 Capital Program for MTA New York City Transit and Regional Investments; (3) transfers of scope from MTA Bridges and Tunnels' 2015-2019 Capital Program to its 2010-2014 Sandy program to utilize surplus budgets; (4) modifications to ensure the timing of projects and budgets throughout the program to reflect updated assumptions; and (5) identification of elements with 10% issues requiring CPRB approval.

General. The amended 2010-2014 Capital Program (as approved by the CPRB on July 31, 2017, and as further amended through September 25, 2019), in the amount of \$31.704 billion consists of the following components:

- Transit Core Program;
- Commuter Core Program;
- MTA Bus Capital Program;
- MTA Network Expansion Program;
- MTA-Wide Security/Disaster Recovery Program (including Bridges and Tunnels);
- MTA Interagency Program; and
- Bridges and Tunnels Program.

Funding. The combined funding sources for the last MTA Board approved 2010-2014 Capital Program includes \$11.635 billion in MTA Bonds, \$2.022 billion in MTA Bridges and Tunnels Bonds, \$7.377 billion in federal funds, \$0.132

billion in MTA Bus Federal and City Match, \$0.719 billion from the City, \$2.093 billion from other sources (including \$0.250 billion from disposition of real estate assets) and \$0.770 billion in state assistance.

The 2010-2014 Capital Program funding strategy for Superstorm Sandy repair, restoration and resiliency initiatives assumes \$6.697 billion in insurance and federal reimbursement proceeds (including interim borrowing by MTA to cover delays in the receipt of such proceeds), \$0.170 billion in pay-as-you-go capital, supplemented, to the extent necessary, by external borrowing of up to \$0.889 billion in additional MTA and MTA Bridges and Tunnels bonds. Given the 2010-2014 Capital Program's predominant reliance on federal governmental programs as the funding source for Superstorm Sandy mitigation efforts, MTA's ability to carry out specific Superstorm Sandy initiatives will depend upon the future award of federal grants to provide funding for proposed repair, restoration and resiliency projects.

	2010-2014
	Capital Program Amount
	(in millions)
Federal Formula, Flexible, Misc.	\$ 5,844
Federal Security	89
Federal High Speed Rail	173
Federal New Start	1,271
City	719
MTA Bus Federal and City Match	132
State Assistance	770
MTA Bonds (not including MTA Bridges and Tunnels)	11,635
Other	1,293
MTA Bridges and Tunnels	2,022
Superstorm Sandy Recovery Funds	
 Federal Reimbursement/Insurance Proceeds[*] 	6,697
 Pay-as-you-go capital/Cash 	170
 MTA Bonds (including MTA Bridges and Tunnels) 	889
$Total^\dagger$	<u>\$31,704</u>

Subject to future federal appropriation and guidance. ŧ

As of December 31, 2019.

The following table shows, for each of the agencies or programs in the 2010-2014 Capital Program, the totals and the amounts committed, expended and completed:

As of December 31, 2019 (in billions)

Agency	Total	Committed	Expended	Completed
MTA New York City Transit, MaBSTOA				
and MTA Staten Island Railway	\$11.365	\$11.148	\$10.252	\$9.300
MTA Metro-North Railroad and MTA				
Long Island Rail Road	3.924	3.755	3.265	3.409
MTA Network Expansion	5.920	5.282	4.980	3.629
MTA Bus	0.297	0.276	0.241	0.208
MTA Bridges and Tunnels	2.022	1.972	1.881	1.948
MTA-Wide Security Program	0.254	0.239	0.198	0.143
MTA-Wide Superstorm Sandy				
Recovery/Resilience/Mitigation Program	7.557	5.552	3.517	2.443
MTA Interagency Program	0.223	0.198	0.187	0.153

2010-2014 Transit Core Program. The following table represents the capital program by category of work for the Transit System and MTA Staten Island Railway under the 2010-2014 Transit Core Capital Program.

	2010-2014	
	Transit Core Program	
MTA New York City Transit	<u>(in millions)</u>	
Subway Cars	\$ 1,028	
Buses	1,370	
Passenger Stations	2,240	
Track	1,485	
Line Equipment	283	
Line Structures	456	
Signals & Communications	2,693	
Power	166	
Shops & Yards	216	
Depots	465	
Service Vehicles	129	
Miscellaneous	739	
MTA Staten Island Railway	96	
Total*	<u>\$11,365</u>	

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As of December 31, 2019. The total may not add due to rounding.

Among the projects included in the 2010-2014 Transit Core Program are the following:

<u>Subway Cars</u>. For rolling stock, the 2010-2014 Transit Capital Program includes purchase of 300 railcars for the B Division which are expected to replace R-32 and R-42 cars and 103 fleet expansion railcars for the A Division to accommodate service growth on the Flushing and Broadway/7th Avenue lines, including growth to provide service on the "7 West" extension of the Flushing line.

<u>Buses</u>. The bus category includes 1,127 standard buses, 898 articulated buses, and 390 express buses for a total of 2,415 vehicles. Also included is the purchase of 192 new paratransit vehicles. Additionally, the bus category includes the addition of a project for an automated wireless announcement system to be pilot tested and then fully implemented with future bus purchases. This On-Board Audio Visual system will provide bus passengers with planned and real-time service alerts.

<u>Passenger Stations and Track</u>. The 2010-2014 Transit Capital Program funds the rehabilitation of one station, the renewal of 38 others, normal replacement investment at the Dyckman Station and numerous defective station component repairs. ADA accessibility is being added at 11 stations. The program provides for the replacement of approximately 57 miles of mainline track, eight track miles of welded rail, and 126 mainline switches. Also included is the replacement of 18 miles of incandescent lighting with brighter, more energy-efficient compact fluorescent lighting in tunnels, two new fan plants, and the rehabilitation of eight pump rooms.

Line Structures. The 2010-2014 Transit Capital Program's line structures investments include Phase One of subway structural repairs on the 4th Avenue line in Brooklyn, repairs on 15 route miles of structures, and overcoat painting of 18.5 miles of elevated structures. Also included are rehabilitation of 125 emergency exits throughout the subway system, flooding alleviation at one location in Manhattan, and the demolition of abandoned structures.

<u>Signals and Communications.</u> The 2010-2014 Transit Capital Program's major improvements for signals feature complete rehabilitation of conventional signals and two interlockings on the Dyre Avenue line, modernization of six interlockings, system-wide replacement of degraded signal cable, and other similar projects. MTA completed its implementation of CBTC on the Flushing line. Communications projects include the implementation of new technologies to display real-time train arrival information in B Division stations, the first phase of Help Point installations, replacement of the subway's VHF radio system and portable radio units, upgrades to the network backbone cable infrastructure, and improvements to communication rooms.

<u>Power</u>. The power category includes full modernization of one substation in Brooklyn, and initial cable work at the Central Substation in midtown Manhattan, repair or replacement of deficient roofs and enclosures at 10 substations and the rehabilitation of 38 hatchways. Also included are projects providing for the rehabilitation of seven circuit breaker houses, replacement of traction power cables on the 4th Avenue Line and cables plus ducts on the Lenox Avenue Line, and replacement of emergency alarm units at selected locations.

Shops and Yards. For shops, investments include upgrades to the electrical system and heating plant at the 207th Street Overhaul Shop, an upgrade to the DC power system at the 207th Street Maintenance Shop, improvements to the ventilation system at the East New York Maintenance Shop, and rehabilitation of component defects at various railcar shops. Investments at yards include replacement of yard track and switches, replacement of yard lighting fixtures at two locations, and installation of closed circuit television systems at various yards.

<u>Depots</u>. The major depot projects include priority repairs at various bus facilities, replacement of the bus radio system, expansion of the Select Bus Service program, and replacements of depot components such as bus washers at various locations.

<u>MTA Staten Island Railway</u>. For MTA Staten Island Railway, the 2010-2014 Transit Capital Program includes construction of a new station at Arthur Kill and station component repairs at eight stations. Other projects include rehabilitation of eight bridges and one culvert, the first phase of the St. George terminal track and switch modernization, and a new substation at Prince's Bay.

2010-2014 Commuter Core Program. This investment program supports the commuter rail agencies' ongoing commitment to maintaining and enhancing mobility, economic health, and quality of life in the region. Also subject to the efficiencies efforts described above, the 2010-2014 Commuter Core Program includes investments in the state of good repair of its most essential components — rolling stock, stations, track, communications/signals, power, shops and yards, and bridges/viaducts. In addition, there are select service improvements, including customer benefits like delivery of real-time train information to all MTA Metro-North Railroad stations east of the Hudson River in New York territory.

	2010-2014
	Commuter Core Program
MTA Long Island Rail Road	(in millions)
Rolling Stock	\$ 405
Passenger Stations	107
Track	873
Line Structures	133
Communications & Signals	401
Shops & Yards	123
Power	151
Miscellaneous	168
Total [*]	<u>\$2,361</u>

As of December 31, 2019. The total may not add due to rounding.

	2010-2014 Commuter Core Program
MTA Metro-North Railroad	(in millions)
Rolling Stock	\$ 242
Passenger Stations	189
Track & Structures	306
Communications & Signals	304
Power	118
Shops & Yards	322
Miscellaneous	83
Total [*]	<u>\$1,564</u>

As of December 31, 2019. The total may not add due to rounding.

Among the projects included in the 2010-2014 Commuter Core Program are the following:

<u>Rolling Stock</u>. The rolling stock investment for MTA Long Island Rail Road electric fleet in the 2010-2014 Capital Program includes the replacement of approximately 92 multiple unit electric cars. MTA Metro-North Railroad investments in this area include completing the purchase of the initial M-8 multiple unit electric cars to modernize the fleet used for New Haven Line service.

<u>Passenger Stations</u>. Station investments for MTA Long Island Rail Road include replacement of station platforms in Massapequa and Wantagh, and replacement of elevators at Woodside and Rockville Centre stations. Also included are the construction of the new Wyandanch parking facility and air conditioning enhancements at Penn Station. MTA Metro-North Railroad activities in this category include continued component investments at Grand Central Terminal, improvements to customer communications to provide real-time information at East of Hudson stations, component-based renewal work at East of Hudson stations, and new strategic intermodal facility development.

<u>Track and Structures</u>. For MTA Long Island Rail Road, the ongoing track improvements in the 2010-2014 Capital Program include continuation of annual system-wide track investments, replacement of deteriorated track structure on the Atlantic Branch, replacement of track system on the Babylon Branch viaduct, improvement of system-wide right-of-way, and implementation of the first phase of Jamaica infrastructure work to improve capacity. Also included are the full design and Phase One construction of a second track between Farmingdale and Ronkonkoma, and the construction of pocket tracks for train storage capacity at Great Neck and Massapequa. MTA Long Island Rail Road investments in line structures include completion of the Atlantic Avenue Viaduct rehabilitation and rehabilitation or replacement of railroad bridges at priority locations. The MTA Metro-North Railroad track and structures category includes continued investment in the cyclical track program, replacement of track switches system-wide, replacement/repair of approximately 10 East of Hudson undergrade bridges, and continuation of the cyclical track program on the West of Hudson lines.

<u>Communications and Signals</u>. MTA Long Island Rail Road's communications and signal investments include implementation of legislatively-mandated Positive Train Control, installation of a signal system from Speonk to Montauk, system-wide replacement of signal components based on condition, and investments in support of future Centralized Train Control. MTA Metro-North Railroad's investments in communications and signals include implementation of legislativelymandated Positive Train Control, installation of West of Hudson signal improvements on the Port Jervis Line, and replacement of critical components (fiber, cables, track relays, radios).

Shops and Yards. In the 2010-2014 Commuter Capital Program, MTA Long Island Rail Road's investments in shops and yards include building a new Mid-Suffolk Electric Yard for train storage needs on the Main Line in central Suffolk County and reconfiguration of the Port Washington Yard to expand storage capacity. MTA Metro-North Railroad's investments in shops and yards include initiating the replacement of the Harmon Shop electric repair facility, as well as the repair and rehabilitation of select components in shops and yards system-wide.

<u>Power</u>. MTA Long Island Rail Road's power category includes replacement of traction power substations, and replacement and upgrade of third rail system components. MTA Metro-North Railroad's power category includes continued power improvements and component replacement on the Harlem and Hudson Lines, replacement of critical power infrastructure in Mount Vernon, and replacement of the breaker houses at the Harlem River Lift Bridge.

Miscellaneous. For miscellaneous purposes, the 2010-2014 MTA Commuter Capital Program includes various program administrative costs (including program contingency) and environmental remediation.

2010-2014 MTA Bus Program. The primary focus of MTA Bus' \$297 million 2010-2014 Capital Program is meeting the needs of the bus fleet and depots, the core of its service. The 2010-2014 Capital Program includes the purchase of 288 new buses consisting of 75 articulated buses and 213 standard buses. The agency is also continuing the process of providing real-time customer information for its routes.

2010-2014 MTA Network Expansion Projects. The \$5.920 billion 2010-2014 Capital Program includes funding for Phase One of the Second Avenue Subway, the East Side Access Project, and Regional Investments to support the East Side Access Project improvements and to enhance travel quality. See "MTA CONSTRUCTION AND DEVELOPMENT" for a more detailed discussion of the Second Avenue Subway Project and the East Side Access Project. As a part of the July 2017 capital program amendment, \$464 million of related scope in East Side Access and Regional Investments were administratively transferred from the 2015-2019 program to the 2010-2014 program with no change to the overall, multicapital program budgets of East Side Access and Regional Investments. The largest transfers were for rolling stock reserves that were consolidated in the 2010-2014 program so that all budgets related to the future MTA Long Island Rail Road growth fleet for East Side Access (the M9A fleet) are now assembled in the 2010-2014 Capital Program. The M9A fleet is scheduled for award later in 2019. The base order is funded in the 2010-2014 Capital Program. Up to 160 cars will be purchased by East Side Access and Regional Investments with the base and a future option. 2010-2014 MTA-Wide Security/Disaster Recovery Program. In the wake of the September 11, 2001 attacks, MTA initiated a comprehensive security review of its infrastructure. Security experts defined critical vulnerabilities and better strategies to protect people and infrastructure. Capital investments included hardening assets and implementing the networks and equipment necessary to conduct targeted surveillance, control access, stop intrusion and provide command and control systems to support incident response. MTA began implementing these investments in the 2000-2004 and 2005-2009 Capital Programs. The 2010-2014 Capital Program continues this commitment. In the September 2019 amendment to the 2010-2014 Capital Program, the overall budget of the security program was reduced by \$82 million to reflect actual funding levels. No real project budgets were cut, this was simply a reduction of budgets to match funding.

The December 2012 amendment to the 2010-2014 Capital Program added \$4.755 billion to repair and restore MTA assets damaged by Superstorm Sandy. Projects span all the Related Entities and include restoration of the subway Rockaway Line and South Ferry Station and restoration of the Hugh L. Carey Tunnel and Queens Midtown Tunnel. Other projects restore damaged infrastructure at a variety of locations, including communications and signals systems, power systems, line structures, yards, and depots. The July 22, 2013 amendment added \$5.770 billion in resilience/mitigation projects across all agencies. These projects are meant to harden the system against future storms or other catastrophic damage. A subsequent "letter" amendment to the program in July 2014 re-allocated several Superstorm Sandy project budgets with no net change to the disaster recovery budgets. In the July 2017 amendment, the overall budget for MTA-Wide Security and Disaster recovery was reduced from \$10.859 billion to \$7.902 billion. This was primarily done to reflect the availability of funding for the Superstorm Sandy recovery program. The core program now has \$3.951 billion for repair and \$2.848 billion for mitigation. The MTA Bridges and Tunnels Capital Program now has \$621 million for repair and \$145 million for mitigation. As a part of this reduction, projects were adjusted to reflect updated cost and schedule assumptions. All critical projects, such as repair of subway tubes, remain unaffected by the amendments to the 2010-2014 Capital Project. For example, budgets were preserved for all nine subway tubes damaged by Sandy as well as the MTA Long Island Rail Road's East River Tunnels. In addition, yards vulnerable to coastal flooding continue to have budgets supporting mitigation measures. These include 207th Street Yards, Coney Island Yard and 148th Street Yard.

As part of the September 2019 amendment to the 2010-2014 Capital Program, \$206 million of additional insurance money was added to the program. The money came after approval of the 2017 amendment. This \$206 million was partially offset by MTA "flexing" or sending grant money to Amtrak so that Amtrak could address an asset the MTA Long Island Rail Road has previously been assumed to manage and delivery. The net increase to the Sandy program was \$193 million. In the process, several new Sandy projects have been created as part of the amendment and other Sandy project budgets were adjusted to reflect recent cost estimates and the timing of delivery.

2010-2014 Interagency Program. The MTA Interagency section of the 2010-2014 Capital Program includes several categories of investment related to the MTA Business Service Center initiative and other facilities, a small business development program, and planning studies to support MTA's Capital Program.

2010-2014 MTA Bridges and Tunnels Capital Program. Following the September 25, 2019, amendments approved by the MTA Board, this investment program provides for \$2.022 billion in capital commitments, which is expected to be financed with MTA Bridges and Tunnels bonds.

	2010-2014 Capital Program
Category of Project	<u>(in millions)</u>
Structures	\$ 401
Roadways & Decks	1,168
Toll Plazas & Traffic Mgmt.	27
Utilities	205
Buildings & Sites	13
Miscellaneous	37
Structural Painting	_171
Total [*]	<u>\$2,022</u>

As of September 25, 2019. The total may not add due to rounding.

All of the major projects included in the currently approved 2010-2014 MTA Bridges and Tunnels Capital Program have been completed including: rehabilitation of tunnel walls, ceiling and fireline system, and replacement of electrical

equipment in the Hugh L. Carey Tunnel (formerly the Brooklyn Battery Tunnel)^{*}; rehabilitation of tunnel walls, ceiling and fireline system, and replacement of electrical equipment and the upgrade of the ventilation building electrical system in the Queens Midtown Tunnel; replacement of the Queens approach to the Bronx Whitestone Bridge; Phase One construction in connection with the replacement of the upper and lower level toll plaza structure, the lower level approach structure, and the upper level curb stringers supporting the roadway and sidewalk at the Henry Hudson Bridge; replacement of the Bronx toll plaza deck and rehabilitation of the superstructure steel and substructure, rehabilitation of Manhattan approach ramps, repair of Manhattan toll plaza decks, and structural painting at the Robert F. Kennedy Bridge; replacement of the upper level suspended span decks, construction of a new bus/HOV lane and ramp connecting to the Gowanus Expressway, structural painting, west bound Belt Parkway connector ramp improvements at the VNB; and rehabilitation of the Marine Parkway Bridge lift span's electrical, mechanical and controls systems.

Two new projects were added to this program, using available funding within the 2010-2014 Capital Program: A \$6 million project to reconfigure the Bronx-Whitestone Bridge Southbound Queens Approach roadway transition and diverge areas at the Whitestone Expressway and Cross-Island Parkway, to improve traffic operations and customer safety; and a \$3 million project at the Hugh L. Carey Tunnel to replace portions of the fire standpipe in the Brooklyn Plaza of the tunnel, to meet National Fire Protection Association ("NFPA") 502 and FDNY standards. The fire standpipe in the tunnel itself was previously replaced as part of the tunnel reconstruction work. This final work in the plaza will ensure the entire system meets current NFPA 502 and FDNY standards.

1992-2009 Transit Capital Programs Objectives

Highlights of the investments funded in the 1992-2009 Transit Capital Programs include the purchase or remanufacture of 5,865 buses; the purchase of 1,387 new paratransit vehicles; the purchase of 1,025 subway cars; rehabilitation and upgrade of 122 subway stations and three subway station complexes, including the addition of elevators and escalators at several of these stations to make them accessible for the elderly and disabled; construction of a Rail Control Center; modernization of signal systems on six subway lines and the Williamsburg Bridge; development of CBTC; construction of two bus maintenance facilities and reconstruction and maintenance at several other facilities; new cranes at the 207th Street Overhaul Shop and rehabilitation of the 38th Street Yard Shop; and the completion of the 63rd Street connector project designed to significantly relieve overcrowding on the Queens Boulevard line. The 1992-2004 Transit Capital Programs also included investments to modernize the MTA New York City Transit's electrical power system, reconstruct the Franklin Avenue shuttle, reconstruct a section of the Lenox Avenue Line, and replace signals and repair bridges on the MTA Staten Island Railway.

The projects included in the 1992-1999 Transit Capital Program have been substantially completed. As of December 31, 2019, \$10.413 billion of the \$10.427 billion for MTA New York City Transit, MaBSTOA and MTA Staten Island Railway projects included in the 2000-2004 Transit Capital Program have been committed, \$10.338 billion have been expended and \$10.370 billion of projects have been completed, and \$11.480 billion of the \$11.514 billion for MTA New York City Transit, MaBSTOA and MTA Staten Island Railway projects included in the 2005-2009 Transit Capital Program have been completed, and \$11.201 billion of projects have been completed.

1992-2009 Commuter Capital Programs Objectives

Highlights of key investments funded under the 1992-2009 Commuter Capital Programs for MTA Long Island Rail Road included replacement of MTA Long Island Rail Road's diesel fleet of coaches and locomotives, the purchase of electric cars to replace a portion of its electric fleet, completion of normal life cycle replacement of M-1 electric cars, conversion of diesel territory station platforms to high level platforms, extension of platform 11 at Penn Station, start of preliminary engineering for the Network Expansion project East Side Access, and rehabilitation of stations system-wide, including installation of additional ticket vending machines and elevator replacement and upgrades. MTA Metro-North Railroad's key investments included the purchase of diesel coaches and dual-mode locomotives for replacement of a portion of its electric fleet, purchase of new electric cars as part of its continued fleet modernization, extensive infrastructure renovations at Grand Central Terminal, station and platform improvements, installation of concrete ties, construction of a third track on the Mid-Harlem line, and the extension of service from Dover Plains to Wassaic.

These projects' contracts include work performed and funded under the MTA Bridges and Tunnels 2010-2014 Sandy Capital Restoration Program for staging and coordination efficiencies with the state of good repair work that is not included in the \$2,022 million MTA Bridges and Tunnels 2010-2014 Capital Program.

The projects included in the 1992-1999 Commuter Capital Program and 2000-2004 Commuter Capital Program have been substantially completed. As of December 31, 2019, \$3.705 billion for Commuter System projects of the \$3.727 billion of projects included in the 2005-2009 Commuter Capital Program have been committed, \$3.655 billion have been expended and \$3.431 billion of projects have been completed. The 2000-2004 Commuter Capital Program included a Commuter Rail Rolling Stock allocation separately budgeted from the MTA Long Island Rail Road and the MTA Metro-North Railroad.

2005-2009 MTA Network Expansion Objectives

MTA Network Expansion's 2005-2009 Capital Program included the start of construction of East Side Access, the Second Avenue Subway and the No. 7 subway line extension.

The total approved budget in the 2005-2009 MTA Capital Program for expansion projects was \$4.808 billion. The No. 7 subway line extension project was funded entirely by the City. A total of \$53 million in preliminary design included in the 2000-2004 Capital Program was locally funded.

1992-2009 MTA Bridges and Tunnels Capital Programs Objectives

Highlights of key investments funded in the 1992-2009 MTA Bridges and Tunnels Capital Programs included rehabilitation of approaches, roadways and decks at the Bronx-Whitestone Bridge, the Robert F. Kennedy Bridge, the Henry Hudson Bridge, the Throgs Neck Bridge, Cross Bay Veterans' Memorial Bridge, the VNB and the Marine Parkway-Gil Hodges Memorial Bridge and rehabilitation of roadways and drainage systems at the Henry Hudson Bridge; rehabilitation of the Randall's Island Junction Structure, the Harlem River lift span, anchorages and suspension cables at the Robert F. Kennedy Bridge and walls and ceilings at the Queens Midtown Tunnel; replacement of exhaust fans at the Hugh L. Carey Tunnel and rehabilitation of bridge electrical substations and power feeders at the Throgs Neck Bridge; expansion of the service building at the Bronx-Whitestone Bridge, structural rehabilitation and repairs at the ventilation building and overpasses of the Queens Midtown Tunnel; and rehabilitation of toll plazas, including electronic toll collection systems.

The projects included in the 1992-1999, 2000-2004 and 2005-2009 MTA Bridges and Tunnels Capital Program have been substantially completed.

Oversight and Review of Administration of Capital Programs

A committee on capital program oversight (which by charter consists of at least six members, including the Chair of the MTA Board and the Chairs of each of the MTA Board operating committees), monitors various capital program actions and activities, including:

- current and future funding availability;
- contract awards;
- program expenditures; and
- timely progress of projects within the programs.

The legislation establishing the committee also requires MTA to submit a five-year strategic operations plan to the Governor and to amend such plan at least annually. Such plan must include, among other things, planned service and performance standards and the projected fare levels for each year covered by the plan and an analysis of the relationship between planned capital elements and the achievement of planned service and performance standards. MTA communicates with the State officials responsible for monitoring the strategic operations plan in order to keep them informed of such matters.

Non-Capital Program Projects - Hudson Yards Development and Financing

Hudson Yards Development and Financing. MTA owns the land in Manhattan generally bounded by West 30th Street on the south, West 33rd Street on the north, 10th Avenue on the east and 12th Avenue on the west (and including rights to operate under 11th Avenue), on which MTA Long Island Rail Road operates its layup and maintenance yard (the

"West Side Yard") for trains not in service pending travel from Penn Station, its Manhattan hub. The Eastern Rail Yard ("ERY") portion of the West Side Yard, located between 10th and 11th Avenues, was rezoned by the City in 2005 and the Western Rail Yard ("WRY") portion of the West Side Yard, located between 11th and 12th Avenues, was rezoned by the City in December 2009. The zoning on these sites permits extensive mixed-use development.

In July of 2007, MTA issued two separate Requests for Proposals for the sale of and/or long-term leasing of air space and related real property interests for development at the ERY and the WRY, respectively. In 2010, the MTA Board adopted environmental findings with respect to the development and MTA entered into agreements to enter into leases for the WRY and ERY, respectively, with a joint venture of The Related Companies L.P. and its joint venture partner, Oxford Properties Group, Inc., a subsidiary of the Ontario Municipal Employees Retirement System (together, "Related-Oxford"). The closing with respect to the ERY lease occurred on April 10, 2013, with retroactive effect to December 3, 2012 and the closing with respect to the WRY occurred on April 10, 2014. As noted in the next succeeding paragraph, as Related-Oxford proceeded with the entire project, it was projected that the leases and related purchase options relating to the ERY and WRY would provide a net present value which could, if monetized, guarantee approximately \$1.00 billion to support the 2005-2009 and the 2010-2014 MTA Capital Programs.

On September 22, 2016, MTA successfully monetized its interest in the remaining leases and related purchase options by issuing \$1,057,430,000 Hudson Rail Yards Trust Obligations, Series 2016A (the "HY Trust Obligations"). The proceeds of the HY Trust Obligations were used to finance and refinance approved capital program transit and commuter projects for the Related Entities.

Construction continues to move forward on the platform over the ERY, with completion expected in 2020. The status of construction on the ERY severed parcels is as follows:

- Tower C (also known as 10 Hudson Yards or the Coach Building) is a 1,421,776 zoning square foot office building that was substantially completed in 2016. The purchase option for 10 Hudson Yards was exercised by Legacy Yards Tenant LP in July 2016, and thus it is not a source of payment or security for the HY Trust Obligations.
- Tower A (also known as 30 Hudson Yards) is a 2,069,217 zoning square foot office building under construction with Time Warner as an anchor tenant. Completion was completed in 2020.
- The Retail Podium is a 983,881 zoning square foot retail mall with Neiman Marcus as an anchor tenant. It opened in March 2019.
- Tower D (also known as 15 Hudson Yards) is a 737,779 zoning square foot residential condominium building that was substantially completed in 2019. The first residential closings began in the first quarter of 2019.
- The Culture Shed, a 100,000 zoning square foot cultural center, was completed in April 2019.
- Tower E (also known as 35 Hudson Yards) is an 846,547 zoning square foot mixed use building with residential, office and hotel components scheduled for completion in 2020.
- The Retail Pavilion is a 10,800 zoning square foot facility incorporated into the public open space scheduled to open in 2020.

Design is underway on the platform above the WRY. Construction work has not yet started on the WRY platform.

For a detailed description of the HY Trust Obligations see "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – HUDSON RAIL YARDS TRUST OBLIGATIONS" and Part II – Tab 2 – "Details of Each Issue of Obligations – Hudson Rail Yards Trust Obligations (Schedule 1 to Financing Agreement)" of MTA's 2020 Combined Continuing Disclosure Filings.

Climate Bond Standard and Certification Compliance

In early 2016, MTA requested, and the Climate Bonds Standard Board approved, the designation of MTA's Transportation Revenue Bonds, Series 2016A Bonds as "Climate Bond Certified" pursuant to the Low Carbon Transport criteria (the "Climate Criteria") under the Climate Bonds Standard 2.0. As part of the certification requirement MTA engaged

Sustainalytics as an independent verifier to review the MTA's 2010-2014 Capital Program to identify projects with expenditures that met the Climate Criteria. Sustainalytics reviewed \$12.6 billion of spending and concluded that projects totaling \$11.3 billion, or 89.7%, qualified under the Climate Criteria, making them eligible projects for Climate Bonds Initiative ("CBI") certification. CBI and MTA agreed that while MTA's pooled funding of its capital projects makes tracking proceeds to specific bond transactions prior to issuance impractical, the inherent benefit of MTA's Transit and Commuter Systems and the ongoing support and maintenance of them are compatible with an emissions trajectory consistent with the principles underlying the Climate Criteria. Due to the size and complexity of MTA's Capital Program and difficulty in tracking proceeds to specific projects, it is possible that MTA CBI certified bonds may fund or refund projects not specifically identified by the independent verifier but essential to MTA's core mission. Additionally, some of these projects may have been funded by other pooled resources available for MTA's Capital Programs. After an analysis of MTA's Capital Program elements, CBI agreed to certify any bonds issued by MTA for credits that fund the Transit and Commuter Systems portion of its Capital Programs up to a maximum of \$11.3 billion (the "CBI Programmatic Approach Certification").

In January 2017, the CBI implemented the Climate Bonds Standard 2.1, which created a programmatic approach specifying the ability to identify projects as a pool, similar to the approach MTA has taken since its inaugural issuance in 2016. MTA has issued CBI certified bonds pursuant to both standards and continues to issue bonds pursuant to the 2.1 standard.

In light of various investor interest in "Green Bonds" and specifically what constitutes a "Green Bond" MTA asserts the following with regard to its issuances of CBI certified bonds:

- MTA follows a programmatic approach in connection with its MTA CBI certified bond issuances that complies with CBI standards and has been approved by CBI.
- Any certified MTA CBI bond/bond issuance is not tracked on a project specific basis nor is it tied to specific projects but rather to the CBI Programmatic Approach Certification.
- MTA has engaged an independent verifier to identify and to annually re-verify the total amount of Climate Criteria eligible transit and commuter projects under its Capital Programs.
- MTA has issued in aggregate a total par amount of bonds with the CBI certification that is less than the amount of eligible projects verified.

Commencing in 2017 and consistent with the requirements of the Climate Bonds Standard and Certification Process, MTA has undertaken as part of its continuing disclosure filing obligation with respect to Climate Bond Certified bonds to file with EMMA:

- annually, until the maturity or prior redemption of the Climate Bond Certified bonds, a post-issuance compliance certificate as required by the certification process;
- any event of material non-conformance with the certification process and the action MTA is taking or expecting to take to bring the projects and/or assets into conformance; and
- any revocation of the Climate Bond Certification by the Climate Bonds Standard Board.

MTA expects to file with EMMA a copy of its annual compliance certificate pursuant to the Climate Bonds Standard and Certification Process on or about the date hereof.

FUTURE CAPITAL NEEDS

MTA periodically updates its 20-year capital needs assessment which revisits its asset inventory, assesses the conditions of those assets and identifies the long-term investment schedules required to maintain a state of good repair. Long-term investments that improve and expand the system to meet operating goals and strategies are also identified. This long-term plan provides the basis for sizing and configuring the successive five-year Capital Programs and establishes the rationale for the funding levels that are requested to support the program. MTA's "2015-2034 Twenty Year Capital Needs Assessment," the most recent update, was published in October 2013. As of early 2020, the 2020-2039 Twenty Year Capital Needs Assessment has not been published.

On or before October 1, 2023 for the period commencing January 1, 2025, and on or before October first of every fifth year thereafter, MTA is required to submit to the CPRB a twenty-year capital needs assessment in compliance with the requirements of the MTA Act.

No assurances can be given that MTA will be able to identify and secure sufficient sources to fully pay for current and future capital needs or that, if identified, those funding sources will be received. Some of the prospective funding sources, such as federal, City and State funds, are not within the control of MTA and the receipt of such funding is contingent, among other things, upon the ability and willingness of such entities to provide such funding. If MTA does not receive sufficient moneys to fund current and future capital needs, the improvements to the Transit System, MTA Staten Island Railway, the Commuter System, and the MTA Bus System, state of good repair achieved through implementation of previous capital programs could erode.

INVESTMENT POLICY

MTA's Treasury Division is responsible for the investment management of the funds of the Related Entities. The investment activity covers all operating and capital funds, including bond proceeds, and the activity is governed by State statutes, bond resolutions and the MTA Board-adopted investment guidelines (the "Investment Guidelines"). The MTA Act currently permits the Related Entities to invest in the following general types of obligations:

- obligations of the State or the United States Government;
- obligations the principal and interest of which are guaranteed by the State or the United States Government;
- obligations issued or guaranteed by certain federal agencies;
- repurchase agreements fully collateralized by the obligations of the foregoing United States Government and federal agencies;
- certain certificates of deposit of banks or trust companies in the State;
- certain banker's acceptances with a maturity of 90 days or less;
- certain commercial paper;
- certain municipal obligations; and
- certain mutual funds up to \$10 million in the aggregate.

Investment obligations and collateral are held by one of MTA's custodians or trustees.

As of December 31, 2019, \$1.931 billion non-bond capital funds were invested in approximately 3.1% repurchase agreements, 85.7% United States Treasury obligations, 8.2% agency obligations, and 3.0% commercial paper.

As of December 31, 2019, the operating and working capital of the Related Entities (including Payroll Mobility Tax receipts) amounted to \$1.260 billion. Investments included 7.36% commercial paper, 7.71% repurchase agreements, 2.45% agency obligations and 82.49% United States Treasury obligations.

A copy of the current Investment Guidelines is posted, for informational purposes only, on MTA's website under "MTA Info – Investor Information."

See "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – GENERAL – Swap Agreements Relating to Synthetic Fixed Rate Debt" for a discussion of current guidelines relating to the use of swap contracts.

PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS

See also "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES" herein.

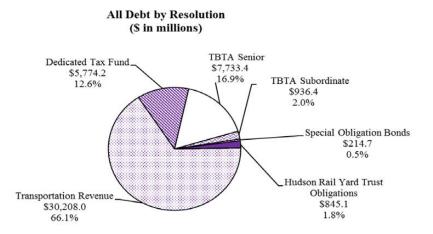
GENERAL

Financing of Capital Projects and Statutory Ceiling

Financing of Capital Projects. Some of the Related Entities are authorized to issue bonds, notes and other obligations to finance capital projects as well as for other purposes. All bonds, notes and other obligations are expected to be issued through either MTA or MTA Bridges and Tunnels. Such obligations are secured by and payable from the revenues and other receipts specified in the bond resolution, indenture or other document authorizing the issuance of such obligations. Generally, bonds, notes and other obligations issued to finance capital projects included in the MTA Capital Programs have in the past been, and are currently, subject to a statutory limitation on the principal amount of such obligations (referred to herein as the statutory ceiling). It is anticipated that obligations issued to finance future MTA Capital Programs will also be subject to a statutory ceiling imposed by the Legislature. Obligations issued by MTA Bridges and Tunnels to fund capital projects relating to its seven bridges and two tunnels, the MTA Bridges and Tunnels Facilities, and the CBD Tolling Program, and obligations issued by the Related Entities for purposes other than to finance projects in the MTA Capital Programs, including for working capital purposes, are not subject to the current statutory ceiling. In addition, none of the RRIF Bond (as defined below), Special Obligation Bonds, and the HY Trust Obligations are subject to the current statutory ceiling.

Reflecting the statutory debt ceiling increase passed by the Legislature on April 3, 2020, for the MTA Capital Programs for the years 1992-2024, the MTA Act permits MTA, MTA Bridges and Tunnels and MTA New York City Transit, collectively, to issue on or after January 1, 1993 an aggregate of \$90.1 billion of bonds, notes and other obligations (net of certain statutory exclusions, including refunding bonds). As of April 29, 2020, MTA and MTA Bridges and Tunnels have issued approximately \$36.051 billion of bonds (not including \$8.25 billion of bond anticipation notes "BANs") net of such statutory exclusions under the current statutory ceiling. MTA expects that the current statutory ceiling will allow it to fulfill the bonding requirements of all MTA Capital Programs approved by the CPRB to date, including the 2010-2014 MTA Capital Program, as amended, the 2015-2019 MTA Capital Program, as amended, and the 2020-2024 MTA Capital Program. Set forth below under "MTA Capital Program Bonds" is a brief summary of the types of obligations issued by the Related Entities to finance or refinance the MTA Capital Programs that are governed by past and current statutory ceilings. Only a portion of the MTA Bridges and Tunnels Senior Revenue Bonds and MTA Bridges and Tunnels Subordinate Revenue Bonds (as each is described below) were issued to finance or refinance items in such MTA Capital Programs and, consequently, were subject to the statutory ceiling; the remainder were issued to finance capital costs of the MTA Bridges and Tunnels Facilities that are not subject to the statutory ceiling.

The following pie chart shows, by percentages, the amount of all debt MTA and MTA Bridges and Tunnels have outstanding as of April 29, 2020, under the various bond resolutions of its core credits, inclusive of BANs, as well as HY Trust Obligations (including HY Refunding Trust Obligations), and Special Obligation Bonds, all as described below.



MTA Capital Program Bonds

MTA's Core Credits.

MTA Transportation Revenue Bonds. Bonds referred to as "Transportation Revenue Bonds" are issued pursuant to the General Resolution Authorizing Transportation Revenue Obligations of MTA, adopted on March 26, 2002 (the "Transportation Resolution"), and are payable solely from and secured by a gross lien on the items pledged under such bond resolution, which include amounts derived from: fares received for the use of the subway and bus systems operated by MTA New York City Transit and MaBSTOA, the commuter railroads operated by MTA Long Island Rail Road and MTA Metro-North Railroad and buses operated by MTA Bus; certain concession revenues; and operating subsidies, including expense reimbursement payments, from the State, the City, and MTA Bridges and Tunnels surplus. The proceeds from the sale of such bonds are used solely to finance capital projects set forth in the MTA Capital Programs. MTA is authorized to issue revenue anticipation notes for working capital purposes that are secured by a lien on a portion of the revenues that secure the Transportation Revenue Bonds (referred to as "Operating Subsidies" under the Transportation Resolution), which is senior to the lien on such Operating Subsidies in favor of the owners of the Transportation Revenue Bonds. See "*-Revolving Credit Agreements*" and "TRANSPORTATION REVENUE BONDS – Revenue Anticipation Notes Authorized by the Resolution" below.

MTA Transportation Revenue Bond Anticipation Notes. Bond anticipation notes referred to as "Transportation Revenue Bond Anticipation Notes" are issued pursuant to the Transportation Resolution and are payable solely from the proceeds of other Transportation Revenue Bond Anticipation Notes or Transportation Revenue Bonds, and though not pledged therefor, notes or other evidences of indebtedness or any other amounts, in each case if and to the extent such amounts may lawfully be used to make such payments. Beginning in 2020, a portion of the Transportation Revenue BANs have been issued in anticipation of the State commitment of \$7.3 billion for the 2015-2019 Capital Program. As of April 29, 2020, \$2.0 billion of the outstanding Transportation Revenue BANs were issued in anticipation of this commitment.

As of April 29, 2020, \$7,500 million of MTA Transportation Revenue BANs are outstanding:

	Principal Amount Outstanding	
Bond Anticipation Notes Series	(\$ in millions)	Maturity Date
TRB 2018B-1a BANs	\$325.00	5/15/2020
TRB 2018B-1b BANs	145.00	5/15/2020
TRB 2018B-1c BANs	100.00	5/15/2020
TRB 2018B-1d BANs	50.00	5/15/2020
TRB 2018B-1e BANs	55.00	5/15/2020
TRB 2018B-1f BANs	25.00	5/15/2020
TRB 2018B-1g BANs	25.00	5/15/2020
TRB 2018B-1h BANs	25.00	5/15/2020
TRB 2018B-1i BANs	25.00	5/15/2020
TRB 2018B-1j BANs	25.00	5/15/2020
TRB 2019B-2 BANs	200.00	5/15/2020
TRB 2019C BANs	300.00	7/1/2020
TRB 2019D-2 BANs	200.00	7/1/2020
TRB 2018C-1 BANs	450.00	9/1/2020
TRB 2019E BANs	600.00	9/1/2020
TRB 2018B-2a BANs	425.00	5/15/2021
TRB 2018B-2b BANs	200.00	5/15/2021
TRB 2018B-2c BANs	100.00	5/15/2021
TRB 2018B-2d BANs	50.00	5/15/2021
TRB 2018B-2e BANs	25.00	5/15/2021
TRB 2018C-2 BANs	450.00	9/1/2021
TRB 2020A-2S BANs	700.00	2/1/2022
TRB 2019B-1 BANs	1,000.00	5/15/2022
TRB 2019D-1 BANs	1,000.00	9/1/2022
TRB 2019F BANs	200.00	11/15/2022

	Principal Amount		
	Outstanding		
Bond Anticipation Notes Series	(\$ in millions)	Maturity Date	
TRB 2020A-1 BANs	800.00	2/1/2023	

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Railroad Rehabilitation and Improvement Financing Program ("RRIF") Loan. On May 5, 2015, MTA entered into a Financing Agreement (the "RRIF Financing Agreement") with the United States of America, represented by the Secretary of Transportation, acting through the FRA in connection with a Railroad Rehabilitation and Improvement Financing loan in an amount not to exceed \$967,100,000, to finance the positive train control project for MTA Long Island Rail Road and MTA Metro-North Railroad (the "RRIF Loan"). As evidence of its obligation to repay the RRIF Loan, MTA delivered to FRA its Transportation Revenue Bonds, Series 2015X (RRIF Loan – Positive Train Control Project) (the "RRIF Bond"). The RRIF Bond constitutes a parity obligation under the Transportation Resolution. Pursuant to a statutory exclusion, the principal amount of the RRIF Bond is not taken into account for purposes of calculating the statutory debt ceiling referred to above.

The principal amount of the RRIF Bond will be increased upon each advance made under the RRIF Loan for eligible expenditures in accordance with the requirements of the RRIF Financing Agreement. Commencing November 15, 2018, advances under the RRIF Loan are repaid in annual installments on each November 15, calculated on a level debt service basis. The RRIF Loan matures November 15, 2037. MTA may prepay the RRIF Bond in whole or in part at any time, without penalty or premium.

The RRIF Bond bears interest at a base rate of 2.38% per annum and is federally taxable. During the period that the FRA or another federal entity is the holder of the RRIF Bond, the interest rate on the RRIF Bond will increase as follows:

- the interest rate will increase by 2.00% per annum, in the event MTA fails to maintain, for a period of at least 180 consecutive days, the unenhanced long-term credit ratings issued by at least two rating agencies on bonds issued under the Transportation Resolution of at least "A-" by S&P Global Ratings ("S&P") or Fitch Ratings ("Fitch"), or "A3" by Moody's Investor Service, Inc. ("Moody's") (a "Ratings Downgrade"); and
- the interest rate will increase by 2.00% per annum, in the event any interest or principal due on the RRIF Bond is not paid within five business days after the same becomes due and payable (a "Payment Default").
- In the event of both a Payment Default and a Ratings Downgrade, the interest rate will be increased during such periods by 4.00% per annum.

During the period that the FRA or another federal entity is the holder of the RRIF Bond, the following events constitute "Advance Suspension Events" under the RRIF Financing Agreement: a Payment Default; MTA's breach of a covenant under the RRIF Financing Agreement or misrepresentation by MTA; the occurrence of certain material adverse events (which include materially adverse events with respect to transportation operations, facilities or financial condition of MTA or the Related Entities, changes in law permitting bankruptcy or insolvency protection or the ability of MTA or any Related Entity to perform any obligation under the RRIF Financing Agreement) for thirty days; an event of default under the Transportation Resolution; the occurrence of a default with respect to any other indebtedness of MTA or any other Related Entity in an aggregate principal amount exceeding \$100,000,000 that would permit acceleration of principal; certain bankruptcy or insolvency events; certain actions by the State in violation of its pledge and agreement to bondholders; unenforceability of material provisions of the Transportation Resolution or the RRIF Financing Agreement or if any Related Entity challenges the enforceability thereof; and judgments of \$25,000,000 or more in excess of available third party insurance coverage. Upon the occurrence of an Advance Suspension Event, unless the Advance Suspension Event is (a) a Payment Default or a Ratings Downgrade, in which case the interest rate will increase as provided in the preceding paragraph, or (b) also an event of default under the Transportation Resolution, in which case the holder of the RRIF Bond may exercise remedies as described in the following paragraph, the FRA may refuse to honor additional advances under the Financing Agreement and may exercise any and all available rights and remedies, including enforcement through specific performance of certain obligations.

Upon the occurrence of an event of default under the Transportation Resolution, a holder of the RRIF Bond (including transferees of the FRA that are not federal entities), may exercise those remedies under the Transportation Resolution that are available to all holders of Transportation Revenue Bonds. No bondholder has any right to require MTA

to redeem the RRIF Bond or accelerate the payment of principal thereon or to subject the RRIF Bond to mandatory purchase in advance of its stated maturity date.

If the FRA transfers all or a portion of the RRIF Bond to a holder that is not another federal entity, such transferee holder will have no right to (1) exercise any remedies other than those provided to the holders of all other Transportation Revenue Bonds under the Transportation Resolution; (2) enforce covenants under the RRIF Financing Agreement; or (3) apply any provisions of the RRIF Financing Agreement with respect to Advance Suspension Events, exercise of remedies under the RRIF Financing Agreement or have any right to receive increased interest rates following a Ratings Downgrade or a Payment Default.

As of February 26, 2019, MTA and FRA have reached an agreement to extend the commitment termination dates to December 31, 2021, for PTC related project elements, and December 31, 2026, for all other project elements, including those related to Automated Speed Control (Safety). A summary of certain provisions of the RRIF Loan and a copy of the RRIF Financing Agreement can be obtained on MTA's website under "MTA Investor Information" at http://web.mta.info/mta/investor/.

On September 20, 2016, MTA made a draw of \$146.5 million, on May 1, 2019, MTA made a draw of \$300.0 million, and on April 20, 2020 MTA made a draw of \$244.4 million. As of April 29, 2020, the undrawn balance of the RRIF Loan is approximately \$276.2 million.

MTA Dedicated Tax Fund Bonds. Bonds referred to as "Dedicated Tax Fund Bonds" are issued pursuant to the Dedicated Tax Fund Obligation Resolution of MTA, adopted on March 26, 2002 (the "DTF Resolution"), and are payable solely from and secured by the MTTF Receipts and the MMTOA Receipts described below under "DEDICATED TAX FUND BONDS – Sources of Payment – Revenues from Dedicated Taxes," subject to appropriation by the Legislature. The proceeds from the sale of such bonds are used solely to finance capital projects of the MTA Capital Programs. For more information on the Dedicated Tax Fund Bonds, see "DEDICATED TAX FUND BONDS" below.

MTA Dedicated Tax Fund Bond Anticipation Notes. Bond anticipation notes referred to as "Dedicated Tax Fund Bond Anticipation Notes" are issued pursuant to the Dedicated Tax Fund Resolution and are payable solely from the proceeds of other Dedicated Tax Fund Bond Anticipation Notes or Dedicated Tax Fund Revenue Bonds, and though not pledged therefor, notes or other evidences of indebtedness or any other amounts, in each case if and to the extent such amounts may lawfully be used to make such payments.

As of April 29, 2020, \$750 million of MTA Dedicated Tax Fund Bond Anticipation Notes are outstanding:

	Principal Amount		
	Outstanding		
Bond Anticipation Notes Series	(\$ in millions)	Maturity Date	
DTF 2019A BANs	\$750.00	3/1/2022	

MTA Bridges and Tunnels Senior Revenue Bonds. Bonds referred to as "General Revenue Bonds" are issued pursuant to the General Resolution Authorizing General Revenue Obligations of MTA Bridges and Tunnels, adopted on March 26, 2002 (the "MTA Bridges and Tunnels Senior Resolution"), and are payable from the net revenues collected on the MTA Bridges and Tunnels Facilities described under "PART 4. OPERATIONS – TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY – MTA Bridges and Tunnels Facilities" after the payment of operating expenses. The proceeds from the sale of such bonds are used to finance capital projects relating to the MTA Bridges and Tunnels Facilities and the MTA Capital Programs (i.e., the Transit System, MTA Bus, MTA Staten Island Railway and the Commuter System), as described herein under "PART 4. OPERATIONS – TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY – Authorized Projects of MTA Bridges and Tunnels." Only that portion of any such bonds issued to finance capital programs is subject to the current statutory ceiling. For more information on the MTA Bridges and Tunnels Senior Revenue Bonds, see "MTA BRIDGES AND TUNNELS SENIOR REVENUE BONDS" below.

MTA Bridges and Tunnels Senior Revenue Bond Anticipation Notes. Bond anticipation notes referred to as "General Revenue Bond Anticipation Notes" are issued pursuant to the MTA Bridges and Tunnels Senior Resolution and are payable solely from the proceeds of other General Revenue Bond Anticipation Notes or General Revenue Bonds, and though not pledged therefor, notes or other evidences of indebtedness or any other amounts, in each case if and to the extent such

amounts may lawfully be used to make such payments. As of April 29, 2020, there are no General Revenue Bond Anticipation Notes outstanding.

MTA Bridges and Tunnels Subordinate Revenue Bonds. Bonds referred to as "Subordinate Revenue Bonds" are issued pursuant to the 2001 Subordinate Revenue Resolution Authorizing Subordinate Revenue Obligations of MTA Bridges and Tunnels, adopted on March 26, 2002 (the "MTA Bridges and Tunnels Subordinate Resolution"), and are payable from the net revenues collected on the MTA Bridges and Tunnels Facilities after the payment of operating expenses and debt service as required by the MTA Bridges and Tunnels Senior Resolution. The proceeds from the sale of such bonds are used to finance capital projects relating to the MTA Bridges and Tunnels Facilities and MTA Capital Programs. Only that portion of any such bonds issued to finance capital projects of the MTA Capital Programs is subject to the current statutory debt ceiling. For more information on the MTA Bridges and Tunnels Subordinate Revenue Bonds, see "MTA BRIDGES AND TUNNELS SUBORDINATE REVENUE BONDS" below.

Other Credits.

MTA Hudson Rail Yards Trust Obligations and Hudson Rail Yard Refunding Trust Obligations. The Hudson Rail Yard Trust Obligations and Hudson Rail Yard Refunding Trust Obligations (together, the "HY Trust Obligations") were issued pursuant to the MTA Hudson Rail Yards Trust Agreement, dated as of September 1, 2016 (the "Original HY Trust Agreement"), as supplemented by the MTA Hudson Rail Yards First Supplemental Trust Agreement, dated as of March 1, 2020 (the "Supplemental HY Trust Agreement" and, together with the Original HY Trust Agreement, the "HY Trust Agreement"), each by and between MTA and Wells Fargo Bank, National Association, as trustee (the "HY Trustee"). The HY Trust Obligations are payable solely from and secured by certain payments made by MTA under the Financing Agreement referred to in the HY Trust Agreement. The proceeds from the sale of such obligations were used solely to finance capital projects of the MTA Capital Programs. Other than refunding bonds, MTA does not expect to issue additional bonds under the HY Trust Agreement. For more information on the HY Trust Obligations see "HUDSON RAIL YARD TRUST OBLIGATIONS" below.

Non-Capital Program Securities

The Related Entities have also issued other obligations that are not subject to the current or any prior statutory ceiling and that were issued for projects that are not part of the Capital Programs, as follows:

Moynihan Station Development Project Financial Guarantee. On May 22, 2017, the MTA Board approved entering into various agreements necessary to effectuate Phase Two of the Moynihan Station Development, which project will entail the redevelopment of the James A. Farley Post Office Building adjacent to Penn Station to include a new train hall, to be shared by Amtrak, MTA Long Island Rail Road and MTA Metro-North Railroad (the "Train Hall"), as well as providing retail and commercial space.

On July 21, 2017, New York State Urban Development Corporation d/b/a Empire State Development ("ESD") executed a TIFIA Loan Agreement with the U.S. Department of Transportation in an amount of up to \$526 million (the "TIFIA Loan"), the proceeds of which are being used to pay for costs of construction of the Train Hall. The TIFIA Loan is secured primarily by payments in lieu of taxes ("PILOTs") to be made by certain future retail and commercial tenants of the Train Hall, a debt service reserve account (the "TIFIA Debt Service Reserve Account") and a mortgage (the "Train Hall Mortgage") on the Train Hall property.

Simultaneously with the execution of the TIFIA Loan Agreement, a Joint Services Agreement (the "JSA") was entered into among MTA, the U.S. Department of Transportation, ESD, and Manufacturers and Traders Trust Company (as PILOT trustee). Under the JSA, MTA is obligated to satisfy deficiencies, if any, in the TIFIA Debt Service Reserve Account. The TIFIA Loan will remain in effect until the earliest to occur of (i) the MTA JSA Release Date (as defined in the JSA and summarized below), (ii) the date on which the TIFIA Loan has been paid in full, or (iii) foreclosure by the U.S. Department of Transportation under the Train Hall Mortgage. Pursuant to the JSA, the MTA JSA Release Date is the date on which each of the following conditions has been satisfied: (a) substantial completion of (i) the Train Hall and initiation by MTA Long Island Rail Road and Amtrak of transportation service therein, and (ii) the retail and commercial space; (b) discharge or settlement of all material construction claims; (c) certain PILOTs have been calculated as provided in the TIFIA Loan Agreement; (d) certain designated defaults or events of default under the TIFIA Loan Agreement have not occurred and are continuing; and (e) certain occupancy and ratings thresholds and debt service coverage ratios for the TIFIA Loan have been met. Upon execution of the JSA, MTA set aside \$20 million in the event it is obligated to make deficiency

payments to the TIFIA Debt Service Reserve Account. The MTA JSA Release Date is not expected to occur prior to June 30, 2033.

On June 12, 2017, MTA entered into a Memorandum of Understanding with ESD and DOB whereby DOB agreed that, subject to certain conditions, in the event in any given year during the term of the JSA MTA is required to make a deficiency payment to the TIFIA Debt Service Reserve Account, DOB will consider entering into an agreement with MTA that will provide for a reduction in the cost recovery assessment otherwise payable under State law to the State. As of April 29, 2020, MTA has not been required to make any deficiency payments to the TIFIA Debt Service Reserve Account.

Revenue Anticipation Notes. MTA and MTA New York City Transit have in the past and may, from time to time, in the future issue revenue anticipation notes ("RANs") for their working capital needs and the needs of their respective affiliates and subsidiaries occasioned by delays in the receipt of subsidies or other irregularities in the timing of receipt of revenues.

RANs issued under the Transportation Resolution are secured by a lien on Operating Subsidies (as defined in the Transportation Resolution) prior to the lien in favor of the owners of Transportation Revenue Bonds. The maturity on such RANs may not exceed 18 months. While such notes can be rolled over, the final maturity cannot exceed five years from the date of their original issuance. See "TRANSPORTATION REVENUE BONDS – Revenue Anticipation Notes Authorized by the Resolution" below.

Revolving Credit Agreements. On August 24, 2017, MTA entered into a \$350 million taxable revolving credit agreement (the "JPMorgan Chase Agreement") with JPMorgan Chase Bank, National Association that is active through August 24, 2022. The JPMorgan Chase Agreement was amended on August 14, 2018 and August 16, 2019, increasing the line of credit to \$700 million and \$800 million, respectively. MTA will maintain a 1% draw on the line of credit throughout the duration of the JPMorgan Chase Agreement.

On August 16, 2019, MTA entered into a \$200 million taxable revolving credit agreement with Bank of America, National Association (the "BANA Agreement") that is active through August 24, 2022. The BANA Agreement was amended on April 6, 2020, increasing the line of credit to \$400 million.

Draws under the JPMorgan Chase and BANA Agreements are evidenced by Revenue Anticipation Notes issued under the Transportation Resolution. Funds may be used for operational or capital purposes. When draws are repaid, it is noted on the MTA investor website under menu item "Financing Agreements – Lines of Credit."

During the COVID-19 pandemic, on March 20, 2020, MTA drew the remaining \$792 million available on the JPMorgan Chase Agreement and \$200 million on the BANA Agreement. Additionally, on April 22, 2020, MTA drew \$2.5 million on the BANA Agreement. Timing of repayment on these amounts is to be determined. See "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES" for further discussion of information related to the impact of COVID-19 pandemic on MTA and its Related Entities.

Interagency Loans

The Related Entities are authorized to transfer their revenues, subsidies and other moneys or securities to another Related Entity for use by that other Related Entity, provided at the time of the transfer it is reasonably anticipated that the moneys and securities so transferred will be reimbursed, repaid or otherwise provided for by the end of the next succeeding calendar year.

Leasing

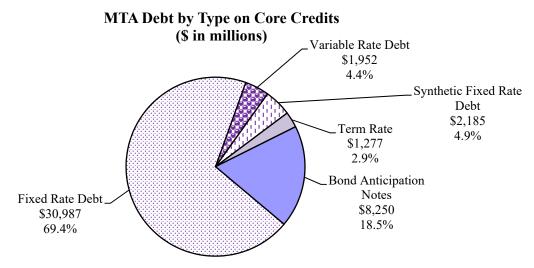
The Related Entities lease real property, facilities, equipment and other personal property in the normal course of business. In addition, the Related Entities have entered into financing leases and other financial transactions, including sale-leaseback and lease-leaseback arrangements, pursuant to which existing assets are sold or leased to other parties and leased or subleased back by the Related Entities. The basic rent payment obligation of the Related Entities under such leases and subleases, together with a purchase option, is economically defeased by a pledge of financial obligations and/or securities of other entities, including, in certain cases, United States government obligations. The expected economic result of such

transactions is the receipt by the Related Entities of a net up-front payment, while pursuant to the agreement, the relevant operating agency retains full use of the facility or equipment. If a defeasance obligor were to default on its financial obligations under its respective defeasance instrument, it is possible that the applicable Related Entity would be required to pay the related rent obligations or purchase option amounts from other sources. In addition, the event of loss, default, indemnification, and guaranty provisions of these transactions could create substantial undefeased financial obligations of the Related Entities in the unlikely event that they were triggered; if those financial obligations were, in turn, not timely met, the relevant operating agency could lose use of the leased facilities or equipment. For all of the lease transactions entered into after 1996, MTA has covenanted that all rent and supplemental rent obligations under such lease transactions which are not paid by defeasance obligors shall be paid from those "Revenues" (as defined in the Transportation Resolution) available for release from the lien of the Transportation Resolution in accordance with Section 504(d) of the Transportation Resolution, immediately following all transfers pursuant to Section 504(a), (b) and (c) of the Transportation Resolution, on a pari passu basis among all such lease transactions and prior to the transfer or use of any such amounts for any other purpose, including the payment of operating and maintenance expenses. The payment obligations of the Related Entities under such leases and subleases is generally subordinate to the payment of debt service on the bonds of the agency obligated to make the payments, but to the extent the undefeased financial obligations were obligations (including guaranties) of MTA Bridges and Tunnels, a reduction in the amount of operating surplus transferred from MTA Bridges and Tunnels could result.

For more information with respect to certain of these leasing and other financial transactions, reference is made to the footnotes in the financial statements of the Related Entities which contain a summary of certain capital lease obligations. See, in particular, Footnote 8 to the audited Combined Financial Statements of MTA for the years ended December 31, 2019 and 2018, Footnote 5 to the audited Consolidated Financial Statements of MTA New York City Transit for the years ended December 31, 2019 and 2018, and Footnote 15 to the audited Financial Statements of MTA Bridges and Tunnels for the years ended December 31, 2019 and 2018.

Types of Debt Outstanding

The following pie chart shows, by percentages, the types of debt MTA and MTA Bridges and Tunnels have outstanding under the resolutions relating to MTA's core credits, which include MTA Transportation Revenue Bonds, MTA Dedicated Tax Fund Bonds, MTA Bridges and Tunnels Senior Revenue Bonds and MTA Bridges and Tunnels Subordinate Revenue Bonds, as of April 29, 2020.



Swap Agreements Relating to Synthetic Fixed Rate Debt

Board-adopted Guidelines. The Related Entities adopted guidelines governing the use of swap contracts on March 26, 2002. The guidelines were amended and approved by the MTA Board on March 13, 2013. The guidelines establish limits on the amount of interest rate derivatives that may be outstanding and specific requirements that must be satisfied for a Related Entity to enter into a swap contract, such as suggested swap terms and objectives, retention of a swap

advisor or qualified independent representative, credit ratings of the counterparties, collateralization requirements and reporting requirements.

Objectives of Synthetic Fixed Rate Debt. To achieve cash flow savings through a synthetic fixed rate, MTA and MTA Bridges and Tunnels have entered into separate pay-fixed, receive-variable interest rate swaps at a cost anticipated to be less than what MTA and MTA Bridges and Tunnels would have paid to issue fixed-rate debt, and in some cases where federal tax law prohibits an advance refunding to synthetically refund debt on a forward basis.

Fair Value and Mid-Market Value. Fair value for the swaps is calculated in accordance with GASB Statement No. 72, utilizing the income approach and Level 2 inputs. It incorporates the mid-market valuation, nonperformance risk of either MTA/MTA Bridges and Tunnels or the counterparty, as well as bid/offer. The fair values were estimated using the zero-coupon method. This method calculates the future net settlement payments required by the swap, assuming that the current forward rates implied by the yield curve correctly anticipate future spot interest rates. These payments are then discounted using the spot rates implied by the current yield curve for hypothetical zero-coupon bonds due on the date of each future net settlement on the swap.

A negative mid-market value means that MTA and/or MTA Bridges and Tunnels would have to pay the counterparty that approximate amount to terminate the swap. If a swap has a positive mid-market value, in the event of a termination, MTA and/or MTA Bridges and Tunnels would be entitled to receive a termination payment from the counterparty. Consequently, MTA and/or MTA Bridges and Tunnels would be exposed to the credit risk of the counterparty when a swap has a positive mid-market value.

Terms and Fair Values. The terms, fair values and counterparties of the outstanding swaps of MTA and MTA Bridges and Tunnels are reflected in the following tables (as of March 31, 2020).

	Metropolitan Transportation Authority					
Related Bonds	Notional Amount as of 3/31/20 (\$ in millions)	Effective Date	Maturity Date	Terms	Counterparty and Ratings (S&P / Moody's / Fitch)	Fair Value as of 3/31/20 (\$ in millions)
TRB 2002D-2	\$200.000	01/01/07	11/01/32	Pay 4.45%; receive 69% 1M LIBOR	JPMorgan Chase Bank, NA (A+ / Aa2 / AA)	\$(75.270)
TRB 2005D & 2005E	262.815	11/02/05	11/01/35	Pay 3.561%; receive 67% 1M LIBOR	UBS AG (A+ / Aa3 / AA-)	(60.153)
TRB 2005E	87.605	11/02/05	11/01/35	Pay 3.561%; receive 67% 1M LIBOR	AIG Financial Products* (BBB+ / Baa1 / BBB+)	(20.051)
TRB 2012G	356.375	11/15/12	11/01/32	Pay 3.563%; receive 67% 1M LIBOR	JPMorgan Chase Bank, NA (A+ / Aa2 / AA)	(102.931)
DTF 2008A	304.000	03/24/05	11/01/31	Pay 3.3156%; receive 67% 1M LIBOR	Bank of New York Mellon (AA- / Aa2 / AA)	(59.655)
Total	\$1,210.795					\$(318.060)

* Guarantor: American International Group, Inc., parent of AIG Financial Products.

MTA Bridges and Tunnels						
Related Bonds	Notional Amount as of 3/31/20 (\$ in millions)	Effective Date	Maturity Date	Terms	Counterparty and Ratings (S&P / Moody's / Fitch)	Fair Value as of 3/31/20 (\$ in millions)
TBTA 2002F & 2003B-2	\$188.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	Citibank, N.A. (A+ / Aa3 / A+)	\$(45.516)
TBTA 2005B-2	188.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	JPMorgan Chase Bank, NA (A+ / Aa2 / AA)	(45.516)
TBTA 2005B-3	188.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	BNP Paribas US Wholesale Holdings, Corp. (A+ / Aa3 / AA-)	(45.516)
TBTA 2005B-4	188.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	UBS AG (A+ / Aa3 / AA-)	(45.516)
TRB 2002G-1 & 2011B, TBTA 2001C ⁽¹⁾ & 2005A	110.725	04/01/16	01/01/30	Pay 3.52%; receive 67% 1M LIBOR	U.S. Bank N.A. (AA- / A1 / AA-)	(17.831) ⁽²⁾
TRB 2002G-1 & 2011B, TBTA 2001C ⁽¹⁾ & 2005A	110.725	04/01/16	01/01/30	Pay 3.52%; receive 67% 1M LIBOR	Wells Fargo Bank, N.A. (A+ / Aa2 / AA-)	(17.831) ⁽²⁾
Total	\$974.650					\$ (217.728)

⁽¹⁾ Between November 22, 2016 and December 5, 2016, the Variable Rate Certificates of Participation, Series 2004A were redeemed. Corresponding notional amounts from the Series 2004A COPs were reassigned to MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2001C.

(2) MTA Bridges and Tunnels' obligation to make both its regularly scheduled and termination payments under these swap agreements is subordinate to its obligation to pay debt service on MTA Bridges and Tunnels Subordinate Revenue Bonds and from the same revenues that are available to pay termination payments on the other MTA Bridges and Tunnels swap agreements. Pursuant to an Interagency Agreement (following novations from UBS in April 2016), MTA New York City Transit is responsible for 68.7%, MTA is responsible for 21.0%, and MTA Bridges and Tunnels is responsible for 10.3% of the transaction.

LIBOR: London Interbank Offered Rate

TRB: Transportation Revenue Bonds

DTF: Dedicated Tax Fund Bonds

TBTA: Triborough Bridge and Tunnel Authority General Revenue Bonds

Risks Associated with the Swap Agreements

From MTA's and MTA Bridges and Tunnels' perspective, the following risks are generally associated with swap agreements:

Credit Risk – The risk that a counterparty becomes insolvent or is otherwise not able to perform its financial obligations. To mitigate the exposure to credit risk, the swap agreements include collateral provisions in the event of downgrades to the swap counterparties' credit ratings. Generally, MTA's and MTA Bridges and Tunnels' swap agreements contain netting provisions under which transactions executed with a single counterparty are netted to determine collateral amounts. Collateral may be posted with a third-party custodian in the form of cash, U.S. Treasury securities, or certain federal agency securities. MTA and MTA Bridges and Tunnels require its counterparties to fully collateralize if ratings fall below certain levels (in general, at the Baa1/BBB+ or Baa2/BBB levels), with partial posting requirements at higher rating levels (details on collateral posting discussed further under "*Collateralization/Contingencies*" below). As of March 31, 2020, all of the valuations were in liability positions to MTA and MTA Bridges and Tunnels; accordingly, no collateral was posted by any of the counterparties.

Counterparty	S&P	Moody's	Fitch	Notional Amount (in millions)	% of Total Notional Amount
JPMorgan Chase Bank, NA	A+	Aa2	AA	\$744.675	34.07%
UBS AG	A+	Aa3	AA-	451.115	20.64
The Bank of New York Mellon	AA-	Aa2	AA	304.000	13.91
Citibank, N.A.	A+	Aa3	A+	188.300	8.62
BNP US Wholesale Holdings,					
Corp.	A+	Aa3	AA-	188.300	8.62
U.S. Bank National Association	AA-	Al	AA-	110.725	5.07
Wells Fargo Bank, N.A.	A+	Aa2	AA-	110.725	5.07
AIG Financial Products Corp.	BBB+	Baa1	BBB+	87.605	4.01
Total				\$2,185.445	100.00%

The following table shows, as of March 31, 2020, the diversification, by percentage of total notional amount, among the various counterparties that have entered into ISDA Master Agreements with MTA and/or MTA Bridges and Tunnels. The notional amount totals below include all swaps.

- Interest Rate Risk MTA and MTA Bridges and Tunnels are exposed to interest rate risk on the interest rate swaps. On the pay-fixed, receive-variable interest rate swaps, as LIBOR decreases, MTA and MTA Bridges and Tunnels' net payments on the swaps increase. MTA and MTA Bridges and Tunnels are evaluating the impact of the expected cessation of the LIBOR benchmark at the end of 2021.
- Basis Risk The risk that the variable rate of interest paid by the counterparty under the swap and the variable
 interest rate paid by MTA or MTA Bridges and Tunnels on the associated bonds may not be the same. If the
 counterparty's rate under the swap is lower than the bond interest rate, then the counterparty's payment under
 the swap agreement does not fully reimburse MTA or MTA Bridges and Tunnels for its interest payment on the
 associated bonds. Conversely, if the bond interest rate is lower than the counterparty's rate on the swap, there is
 a net benefit to MTA or MTA Bridges and Tunnels.
- Termination Risk The risk that a swap agreement will be terminated and MTA or MTA Bridges and Tunnels
 will be required to make a swap termination payment to the counterparty and, in the case of a swap agreement
 which was entered into for the purpose of creating a synthetic fixed rate for an advance refunding transaction
 may also be required to take action to protect the tax-exempt status of the related refunding bonds.

The ISDA Master Agreement sets forth certain termination events applicable to all swaps entered into by the parties to that ISDA Master Agreement. MTA and MTA Bridges and Tunnels have entered into separate ISDA Master Agreements with each counterparty that govern the terms of each swap with that counterparty, subject to individual terms negotiated in a confirmation. MTA and MTA Bridges and Tunnels are each subject to termination risk if its credit ratings fall below certain specified thresholds or if it commits a specified event of default or other specified event of termination. If, at the time of termination, a swap was in a liability position to MTA or MTA Bridges and Tunnels, a termination payment would be owed by MTA or MTA Bridges and Tunnels to the counterparty, subject to applicable netting arrangements.

The following tables set forth the Additional Termination Events for MTA/MTA Bridges and Tunnels and its counterparties.

MTA Transportation Revenue			
Counterparty Name	МТА	Counterparty	
AIG Financial Products Corp.; JPMorgan Chase Bank, NA; UBS AG	Below Baa3 (Moody's) or BBB- (S&P)*†	Below Baa3 (Moody's) or BBB- (S&P)* †‡	

* Equivalent Fitch rating is replacement for Moody's or S&P.

[†] The Additional Termination Event is also triggered if a relevant rating is withdrawn or no rating exists from Moody's and S&P.

[‡] In all cases except JPMorgan Chase Bank, N.A. counterparty thresholds, Fitch rating is replacement for either Moody's or S&P, at which point threshold is based on lowest rating.

MTA Dedicated Tax Fund			
Counterparty Name MTA Counterparty			
Bank of New York Mellon	Below BBB (S&P) or BBB (Fitch)*	Below A3 (Moody's) or A- (S&P) [†]	

* Equivalent Moody's rating is replacement for S&P or Fitch. The Additional Termination Event is also triggered if a relevant rating is withdrawn for credit-related reasons or no rating exists from S&P and Fitch.

[†] Equivalent Fitch rating is replacement for Moody's or S&P. The Additional Termination Event is also triggered if a relevant rating is withdrawn for credit-related reasons or no rating exists from Moody's and S&P.

MTA Bridges and Tunnels Senior Lien			
Counterparty Name	MTA Bridges and Tunnels	Counterparty	
BNP Paribas US Wholesale Holdings, Corp.; Citibank, N.A.; JPMorgan Chase Bank, NA; UBS AG	Below Baa2 (Moody's) or BBB (S&P)*	Below Baa1 (Moody's) or BBB+ (S&P)*	

* Equivalent Fitch rating is replacement for Moody's or S&P. The Additional Termination Event is also triggered if a relevant rating is withdrawn or no rating exists from Moody's and S&P.

MTA Bridges and Tunnels Subordinate Lien				
Counterparty Name MTA Bridges and Tunnels Counterparty				
U.S. Bank National Association; Wells Fargo Bank, N.A.	Below Baa2 (Moody's) or BBB (S&P)*	Below Baa2 (Moody's) or BBB (S&P) [†]		

* Equivalent Fitch rating is replacement for Moody's or S&P. If not below investment grade, MTA Bridges and Tunnels may cure such Termination Event by posting collateral at a zero threshold. The Additional Termination Event is also triggered if a relevant rating is withdrawn for credit-related reasons or no rating exists from Moody's and S&P.

[†] Equivalent Fitch rating is replacement for Moody's or S&P. The Additional Termination Event is also triggered if a relevant rating is withdrawn for credit-related reasons or no rating exists from Moody's and S&P.

- MTA and MTA Bridges and Tunnels' ISDA Master Agreements provide that the payments under one transaction will be netted against other transactions entered into under the same ISDA Master Agreement. Under the terms of these agreements, should one party become insolvent or otherwise default on its obligations, close-out netting provisions permit the non-defaulting party to accelerate and terminate all outstanding transactions and net the amounts so that a single sum will be owed by, or owed to, the non-defaulting party.
- Rollover Risk The risk that the swap agreement matures or may be terminated prior to the final maturity of the associated bonds on a variable rate bond issuance, and MTA or MTA Bridges and Tunnels may be exposed to then market rates and cease to receive the benefit of the synthetic fixed rate for the duration of the bond issue. The following debt is exposed to rollover risk:

Associated Bond Issue	Bond Maturity Date	Swap Termination Date
MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2001C (swaps with U.S. Bank/Wells Fargo)	January 1, 2032	January 1, 2030
MTA Bridges and Tunnels General Revenue Variable Rate Refunding Bonds, Series 2002F (swap with Citibank, N.A.)	November 1, 2032	January 1, 2032
MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2003B (swap with Citibank, N.A.)	January 1, 2033	January 1, 2032
MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2005A (swaps with U.S. Bank/Wells Fargo and Citibank, N.A.)	November 1, 2041	January 1, 2030 (U.S. Bank/Wells Fargo) January 1, 2032 (Citibank)
MTA Transportation Revenue Variable Rate Bonds, Series 2011B (swaps with U.S. Bank/Wells Fargo)	November 1, 2041	January 1, 2030

Collateralization/Contingencies. Under the majority of the swap agreements, MTA and/or MTA Bridges and Tunnels is required to post collateral in the event its credit rating falls below certain specified levels. The collateral posted is to be in the form of cash, U.S. Treasury securities, or certain federal agency securities, based on the valuations of the swap agreements in liability positions and net of the effect of applicable netting arrangements. If MTA and/or MTA Bridges and Tunnels do not post collateral, the swap(s) may be terminated by the counterparty(ies).

As of March 31, 2020, the aggregate mid-market valuation of MTA's swaps subject to collateral posting agreements was (\$308.525) million; as of this date, MTA was not subject to collateral posting based on its credit ratings (see further details below).

As of March 31, 2020, the aggregate mid-market valuation of MTA Bridges and Tunnels' swaps subject to collateral posting agreements was (\$223.738) million; as of this date, MTA Bridges and Tunnels was not subject to collateral posting based on its credit ratings (see further details below).

The following tables set forth the ratings criteria and threshold amounts applicable to MTA/MTA Bridges and Tunnels and its counterparties.

MTA Transportation Revenue				
Counterparty	MTA Collateral Thresholds (based on highest rating)	Counterparty Collateral Thresholds (based on highest rating)		
AIG Financial Products Corp.; JPMorgan Chase Bank, NA; UBS AG	Baa1/BBB+: \$10 million Baa2/BBB & below: Zero	Baa1/BBB+: \$10 million Baa2/BBB & below: Zero		

Note: Based on Moody's and S&P ratings. In all cases except JPMorgan Chase Bank, N.A. counterparty thresholds, Fitch rating is replacement for either Moody's or S&P, at which point threshold is based on lowest rating.

MTA Dedicated Tax Fund					
Counterparty	Counterparty MTA Collateral Thresholds Counterparty Collateral Thresholds (based on lowe rating)				
Bank of New York Mellon	N/A – MTA does not post collateral	Aa3/AA- & above: \$10 million A1/A+: \$5 million A2/A: \$2 million A3/A-: \$1 million Baa1/BBB+ & below: Zero			

Note: Counterparty thresholds based on Moody's and S&P ratings. Fitch rating is replacement for either Moody's or S&P.

MTA Bridges and Tunnels Senior Lien					
MTA Bridges and TunnelsCounterparty CollateralCounterpartyCollateral Thresholds (based on highest rating)Thresholds (based on highest rating)					
BNP Paribas US Wholesale Holdings, Corp.; Citibank, N.A.; JPMorgan Chase Bank, NA; UBS AG	Baa1/BBB+: \$30 million Baa2/BBB: \$15 million Baa3/BBB- & below: Zero	A3/A-: \$10 million Baa1/BBB+ & below: Zero			

Note: MTA Bridges and Tunnels thresholds based on Moody's, S&P, and Fitch ratings. Counterparty thresholds based on Moody's and S&P ratings; Fitch rating is replacement for Moody's or S&P.

MTA Bridges and Tunnels Subordinate Lien					
Counterparty	arty MTA Bridges and Tunnels Counterparty Collateral Collateral Thresholds (based on lowest rating) rating)				
U.S. Bank National Association; Wells Fargo Bank, N.A.	Baa3/BBB- & below: Zero (note: only applicable as cure for Termination Event)	Aa3/AA- & above: \$15 million A1/A+ to A3/A-: \$5 million Baa1/BBB+ & below: Zero			

Note: Thresholds based on Moody's and S&P ratings. Fitch rating is replacement for Moody's or S&P.

TRANSPORTATION REVENUE BONDS

General

There is \$22,708,046,088 aggregate principal amount of outstanding Transportation Revenue Bonds as of April 29, 2020. In addition, and not included in the above amount, MTA has outstanding \$7,500,000,000 aggregate principal amount of bond anticipation notes issued under the Transportation Resolution. The following **TRB Table 1** sets forth, on a cash basis, the debt service on outstanding MTA Transportation Revenue Bonds as of April 29, 2020.

TRB Table 1 -- Aggregate Debt Service (\$ in thousands)

	(\$ in thousands)
Year Ending	Aggregate
December 31	Debt Service ⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾⁽⁵⁾
2020	\$ 1,650,164
2021	1,678,482
2022	1,661,841
2023	1,747,221
2024	1,738,619
2025	1,718,874
2026	1,756,096
2027	1,597,466
2028	1,711,713
2029	1,721,194
2030	1,721,549
2031	1,779,444
2032	1,773,773
2033	1,503,495
2034	1,464,380
2035	1,399,112
2036	1,210,309
2037	1,186,245
2038	1,104,441
2039	1,040,702
2040	973,372
2041	806,263
2042	753,688
2043	611,766
2044	639,901
2045	533,312
2046	674,443
2047	475,743
2048	462,013
2049	267,238
2050	221,267
2051	191,749
2052	191,744
2053	142,125
2054	142,117
2055	79.395
2056	63,684
2057	10,483
Total	\$38,405,426
1.0000	\$50,105,120

(1) Totals may not add due to rounding.

⁽³⁾ Excludes debt service on all outstanding Bond Anticipation Notes and Revenue Anticipation Notes.

⁽⁴⁾ Includes debt service on all draws on the RRIF Loan, including a \$244,397,707 draw on April 20, 2020.

⁽⁵⁾ Debt service has not been reduced to reflect expected receipt of Build America Bond interest subsidies relating to certain Outstanding Bonds; such subsidies do not constitute pledged revenues under the Transportation Resolution.

⁽²⁾ Includes the following assumptions for debt service: variable rate bonds at an assumed rate of 4.0%; variable rate bonds swapped to fixed at the applicable fixed rate on the swap; floating rate notes at an assumed rate of 4.0% plus the current fixed spread; floating rate notes swapped to fixed at the applicable fixed rate on the swap plus the current fixed spread; Subseries 2002G-1 Bonds at an assumed rate of 4.0% plus the current fixed spread, except Subseries 2002G-1g Bonds at an assumed rate of 4.0%; Series 2011B Bonds at an assumed rate of 4.0% plus the current fixed spread; Series 2020B Bonds at an assumed rate of 4.0%; fixed rate mandatory tender bonds at their respective fixed rates prior to the mandatory tender date; interest paid monthly, calculated on the basis of a 360-day year consisting of twelve 30-day months for variable rate bonds, floating rate notes and direct purchases.

Under State law, the Transportation Revenue Bonds are MTA's special obligations, which means that they are payable solely from a gross lien on the money pledged for payment under the Transportation Resolution. They are not MTA's general obligations.

Summaries of certain provisions of the Transportation Resolution, including certain defined terms used therein, and the form of the Interagency Agreement relating thereto have been filed with the MSRB through EMMA, all of which are incorporated by specific cross-reference herein. In addition, for convenience, copies of the summaries and the Interagency Agreement can be obtained at no cost on MTA's website under "MTA Info – Financial Information – Investor Information" at www.mta.info or from the MTA Finance Department at 2 Broadway, New York, New York 10004.

Capitalized terms used under this caption "TRANSPORTATION REVENUE BONDS" not otherwise defined herein have the meanings set forth in the Transportation Resolution.

Pledged Transportation Revenues Gross Lien and Rate Covenant

MTA receives "transportation revenues" directly and through certain subsidiaries (currently, MTA Long Island Rail Road, MTA Metro-North Railroad and MTA Bus) and affiliates (currently, MTA New York City Transit and MaBSTOA), and its receipts from many of these sources are pledged for the payment of Transportation Revenue Bonds. MTA and its subsidiaries also receive operating subsidies from MTA Bridges and Tunnels and a number of other governmental sources. The Transportation Resolution provides that bondholders are to be paid from pledged revenues prior to the payment of operating or other expenses and as described in more detail below. The Transportation Resolution permits MTA to issue revenue anticipation notes that are secured by Operating Subsidies prior to the payment of debt service on the Transportation Revenue Bonds. There are currently \$1.2 billion of such revenue anticipation notes outstanding and MTA has Board approval to enter into agreements for an additional \$1.8 billion. See "TRANSPORTATION REVENUE BONDS – Revenue Anticipation Notes Authorized by the Resolution" below.

TRB Table 2a sets forth by general category the amount of pledged revenues, calculated in accordance with the Transportation Resolution, and the resulting debt service coverage for the five years ended December 31, 2019. A general description of the pledged revenues in the general categories referenced in **TRB Table 2a** follows the table, and a more detailed description is set forth under the heading "PART 2. FINNCIAL INFORMATION – REVENUES OF THE RELATED ENTITIES."

TRB Table 2a is based on the historical audited financial statements of MTA and its subsidiaries, MTA Long Island Rail Road, MTA Metro-North Railroad and MTA Bus, and MTA New York City Transit and its subsidiary MaBSTOA, on a cash basis. The audited financial statements for MTA and MTA New York City Transit for 2018 and 2019 covered by **TRB Table 2a** are included herein by specific cross-reference and should be read in connection with this information. The information in **TRB Table 2a** may not be indicative of future results of operations and financial condition. The information contained in the table has been prepared by MTA management based upon the historical financial statements and the notes thereto.

TRB Table 2a Summary of Pledged Revenues (Calculated in Accordance with the Transportation Resolution) Historical Cash Basis (\$ in millions)⁽¹⁾

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
Revenues from Systems Operations					
Fares from Transit System	\$ 4,396	\$ 4,414	\$ 4,487	\$ 4,454	\$ 4,592
Fares from Commuter System	1,373	1,401	1,460	1,481	1,526
Fares from MTA Bus	223	233	236	242	242
Other Income ⁽²⁾	248	248	256	280	278
Subtotal – Operating Revenues	\$6,240	\$6,296	\$6,439	\$6,457	\$6,638
Non-Operating Revenues:					
Revenues from MTA Bridges and Tunnels Surplus	\$740	\$742	\$731	\$692	\$788
State and Local General Operating Subsidies ⁽³⁾	\$370	\$378	\$376	\$375	\$340
Special Tax-Supported Operating Subsidies					
DTF Excess ⁽⁴⁾	277	259	231	250	268
MMTOA Receipts	1,564	1,668	1,668	1,687	1,824
Urban Tax	941	811	585	656	668
Excess Mortgage Recording Taxes	25	25	25	25	12
MTA Aid Trust Account Receipts	285	300	306	273	311
Payroll Mobility Tax Receipts ⁽⁵⁾	1,626	1,682	<u>1,680</u>	1,727	1,805
Subtotal Special Tax-Supported Operating Subsidies	\$4,718	\$4,745	\$4,495	\$4,617	\$4,888
Station Maintenance and Service Reimbursements	599	563	560	530	647
City Subsidy for MTA Bus	439	356	520	464	669
Revenues from Investment of Capital Program Funds ⁽⁶⁾	8	13	24	55	50
Subtotal – Non-Operating Revenues ⁽⁷⁾	\$6,874	\$6,797	\$6,706	\$6,734	\$7,382
Total Transportation Resolution Pledged Revenues	\$13,114	\$13,093	\$13,145	\$13,190	\$14,020
Debt Service ⁽⁸⁾	\$1,399	\$1,381	\$1,581	\$1,457	\$1,751
Debt Service Coverage from Pledged Revenues	9.4x	9.5x	8.3x	9.1x	8.0x

⁽¹⁾ Totals may not add due to rounding

(2) Other income in the case of the Transit System includes advertising revenue, interest income on certain operating funds, station concessions, Transit Adjudication Bureau collections, rental income and miscellaneous. Other income in the case of the Commuter System includes advertising revenues, interest income on certain operating funds, concession revenues (excluding Grand Central Terminal and Penn Station concessions), rental income and miscellaneous. Other income does not include Superstorm Sandy reimbursement funds.

⁽³⁾ State and Local General Operating Subsidies are lower in 2019 due to delay in receipt of the City's December 18-b payment.

(4) Calculated by subtracting the debt service payments on the Dedicated Tax Fund Bonds from the MTTF Receipts described under the caption "PART 3. PUBLIC DEBT SECURITIES – DEDICATED TAX FUND BONDS."

(5) Payroll Mobility Tax Receipts include PMT Revenue Offset of \$309 million annually in 2015 through 2016, and \$244.3 million in 2017 to 2019.

⁽⁶⁾ Represents investment income on capital program funds held for the benefit of the Transit and Commuter Systems on an accrual basis.

⁽⁷⁾ Sum of (a) Revenues from MTA Bridges and Tunnels Surplus, (b) Revenues from Governmental Sources (including State and Local General Operating Subsidies and Special Tax-Supported Operating Subsidies), (c) Station Maintenance and Service Reimbursements, (d) City Subsidy for MTA Bus and (e) Revenues from Investment of Capital Program Funds.

(8) Debt service was reduced by approximately \$54 million in each year of 2015 through 2019 to reflect Build America Bonds interest credit payments relating to certain outstanding bonds. Such payments do not constitute Pledged Revenues under the Transportation Resolution. Debt service includes payments of interest on bond anticipation notes, including \$13 million in 2016, \$13.5 million in 2017, \$101.5 million in 2018, and \$188.6 million in 2019.

The following should be noted in TRB Table 2a:

MTA receives monthly payments beginning in May of MMTOA Receipts, with the first quarter of the State's
appropriation for the succeeding year advanced into the fourth quarter of MTA's calendar year. MTA continues
to monitor the effect of not having MMTOA Receipts available during the first quarter of the calendar year to
determine if working capital borrowings may be necessary for cash flow needs. In 2015, MMTOA Receipts

remained at the same level as in 2014, because the State redirected a portion of MMTOA funds from the operating budget to the capital budget.

- "Urban Tax" collection reflects the activity level of certain commercial real estate transactions in the City. Urban Tax revenues declined in 2017 due to fewer significantly large transactions (valued over \$100 million) as compared to 2015 and 2016. In 2018 and 2019, MTA saw an increase in Urban Tax revenues from the prior year, as a result of both an overall stronger commercial real estate economy and an uptick in the value of significantly large transactions.
- Mortgage recording taxes consist of two separate taxes: the MRT-1 Tax, which is imposed on borrowers of recorded mortgages of real property; and the MRT-2 Tax, which is a tax imposed on the institutional lender. These taxes are collected by the City and the seven other counties within MTA's service area. Mortgage recording taxes are used for Transit and Commuter Systems purposes after the payment of MTA Headquarters' expenses and MTA Bus debt service (\$25 million annually beginning in 2009). Since 2009, even though mortgage recording tax receipts have grown in seven out of the last eight years, MTA Headquarters expenses and MTA Bus debt service expenses have continued to exceed MRT receipts, resulting in no Excess Mortgage Recording Tax transfers to the Transit and Commuter Systems.
- City Subsidy for MTA Bus was higher in 2017 predominantly due to the timing of payments received. MTA received one extra monthly payment made in 2017 (only 11 payments were made in 2016) and an additional quarterly payment, which is usually reconciled in the following year. In 2018, there was a decrease in receipts for MTA Bus, resulting from the additional quarterly payment that was made in 2017. In 2019, the increase in receipts for MTA Bus is the result of higher monthly fixed payments and an additional quarterly payment made in 2019.
- Revenues from Investment of Capital Program Funds substantially all of the investment income is generated from bond proceeds, such as funds held in anticipation of expenditure on project costs.
- In 2016, \$45.3 million of revenues on deposit in the TRB debt service fund were replaced with proceeds of certain Transportation Revenue Bonds permitting such revenues to be used together with other available moneys to prepay outstanding 2 Broadway Certificates of Participation. As a result, 2016 Debt Service reported in the above table is lower by \$45.3 million than it would have been if such transaction had not occurred.

MTA has covenanted to impose fares and other charges so that pledged revenues, together with other available moneys, will be sufficient to cover all debt service and operating and capital costs of the systems. See "Factors Affecting Revenues – *Ability to Comply with Rate Covenant and Pay Operating and Maintenance Expenses*" below.

TRB Table 2b is the MTA Consolidated Statement of Operations by Category. It sets forth, by major category, for the five years ended December 31, 2019, all of the system operating revenues, expenses, adjustments, prior-year carryover and net cash balance. The information in the table has been prepared by MTA management based on MTA financial plans. The amounts indicated in the "Actual" columns for 2015 to 2019 reflect actual information based on the historical audited financial statements of MTA and its subsidiaries. The information in **TRB Table 2b** may not be indicative of future results of operations and financial condition.

TRB Table 2b

MTA Consolidated Statement of Operations by Category (\$ in millions)

(+	Actual	Actual	Actual	Actual	Actual
Non-Reimbursable	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
Operating Revenue		.			
Farebox Revenue	\$5,961	\$6,170	\$6,172	\$6,155	\$6,351
Toll Revenue Other Revenue	1,809 689	1,912 653	1,912 653	1,976 643	2,071 706
Capital and Other Reimbursements	0	0	0000	045	0
Total Operating Revenue	\$8,459	\$8,608	\$8,737	\$8,774	9,128
<u>Operating Expense</u> Labor Expenses:					
Payroll	\$4,696	\$5,019	\$5,021	\$5,211	\$5,311
Overtime	755	934	934	1,066	974
Health & Welfare	1,050	1,209	1,209	1,230	1,339
OPEB Current Payment	502	564	564	604	666
Pensions	1,249	1,345	1,345	1,336	1,493
Other-Fringe Benefits Reimbursable Overhead	861	794	792	881	848
Subtotal Labor Expenses	<u>(380)</u> \$8,732	<u>(492)</u> \$9,238	<u>(492)</u> \$9,373	<u>(528)</u> \$9,799	<u>(470)</u> \$10,161
Subtotal Labor Expenses	\$6,752	\$7,230	\$9,575	\$9,199	\$10,101
Non-Labor Expenses:					
Electric Power	\$474	\$430	\$430	\$482	\$444
Fuel	162	150	150	185	174
Insurance Claims	57	(3)	(3)	(29)	2
Paratransit Service Contracts	331 379	515 393	526 393	438 478	495 477
Maintenance and Other Operating Contracts	579	692	695	678	731
Professional Service Contracts	380	506	507	544	442
Materials & Supplies	543	588	588	637	647
Other Business Expenses	196	217	217	221	231
Subtotal Non-Labor Expenses	\$3,101	\$3,168	\$3,505	\$3,611	\$3,642
Other Expense Adjustments:					
Other	\$37	\$49	\$49	\$129	149
General Reserve	0	0	ربھ 0	0	0
Subtotal Other Expense Adjustments	\$37	\$47	\$49	\$129	\$149
Total Operating Expense before Non-Cash Liability Adj.	\$11,871	\$12,454	\$12,927	\$13,539	\$13,952
Depreciation	\$2,443	\$2,600	\$2,608	\$2,805	\$2,869
OPEB Liability Adjustment	1,490	1,548	1,567	\$2,000	\$2,009
GASB 75 OPEB Expense Adjustment	,	, ,	,	1,048	766
GASB 68 Pension Expense Adjustment	(410)	(234)	(168)	(373)	10
Environmental Remediation	21	13	13	106	42
Total Operating Expense after Non-Cash Liability Adj.	\$15,414	\$16,252	\$16,948	\$17,124	\$17,639
Conversion to Cash Basis: Non-Cash Liability Adjs.	(\$3,543)	(\$3,927)	(\$4,021)	(\$3,585)	(\$3,687)
Debt Service (excludes Service Contract Bonds)	2,373	2,525	2,525	2,541	2,630
Total Operating Expense with Debt Service	\$14,244	\$14,912	\$15,452	\$16,079	\$16,582
Dedicated Taxes and State/Local Subsidies	\$6,595	\$6,429	\$6,416	\$7,177	\$7,283
Net Surplus/(Deficit) After Subsidies and Debt Service	\$810	\$371	(\$300)	(\$128)	(\$171)
Conversion to Cash Basis: GASB Account	0	0	0	0	0
Conversion to Cash Basis: All Other	(660)	129	174	379	280
CASH BALANCE BEFORE PRIOR-YEAR CARRYOVER ADJUSTMENTS	\$150 0	(\$232) 0	(\$126) 0	\$251 0	\$109 0
PRIOR-YEAR CARRYOVER	330	480	248	121	372
NET CASH BALANCE	\$480	\$248	\$121	\$372	\$481

Description of Pledged Revenues

Each of the following pledged revenues is described in more detail under the caption "PART 2. FINANCIAL INFORMATION – REVENUES OF THE RELATED ENTITIES":

- Fares and Tolls Transit System Fares;
- Fares and Tolls Transit System Fare Reimbursements from the City;
- Fares and Tolls Commuter System Fares;
- Fares and Tolls MTA Bus Fares;
- State and Local General Operating Subsidies;
- State Special Tax Supported Operating Subsidies;
- Congestion Zone Surcharges deposited into the General Transportation Account and the Rapid Transit Lane Fines;
- Metropolitan Transportation Authority Financial Assistance Fund Receipts;
- Urban Taxes for Transit System;
- MTA Bridges and Tunnels Surplus;
- Financial Assistance and Service Reimbursements from Local Municipalities; and
- Miscellaneous Revenues.

Pledged revenues also include payments made by the City under its agreement with MTA Bus to reimburse MTA Bus the difference between the actual cost of operation of the City Bus Routes (other than certain capital costs) and all revenues and subsidies received by MTA Bus and allocable to the operation of the City Bus Routes, as further described under the caption "PART 4. OPERATIONS – MTA BUS COMPANY."

Factors Affecting Revenues

The following is a general discussion of factors affecting MTA's revenues. In addition to the factors listed below, the COVID-19 pandemic has had an impact on MTA's operations and revenues, the full extent of which is still being evaluated. For further information related to the impact of the COVID-19 pandemic on the finances and operations of MTA and its Related Entities, see "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES".

Ridership. The level of fare revenues depends to a large extent on MTA's ability to maintain and/or increase ridership levels on the Transit, Commuter and MTA Bus Systems. Those ridership levels are affected by safety and the quality and efficiency of systems operations as well as by financial and economic conditions in the New York metropolitan area.

Fare Policy. MTA determines the fares charged to users of the Commuter System and MTA Bus System, and MTA New York City Transit and MaBSTOA, together with MTA, do the same for the Transit System. After adopting operating expense budgets and assessing the availability of governmental subsidies, each makes a determination of fares necessary to operate on a self-sustaining cash basis in compliance with State law and covenants in the Transportation Resolution. Considering the impact of increased fares on riders, MTA may attempt to reduce costs or obtain additional revenues from other sources, mainly governmental sources, before increasing fares. As a result, even though MTA does not generally need other government financial conditions, as well as by their respective budgetary and legislative processes. MTA's obligation to obtain approval of fare increases on the New Haven line from CDOT can also affect the amount and timing of fare increases.

Ability to Comply with Rate Covenant and Pay Operating and Maintenance Expenses. The Transit, Commuter and MTA Bus Systems have depended, and are expected to continue to depend, upon government subsidies to meet capital and operating needs. Thus, although MTA is legally obligated by the Transportation Resolution's rate covenant to raise fares sufficient to cover all capital and operating costs together with other available monies, there can be no assurance that there is any level at which Transit, Commuter and MTA Bus Systems fares alone would produce revenues sufficient to comply with the rate covenant, particularly if the current level (or the assumed level in the budget prepared in connection with 2021, 2022 and 2023) of collection of dedicated taxes, operating subsidies, and expense reimbursements were to be discontinued or substantially reduced.

Operating Results and Projections. Based upon, and at the time of, the adoption of the February Plan, the budgets of the Related Entities were projected to be in balance through 2022, but deficits were projected in 2023. Any of the Transit System, the Commuter System or MTA Bus System or all of them may be forced to institute additional cost reductions (which, in certain circumstances, could affect service which, in turn, could adversely affect revenues) or take other additional actions to close projected budget gaps, which could include additional fare increases.

2020-2023 Financial Plans. The February Plan, the 2010-2014 Capital Program, the 2015-2019 Capital Program, the 2020-2024 Capital Program and prior and future Capital Programs are interrelated, and any failure to fully achieve the various components of these plans could have an adverse impact on one or more of the other proposals contained in the February Plan, 2010-2014 Capital Program, the 2015-2019 Capital Program, the 2020-2024 Capital Program and prior and future Capital Program, the 2015-2019 Capital Program, the 2020-2024 Capital Program and prior and future Capital Programs, as well as on pledged revenues. See "PART 2. FINANCIAL PLANS AND CAPITAL PROGRAMS".

MTA Bridges and Tunnels Operating Surplus. The amount of MTA Bridges and Tunnels operating surplus to be used for the Transit and Commuter Systems is affected by a number of factors, including traffic volume, the timing and amount of toll increases, the operating and capital costs of MTA Bridges and Tunnels Facilities, and the amount of debt service payable from its operating revenues, including debt service on obligations issued for the benefit of MTA's affiliates and subsidiaries and for MTA Bridges and Tunnels' own capital needs.

Government Assistance. The level and timing of government assistance to MTA may be affected by several different factors, such as:

- Subsidy payments by the State may be made only if and to the extent that appropriations have been made by the Legislature and money is available to fund those appropriations.
- The Legislature may not bind or obligate itself to appropriate revenues during a future legislative session, and appropriations approved during a particular legislative session generally have no force or effect after the close of the State fiscal year for which the appropriations are made.
- The State is not bound or obligated to continue to pay operating subsidies to the Transit System, Commuter System or MTA Bus System or to continue to impose any of the taxes currently funding those subsidies.
- The financial condition of the State, Connecticut, and the City and counties in the MTA Commuter Transportation District, could affect the ability or willingness of the States and local governments to continue to provide general operating subsidies, the City and local governments to continue to provide reimbursements and station maintenance payments, and the State to continue to make special appropriations.
- Court challenges to the State taxes, tolls, fees, surcharges, fines and other charges that are the sources of various State and City operating subsidies to MTA, if successful, could adversely affect the amount of pledged revenues generated by such State taxes, tolls, fees, surcharges, fines and other charges.

Security - General

Transportation Revenue Bonds are MTA's special obligations payable as to principal (including sinking fund installments), redemption premium, if any, and interest from the security, sources of payment, and funds specified in the Transportation Resolution.

The payment of principal (including sinking fund installments, if any), redemption premium, if any, and interest on the Transportation Revenue Bonds is secured by, among other sources described below, the transportation revenues discussed in the preceding section which are, together with certain other revenues, referred to as "pledged revenues."

Summaries of certain provisions of the Transportation Resolution, including certain defined terms used therein, have been filed with the MSRB through EMMA, all of which are incorporated by specific cross-reference herein. In addition, for convenience, copies of the summaries can be obtained on MTA's website under "MTA Info – Financial Information – Investor Information" at www.mta.info or from the MTA Finance Department at 2 Broadway, New York, New York 10004.

Holders of Transportation Revenue Bonds are to be paid from pledged revenues after the payment of debt service on revenue anticipation notes and prior to the payment of operating or other expenses of MTA, MTA New York City Transit, MaBSTOA, MTA Long Island Rail Road, MTA Metro-North Railroad and MTA Bus, but subordinate to the payment of Revenue Anticipation Notes. However, MTA's ability to generate major portions of the pledged revenues depends upon its payment of operating and other expenses.

MTA Transportation Revenue Bonds are not a debt of the State or the City, or any other local governmental unit. MTA has no taxing power.

Revenue Anticipation Notes Authorized by the Resolution

MTA and MTA New York City Transit have in the past and may, from time to time, in the future issue RANs for their working capital needs and the needs of their respective affiliates and subsidiaries occasioned by delays in the receipt of subsidies or other irregularities in the timing of receipt of revenues. RANs issued under the Transportation Resolution are secured by a lien on Operating Subsidies prior to the lien in favor of the owners of Transportation Revenue Bonds.

Owners of MTA Transportation Revenue Bonds retain a first lien on the other Pledged Revenues, including fares. The maturity on such RANs may not exceed 18 months. While such notes can be rolled, the final maturity of the notes cannot exceed five years from the date of their original issuance.

Operating Subsidies include general operating subsidies from the State and local governments under the State's Section 18-b program; special tax-supported operating subsidies (the MTTF Receipts and MMTOA Receipts) after the payment of debt service and certain other obligations relating to MTA's Dedicated Tax Fund senior and subordinated bonds; PMT Revenues after the payment of debt service and certain other obligations relating to senior and subordinated bonds issued under a PMT Resolution that may be adopted by MTA; MTA Bridges and Tunnels operating surplus; Commuter System station maintenance payments; the Urban Taxes; and Congestion Zone Surcharges and Rapid Transit Lane Fines deposited into the General Transportation Account.

Pledge Effected by the Resolution

The Transportation Resolution provides that there are pledged to the payment of principal and redemption premium of, interest on, and sinking fund installments for, the Transportation Revenue Bonds and Parity Debt, in accordance with their terms and the provisions of the Transportation Resolution the following, referred to as the "trust estate."

- all pledged revenues as described above;
- the net proceeds of certain agreements pledged by MTA to the payment of Transit and Commuter capital projects;
- the proceeds from the sale of Transportation Revenue Bonds, until those proceeds are paid out for an authorized purpose;
- all funds, accounts and subaccounts established by the Transportation Resolution (except those established pursuant to a related supplemental resolution, and excluded by such supplemental resolution from the Trust Estate as security for all Transportation Revenue Bonds, in connection with variable interest rate obligations, put obligations, parity debt, subordinated contract obligations or subordinated debt); and

• the Interagency Agreement dated as of April 1, 2006, among MTA, MTA Long Island Rail Road, MTA Metro-North Railroad, MTA Bus, MTA New York City Transit and MaBSTOA.

The Trustee may directly enforce an undertaking to operate the Transit System, the Commuter System or the MTA Bus System to ensure compliance with the Transportation Resolution.

Under the Transportation Resolution, the operators of the Transit System, Commuter System and MTA Bus System are obligated to transfer to the Trustee for deposit into the Revenue Fund virtually all pledged revenues as soon as practicable following receipt or, with respect to revenues in the form of cash and coin, immediately after being counted and verified. The pledge of money located in Connecticut may not be effective until that money is deposited under the Transportation Resolution.

Flow of Revenues

The Transportation Resolution creates the following funds and accounts:

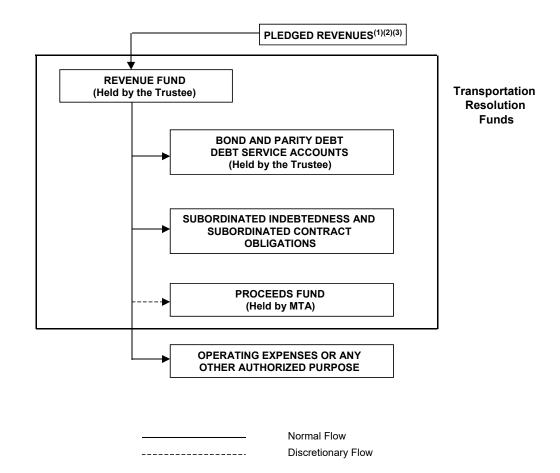
- Revenue Fund (held by the Trustee);
- Debt Service Fund (held by the Trustee); and
- Proceeds Fund (held by MTA).

Subject to the payment from the operating subsidies of debt service on RANs, the Transportation Resolution requires the Trustee, promptly upon receipt of the pledged revenues in the Revenue Fund, to deposit the revenues into the following funds and accounts, in the amounts and in the order of priority, as follows:

- to the debt service accounts, the net amount, if any, required to make the amount in the debt service accounts equal to the accrued debt service for Transportation Revenue Bonds and Parity Debt to the last day of the current calendar month;
- to pay, or accrue to pay, principal of and interest on any Subordinated Indebtedness or for payment of amounts due under any Subordinated Contract Obligation;
- to MTA for deposit in the Proceeds Fund, as directed by one of MTA's authorized officers, to fund Capital Costs of the Transit System, Commuter System and MTA Bus System; and
- to accounts held by MTA or any of the other Related Entities for payment of operating expenses or any other authorized purpose.

All amounts paid out by MTA or the Trustee either for an authorized purpose (excluding transfers to any other pledged fund or account) or under the last bullet point above are free and clear of the lien and pledge created by the Transportation Resolution.

The following chart illustrates the basic elements of the flow of revenues described above:



TRANSPORTATION REVENUE OBLIGATIONS - FLOW OF PLEDGED REVENUES

- ⁽²⁾ MTA currently anticipates establishing a new credit, with bonds to be secured in whole or in part by the PMT Revenues and the Aid Trust Account Monies.
- (3) MTA is authorized to issue deficit bonds payable from numerous sources, including PMT Revenues.

Covenants

Rate Covenants. MTA must fix the Transit and Commuter and MTA Bus fares and other charges and fees to be sufficient, together with other money legally available or expected to be available, including from government subsidies –

- to pay the debt service on all the Transportation Revenue Bonds;
- to pay any Parity Debt;
- to pay any Subordinated Indebtedness and amounts due on any Subordinated Contract Obligations; and

⁽¹⁾ Includes "Operating Subsidies" pledged to the payment of RANs prior to the payment of principal and interest on Transportation Revenue Bonds.

• to pay, when due, all operating and maintenance expenses and other obligations of its transit and commuter affiliates and subsidiaries.

Operating and Maintenance Covenants.

- MTA, MaBSTOA, MTA New York City Transit, MTA Bus, MTA Metro-North Railroad and MTA Long Island Rail Road are required at all times to operate, or cause to be operated, the systems properly and in a sound and economical manner and maintain, preserve, reconstruct and keep the same or cause the same to be maintained, preserved, reconstructed and kept in good repair, working order and condition.
- Nothing in the Transportation Resolution prevents MTA from ceasing to operate or maintain, or from leasing or disposing of, all or any portion of the systems if, in MTA's judgment it is advisable to do so, but only if the operation is not essential to the maintenance and continued operation of the rest of the systems and this arrangement does not materially interfere with MTA's ability to comply with MTA's rate covenants.

Additional Bonds. The Transportation Resolution permits MTA to issue additional Transportation Revenue Bonds and to issue or enter into Parity Debt, from time to time, to pay or provide for the payment of qualifying costs, without meeting any specific debt-service-coverage level, as long as MTA certifies to meeting the rate covenant described above for the year in which the additional debt is being issued. Under the Transportation Resolution, MTA may only issue additional Transportation Revenue Bonds if those bonds are issued to fund projects pursuant to a CPRB-approved MTA Capital Program, if an approved Capital Program is then required.

There is no covenant with bondholders limiting the aggregate principal amount of Revenue Anticipation Notes or additional Transportation Revenue Bonds or Parity Debt that MTA may issue. There is a limit under current State law that covers the Transportation Revenue Bonds and certain other securities. See "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS—GENERAL—Financing of Capital Projects and Statutory Ceiling" above for a description of the current statutory ceiling.

Refunding Bonds. MTA may issue Transportation Revenue Bonds to refund all or any portion of the Transportation Revenue Bonds or Parity Debt.

Non-Impairment. Under State law, the State has pledged to MTA that it will not limit or change MTA's powers or rights in such a way that would impair the fulfillment of MTA's promises to holders of the Transportation Revenue Bonds.

No Bankruptcy. State law specifically prohibits MTA or the other Related Entities from filing a voluntary bankruptcy petition under Chapter 9 of the Federal Bankruptcy Code, so long as any Transportation Revenue Bonds are outstanding. The State has covenanted not to change the law to permit MTA or its affiliates or subsidiaries to file such a petition. Chapter 9 does not provide authority for creditors to file involuntary bankruptcy proceedings against MTA or other Related Entities.

Parity Debt

MTA may incur Parity Debt pursuant to the terms of the Transportation Resolution that, subject to certain exceptions, would be secured by a pledge of, and a lien on, the Trust Estate on a parity with the lien created by the Transportation Resolution with respect to Transportation Revenue Bonds. Parity Debt may be incurred in the form of a Parity Reimbursement Obligation, a Parity Swap Obligation or any other contract, agreement or other obligation of MTA designated as constituting "Parity Debt" in a certificate of an Authorized Officer delivered to the Trustee.

MTA BRIDGES AND TUNNELS SENIOR REVENUE BONDS

There is \$7,733,365,000 aggregate principal amount of outstanding MTA Bridges and Tunnels Senior Revenue Bonds as of April 29, 2020. The following **MTA Bridges and Tunnels Senior Table 1** sets forth, on a cash basis, the debt service on the outstanding MTA Bridges and Tunnels Senior Revenue Bonds as of April 29, 2020.

MTA Bridges and Tunnels Senior Table 1 Aggregate Senior Lien Debt Service (\$ in thousands)

Year Ending December 31 2020	Aggregate <u>Debt Service⁽¹⁾⁽²⁾⁽³⁾</u> \$519,006
2021	575,478
2022	571,123
2023	582,134
2024	602,577
2025	602,025
2026	620,674
2027	616,895
2028	621,295
2029	622,846
2030	616,343
2031	624,415
2032	666,576
2033	381,296
2034	381,280
2035	381,271
2036	390,113
2037	390,114
2038	390,110
2039	254,001
2040	231,909
2041	323,085
2042	216,267
2043	196,975
2044	270,097
2045	173,701
2046	168,689
2047	148,644
2048	128,645
2049	34,753
2050	13,729
Total	\$12,316,064

(1) Totals may not add due to rounding.

(2) Includes the following assumptions for debt service: variable rate bonds at an assumed rate of 4.0%; variable rate bonds swapped to fixed at the applicable fixed rate on the swap; floating rate notes at an assumed rate of 4.0% plus the current fixed spread; floating rate notes swapped to fixed at the applicable fixed rate on the swap plus the current fixed spread. Series 2001C Bonds and a portion of Series 2005A Bonds at an assumed rate of 4.0%, interest paid monthly, calculated on the basis of a 360-day year consisting of twelve 30-day months.

⁽³⁾ Debt service has not been reduced to reflect expected receipt of Build America Bond interest subsidies relating to certain Outstanding Bonds; such subsidies do not constitute pledged revenues under the MTA Bridges and Tunnels Senior Resolution.

Sources of Payment

MTA Bridges and Tunnels receives its revenues from all tolls, revenues, rates, fees, charges, rents, and proceeds of use and occupancy insurance on any portion of its tunnels, bridges and other facilities, including the net revenues of the Battery Parking Garage, and of any other insurance which insures against loss of revenues therefrom payable to or for the account of MTA Bridges and Tunnels, and MTA Bridges and Tunnels' receipts from those sources, after payment of MTA Bridges and Tunnels' operating expenses, are pledged to the holders of the MTA Bridges and Tunnels Senior Revenue Bonds for payment, as described below.

MTA Bridges and Tunnels is required to fix and collect tolls for the MTA Bridges and Tunnels Facilities, and MTA Bridges and Tunnels' power to establish toll rates is not subject to the approval of any governmental entity. For more information relating to MTA Bridges and Tunnels' power to establish tolls, see "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Toll Rates".

MTA Bridges and Tunnels Senior Table 2 sets forth, by MTA Bridges and Tunnels facility, the amount of revenues for each of the last five years, as well as operating expenses. The audited financial statements for MTA and MTA Bridges and Tunnels for 2017 and 2018 and the audited financial statements for 2019 covered by MTA Bridges and Tunnels Senior Table 2 are included herein by specific cross-reference and should be read in connection with this information. The information in MTA Bridges and Tunnels Senior Table 2 may not be indicative of future results of operations and financial condition. The information contained in the table has been prepared by MTA management based upon the historical financial statements and notes.

MTA Bridges and Tunnels Senior Table 2 Historical Revenues, Operating Expenses and Senior Lien Debt Service (\$ in thousands)

	(in thousanus)			
Bridge and Tunnel Revenues:	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
Robert F. Kennedy Bridge	\$422,756	\$428,083	\$437,735	\$449,086	\$463,134
Verrazzano-Narrows Bridge	372,347	393,017	416,312	434,963	453,343
Bronx Whitestone Bridge	294,022	320,486	327,812	334,325	352,093
Throgs Neck Bridge	324,702	335,732	345,556	345,992	356,078
Henry Hudson Bridge	71,388	76,309	84,479	84,422	88,568
Marine Parkway Gil Hodges Memorial Bridge	16,906	17,263	18,182	17,526	18,507
Cross Bay Veterans' Memorial Bridge	17,517	18,431	18,662	18,647	19,543
Queens Midtown Tunnel	182,382	171,121	157,443	175,919	198,866
Hugh L. Carey Tunnel	106,881	109,250	105,677	114,783	121,279
Total Bridge and Tunnel Revenues:	\$1,808,901	\$1,869,693	\$1,911,858	\$1,975,663	\$2,071,411
Investment Income and Other ⁽¹⁾	39,818	26,692	23,425	30,106	31,921
Total Revenues	\$1,848,719	\$1,896,385	\$1,935,283	\$2,005,769	\$2,103,332
Operating Expenses ⁽²⁾					
Personnel Costs	\$226,408	\$250,285	\$254,621	\$275,410	\$286,792
Maintenance and Other Operating Expenses	217,658	221,418	241,838	256,210	257,028
Total Operating Expenses	\$444,066	\$471,703	\$496,459	\$531,620	\$543,820
Net Revenues Available for Debt Service ⁽³⁾	\$1,404,653	\$1,424,682	\$1,438,824	\$1,474,149	\$1,559,512
MTA Bridges and Tunnels Senior Lien Debt Service ⁽³⁾	\$476,119	\$504,834	\$528,327	\$551,552	\$558,253
Senior Lien Coverage	2.95x	2.82x	2.72x	2.67x	2.79x

(1) Includes the net revenues from the Battery Parking Garage, as well as E-ZPass administrative fees and miscellaneous other revenues. Investment earnings include interest earned on bond funds, including debt service funds that were applied to the payment of debt service as follows for the years 2015 through 2019, respectively (in thousands); \$185, \$708, \$1,824, \$3,582 and \$4,793. The amounts set forth in this footnote are derived from MTA Bridges and Tunnels' audited financial statements for the years 2015 through 2019.

⁽²⁾ Excludes depreciation, other post-employment benefits other than pensions and asset impairment due to Superstorm Sandy.

(3) Net of Build America Bond interest subsidies of \$8.7 million in 2015, \$8.4 million in 2016, \$8.1 million in 2017, \$8.5 million in 2018 and \$8.4 million in 2019.

The following should be noted in MTA Bridges and Tunnels Senior Table 2:

• Bridge and Tunnel Revenues – Traffic in 2019 was the highest year ever with approximately 329.4 million paid vehicles crossing, surpassing the previous high of 322.3 million crossings in 2018 by 2.2%. The increase was primarily due to improvements in the regional economy, relatively favorable winter weather, stable gas prices,

and the substantial completion of Sandy restoration work at the Queens Midtown Tunnel and the Hugh L. Carey Tunnel in the fourth quarter 2018. Additional revenue was due to higher traffic volume and a toll increase implemented on March 31, 2019.

- Operating Expenses Personnel Costs The 2015 to 2016 increase in personnel costs was primarily due to the additional wage and fringe benefits costs resulting from the full value of all vacation and sick leave balances, earned by employees to date if the leave was attributable to past service. The increase in 2017 was primarily due to wage and fringe benefits inflation for both contractually represented and non-represented employees. The increase in 2018 was mainly due to the recent changes to accounting for Other Post Employment Benefit ("OPEB") plans under GASB 75, a new accounting standard. The increase in 2019 was primarily due to an increase in retirement and other employee benefits.
- Operating Expenses Maintenance and Other Operating Expenses In 2015, the increase in non-labor expenses was primarily due to additional major maintenance and bridge painting costs and higher credit card fees associated with the toll increase. In 2016, the increase in non-labor expenses was mainly due to additional major maintenance and bridge painting costs. Most of the growth in 2017 non-labor expenses was due to implementation costs for Cashless Tolling and back-office costs for administering the Tolls by Mail program. In 2018, the increase in non-labor expenses was mainly due to higher costs relating to a full year of Cashless Tolling and additional major maintenance projects. In 2019, there was a slight increase in non-labor expenses mainly due to higher credit card fees associated with the toll increase implemented on March 31, 2019 and general inflationary adjustments across a variety of areas.

Security – General

MTA Bridges and Tunnels Senior Revenue Bonds are general obligations of MTA Bridges and Tunnels payable solely from the trust estate (described below) pledged for the payment of the Bonds and Parity Debt pursuant to the terms of the MTA Bridges and Tunnels Senior Resolution, after the payment of Operating Expenses.

Summaries of certain provisions of the MTA Bridges and Tunnels Senior Resolution, including certain defined terms used therein, have been filed with the MSRB through EMMA, all of which are incorporated by specific cross-reference herein. In addition, for convenience, copies of the summaries can be obtained on MTA's website under "MTA Info – Financial Information – Investor Information" at www.mta.info or from the MTA Finance Department at 2 Broadway, New York, New York 10004.

Capitalized terms used under this caption "MTA BRIDGES AND TUNNELS SENIOR REVENUE BONDS" not otherwise defined herein have the meanings set forth in the MTA Bridges and Tunnels Senior Resolution, except that the term "MTA Bridges and Tunnels" is used herein in place of the defined term "TBTA." So, for example, the term "MTA Bridges and Tunnels Facilities" as used herein is referred to in the MTA Bridges and Tunnels Senior Resolution and in the summaries thereof as "TBTA Facilities."

MTA Bridges and Tunnels Senior Revenue Bonds are not a debt of the State or the City, or any local governmental unit. MTA Bridges and Tunnels has no taxing power.

Pledge Effected by the MTA Bridges and Tunnels Senior Resolution

The Bonds and Parity Debt issued in accordance with the MTA Bridges and Tunnels Senior Resolution are secured by a net pledge of Revenues after the payment of Operating Expenses.

Pursuant to, and in accordance with, the MTA Bridges and Tunnels Senior Resolution, MTA Bridges and Tunnels has pledged to the holders of the MTA Bridges and Tunnels Senior Revenue Bonds a "trust estate," which consists of

- Revenues;
- the proceeds from the sale of the MTA Bridges and Tunnels Senior Revenue Bonds; and
- all funds, accounts and subaccounts established by the MTA Bridges and Tunnels Senior Resolution (except those established pursuant to a related supplemental resolution, and excluded by such supplemental resolution from the Trust Estate as security for all MTA Bridges and Tunnels Senior Revenue Bonds in connection with

variable interest rate obligations, put obligations, parity debt, subordinated contract obligations or subordinated debt).

Revenues and Additional MTA Bridges and Tunnels Projects

Revenues from MTA Bridges and Tunnels Facilities. MTA Bridges and Tunnels does not currently derive any significant recurring Revenues from any sources other than the MTA Bridges and Tunnels Facilities and investment income. Income from capital projects for the Transit and Commuter Systems, MTA Bus and MTA Staten Island Railway financed by MTA Bridges and Tunnels is not derived by or for the account of MTA Bridges and Tunnels; consequently, no revenues from any portion of the capital projects for the Transit and Commuter Systems, MTA Bus and MTA Staten Island Railway financed by MTA Bridges and Tunnels are pledged to the payment of debt service on the MTA Bridges and Tunnels Senior Revenue Bonds.

CBD Tolling Capital Lockbox Fund. Moneys deposited into the CBD Tolling Capital Lockbox Fund include tolls from the CDB Tolling Program, certain State and City sales taxes and the Mansion Tax. Except as permitted for operating purposes during 2020 and 2021 due to the COVID-19 pandemic, such moneys are required to be applied to CBD Tolling Program operating and infrastructure costs and capital projects in the 2020-2024 and later MTA Capital Programs. The CBD Tolling Program is an MTA Bridges and Tunnel project for which revenues generated by the MTA Bridges and Tunnels Facilities may be spent, but it is not currently an Additional MTA Bridges and Tunnel Facility for which proceeds of bonds issued under the MTA Bridges and Tunnels Senior or Subordinate Resolution can be spent.

Additional MTA Bridges and Tunnels Projects That Can Become MTA Bridges and Tunnels Facilities. If MTA Bridges and Tunnels is authorized to undertake another project, whether a bridge or tunnel or the CBD Tolling Program, that project can become an MTA Bridges and Tunnels Facility for purposes of the MTA Bridges and Tunnels Senior Resolution if it is designated as such by MTA Bridges and Tunnels and it satisfies certain conditions more fully described under "SUMMARY OF CERTAIN PROVISIONS OF THE TBTA RESOLUTION – Additional TBTA Facilities" in the summaries of documents.

Flow of Revenues

The MTA Bridges and Tunnels Senior Resolution establishes the following funds and accounts, each held by MTA Bridges and Tunnels:

- Revenue Fund;
- Proceeds Fund;
- Debt Service Fund; and
- General Fund.

Under the MTA Bridges and Tunnels Senior Resolution, MTA Bridges and Tunnels is required to pay into the Revenue Fund all Revenues as and when received and available for deposit.

MTA Bridges and Tunnels is required to pay out from the Revenue Fund, on or before the 25th day of each calendar month, the following amounts in the following order of priority:

- payment of reasonable and necessary Operating Expenses or accumulation in the Revenue Fund as a reserve

 for working capital, (2) for such Operating Expenses the payment of which is not immediately required,
 including amounts determined by MTA Bridges and Tunnels to be required as an operating reserve, or
 (3) deemed necessary or desirable by MTA Bridges and Tunnels to comply with orders or rulings of an agency
 or regulatory body having lawful jurisdiction;
- transfer to the Debt Service Fund, the amount, if any, required so that the balance in the fund is equal to Accrued Debt Service to the last day of the current calendar month; provided, however, that in no event shall the amount to be so transferred be less than the amount required for all payment dates occurring prior to the 25th day of the next succeeding calendar month;

- transfer to another person for payment of, or accrual for payment of, principal of and interest on any Subordinated Indebtedness or for payment of amounts due under any Subordinated Contract Obligations; and
- transfer to the General Fund any remaining amount.

All amounts paid out by MTA Bridges and Tunnels for an authorized purpose (excluding transfers to any other pledged Fund or Account), or withdrawn from the General Fund in accordance with the MTA Bridges and Tunnels Senior Resolution, are free and clear of the lien and pledge created by the MTA Bridges and Tunnels Senior Resolution.

Under the MTA Bridges and Tunnels Senior Resolution, MTA Bridges and Tunnels is required to use amounts in the General Fund to make up deficiencies in the Debt Service Fund and the Revenue Fund, in that order. Subject to the preceding sentence and any lien or pledge securing Subordinated Indebtedness, the MTA Bridges and Tunnels Senior Resolution authorizes MTA Bridges and Tunnels to release amounts in the General Fund to be paid to MTA Bridges and Tunnels free and clear of the lien and pledge created by the MTA Bridges and Tunnels Senior Resolution.

MTA Bridges and Tunnels is required by law to transfer amounts released from the General Fund to MTA as Operating Surplus, and a statutory formula determines how MTA allocates that money between the Transit and Commuter Systems.

Rate Covenant

Under the MTA Bridges and Tunnels Senior Resolution, MTA Bridges and Tunnels is required at all times to establish, levy, maintain and collect, or cause to be established, levied, maintained and collected, such tolls, rentals and other charges in connection with the MTA Bridges and Tunnels Facilities as shall always be sufficient, together with other money available therefor (including the anticipated receipt of proceeds of the sale of Obligations or other bonds, notes or other obligations or evidences of indebtedness of MTA Bridges and Tunnels that will be used to pay the principal of Obligations issued in anticipation of such receipt, *but not including* any anticipated or actual proceeds from the sale of MTA Bridges and Tunnels Facilities), to equal or exceed in each calendar year *the greater of*:

- an amount equal to the sum of amounts necessary in such calendar year
 - o to pay all Operating Expenses of MTA Bridges and Tunnels, plus
 - to pay Calculated Debt Service, as well as the debt service on all Subordinated Indebtedness and all Subordinated Contract Obligations, plus
 - to maintain any reserve established by MTA Bridges and Tunnels pursuant to the MTA Bridges and Tunnels Senior Resolution, in such amount as may be determined from time to time by MTA Bridges and Tunnels in its judgment, or
- an amount such that Revenues less Operating Expenses shall equal at least 1.25 times Calculated Debt Service on all senior lien Bonds for such calendar year.

For a more complete description of the rate covenant and a description of the minimum tolls that can be charged at the MTA Bridges and Tunnels Facilities, see "SUMMARY OF CERTAIN PROVISIONS OF THE TBTA RESOLUTION – Rates and Fees" in the summaries of documents.

Additional Bonds

Under the provisions of the MTA Bridges and Tunnels Senior Resolution, MTA Bridges and Tunnels may issue one or more series of Additional Bonds on a parity with the outstanding MTA Bridges and Tunnels Senior Revenue Bonds to provide for Capital Costs.

Certain Additional Bonds for MTA Bridges and Tunnels Facilities. MTA Bridges and Tunnels may issue Additional Bonds without satisfying any earnings or coverage test for the purpose of providing for Capital Costs relating to MTA Bridges and Tunnels Facilities for the purpose of keeping such MTA Bridges and Tunnels Facilities in good operating condition or preventing a loss of Revenues or Revenues after payment of Operating Expenses derived from such MTA Bridges and Tunnels Facilities.

Additional Bonds for Other Purposes. MTA Bridges and Tunnels may issue Additional Bonds to pay or provide for the payment of all or part of Capital Costs relating to any of the following purposes:

- capital projects of the Transit and Commuter Systems, MTA Bus and MTA Staten Island Railway;
- any Additional MTA Bridges and Tunnels Project (that does not become an MTA Bridges and Tunnels Facility); or
- any MTA Bridges and Tunnels Facilities other than for the purposes set forth in the preceding paragraph.

In the case of Additional Bonds issued other than for the improvement, reconstruction or rehabilitation of MTA Bridges and Tunnels Facilities as described under the preceding heading, in addition to meeting certain other conditions, all as more fully described in "SUMMARY OF CERTAIN PROVISIONS OF THE TBTA RESOLUTION – Special Provisions for Capital Cost Obligations" in the summaries of documents, an Authorized Officer must certify that the historical Twelve Month Period Net Revenues are at least equal to 1.40 times the Maximum Annual Calculated Debt Service on all MTA Bridges and Tunnels Senior Revenue Bonds, including debt service on the MTA Bridges and Tunnels Senior Revenue Bonds to be issued.

Refunding Bonds

MTA Bridges and Tunnels Senior Revenue Bonds may be issued for the purpose of refunding MTA Bridges and Tunnels Senior Revenue Bonds or Parity Debt if (a) the Maximum Annual Calculated Debt Service (including the refunding MTA Bridges and Tunnels Senior Revenue Bonds then proposed to be issued but not including the MTA Bridges and Tunnels Senior Revenue Bonds to be refunded) is equal to or less than the Maximum Annual Calculated Debt Service on the MTA Bridges and Tunnels Senior Revenue Bonds as calculated immediately prior to the refunding (including the refunded MTA Bridges and Tunnels Senior Revenue Bonds but not including the refunding MTA Bridges and Tunnels Senior Revenue Bonds but not including the refunding MTA Bridges and Tunnels Senior Revenue Bonds but not including the refunding MTA Bridges and Tunnels Senior Revenue Bonds but not including the refunding MTA Bridges and Tunnels Senior Revenue Bonds but not including the refunding MTA Bridges and Tunnels Senior Revenue Bonds but not including the refunding MTA Bridges and Tunnels Senior Revenue Bonds but not including the refunding MTA Bridges and Tunnels Senior Revenue Bonds but not including the refunding MTA Bridges and Tunnels Senior Revenue Bonds but not including the refunding MTA Bridges and Tunnels Senior Revenue Bonds but not including the refunding MTA Bridges and Tunnels Senior Revenue Bonds but not including the refunding MTA Bridges and Tunnels Senior Revenue Bonds being refunded are satisfied.

For a more complete description of the conditions that must be satisfied before issuing refunding Bonds, see "SUMMARY OF CERTAIN PROVISIONS OF THE TBTA RESOLUTION – Refunding Obligations" in the summaries of documents.

Parity Debt

MTA Bridges and Tunnels may incur Parity Debt pursuant to the terms of the MTA Bridges and Tunnels Senior Resolution that, subject to certain exceptions, would be secured by a pledge of, and a lien on, the Trust Estate on a parity with the lien created by the MTA Bridges and Tunnels Senior Resolution with respect to MTA Bridges and Tunnels Senior Revenue Bonds. Parity Debt may be incurred in the form of a Parity Reimbursement Obligation, a Parity Swap Obligation or any other contract, agreement or other obligation of MTA Bridges and Tunnels designated as constituting "Parity Debt" in a certificate of an Authorized Officer delivered to the Trustee.

Subordinate Obligations

The MTA Bridges and Tunnels Senior Resolution authorizes the issuance or incurrence of subordinate obligations. See "MTA BRIDGES AND TUNNELS SUBORDINATE REVENUE BONDS" below.

MTA BRIDGES AND TUNNELS SUBORDINATE REVENUE BONDS

There is \$936,370,000 aggregate principal amount of outstanding MTA Bridges and Tunnels Subordinate Revenue Bonds as of April 29, 2020. The following **MTA Bridges and Tunnels Subordinate Table 1** sets forth, on a cash basis, the debt service thereon and on the MTA Bridges and Tunnels Senior Revenue Bonds as of April 29, 2020.

MTA Bridges and Tunnels Subordinate Table 1 Aggregate Senior and Subordinate Debt Service⁽¹⁾ (\$ in thousands)

	MTA Bridges and Tunnels	MTA Bridges and Tunnels	
Year Ending	Senior Revenue Bonds	Subordinate Revenue Bonds	MTA Bridges and Tunnels
December 31	Debt Service ⁽²⁾⁽³⁾	Debt Service	Aggregate Debt Service ⁽³⁾
2020	\$519,006	\$102,231	\$621,237
2021	575,478	101,978	677,456
2022	571,123	103,148	674,271
2023	582,134	104,445	686,579
2024	602,577	93,656	696,234
2025	602,025	94,084	696,109
2026	620,674	75,670	696,343
2027	616,895	75,952	692,847
2028	621,295	76,146	697,441
2029	622,846	76,198	699,043
2030	616,343	76,408	692,750
2031	624,415	75,713	700,128
2032	666,576	62,484	729,060
2033	381,296	-	381,296
2034	381,280	-	381,280
2035	381,271	-	381,271
2036	390,113	-	390,113
2037	390,114	-	390,114
2038	390,110	-	390,110
2039	254,001	-	254,001
2040	231,909	-	231,909
2041	323,085	-	323,085
2042	216,267	-	216,267
2043	196,975	-	196,975
2044	270,097	-	270,097
2045	173,701	-	173,701
2046	168,689	-	168,689
2047	148,644	-	148,644
2048	128,645	-	128,645
2049	34,753	-	34,753
2050	13,729	<u> </u>	13,729
Total	\$12,316,064	\$1,118,110	\$13,434,174

(1) Totals may not add due to rounding.

(2) Includes the following assumptions for debt service: variable rate bonds at an assumed rate of 4.0%; variable rate bonds swapped to fixed at the applicable fixed rate on the swap; floating rate notes at an assumed rate of 4.0% plus the current fixed spread; floating rate notes swapped to fixed at the applicable fixed rate on the swap plus the current fixed spread, MTA Bridges and Tunnels Senior Revenue Bonds, Series 2001C and a portion of MTA Bridges and Tunnels Senior Revenue Bonds, Series 2005A at an assumed rate of 4.0%; interest paid monthly, calculated on the basis of a 360-day year consisting of twelve 30-day months.

(3) Debt service has not been reduced to reflect expected receipt of Build America Bond interest subsidies relating to certain Outstanding Bonds; such subsidies do not constitute pledged revenues under the MTA Bridges and Tunnels Senior Resolution.

Sources of Payment

The revenues that are pledged to pay the MTA Bridges and Tunnels Subordinate Revenue Bonds are the same as the revenues that are pledged to pay the MTA Bridges and Tunnels Senior Revenue Bonds. See "MTA BRIDGES AND TUNNELS SENIOR REVENUE BONDS – Sources of Payment" above.

MTA Bridges and Tunnels Subordinate Table 2 sets forth, by MTA Bridges and Tunnels facility, the amount of revenues for each of the last five years, as well as operating expenses. The audited financial statements for MTA and MTA Bridges and Tunnels for 2018 and 2019 covered by MTA Bridges and Tunnels Subordinate Table 2 are included herein by specific cross-reference and should be read in connection with this information. This information in MTA Bridges and Tunnels Subordinate Table 2 may not be indicative of future results of operations and financial condition. The information contained in the table has been prepared by MTA management based upon the historical financial statements and notes.

MTA Bridges and Tunnels Subordinate Table 2 Historical Revenues, Operating Expenses and Senior and Subordinate Debt Service (in thousands)

2015 \$ 422,756 372,347 294,509 324,702 71,388	2016 \$ 428,083 393,017 320,486 335,732 76,309	2017 \$ 437,735 416,312 327,812 345,556 84,479	2018 \$ 449,086 434,963 334,325 345,992 84,422	2019 \$ 463,134 453,434 352,093 356,078 88,568
$ \begin{array}{r} 16,906 \\ 17,517 \\ 182,382 \\ \underline{106,881} \\ \$1,808,901 \end{array} $	$ 17,263 \\ 18,431 \\ 171,121 \\ 109,250 \\ \$ 1,869,693 $	18,182 18,662 157,443 <u>105,677</u> \$1,911,858	17,526 18,647 175,919 <u>114,783</u> \$1,975,663	18,507 19,543 198,866 121,279 \$ 2,071,411
<u>39,818</u> \$1,848,719	<u>26,692</u> § 1,896,385	<u>23,425</u> \$ 1,935,283	<u>30,106</u> \$ 2,005,769	<u>31,921</u> <u>\$ 2,103,332</u>
\$ 226,408 217,658 \$ 444,066	\$ 250,285 221,418 \$ 471,703	\$ 254,621 	\$ 275,410 <u>256,210</u> \$ 531,620	\$ 286,792 257,028 \$ 543,820
\$ 1,404,653	\$ 1,424,682	\$ 1,438,824	\$ 1,474,149	\$ 1,559,512
\$ 476,119 \$ 53 \$ 925,587 \$ 125,898 \$ 602,017	\$ 504,834 \$ 157 \$ 920,005 \$ 127,424 \$ 632,258	\$ 528,327 \$ 412 \$ 910,909 \$ 125,384 \$ 653,711 \$ 200	\$ 551,552 \$ 819 \$ 923,416 \$ 120,076 \$ 671,628	\$ 558,253 \$ 938 \$ 1,002,197 \$ 102,721 \$ 660,974 2,36x
	\$ 422,756 372,347 294,509 324,702 71,388 16,906 17,517 182,382 <u>106,881</u> \$ 1,808,901 <u>39,818</u> \$1,808,901 <u>39,818</u> \$1,848,719 \$ 226,408 <u>217,658</u> \$ 444,066 \$ 1,404,653 \$ 476,119 \$ 53 \$ 925,587 \$ 125,898	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$

(1) Includes the net revenues from the Battery Parking Garage, as well as E-ZPass administrative fees and miscellaneous other revenues. Investment earnings include interest earned on bond funds, including debt service funds that were applied to the payment of debt service as follows for the years 2015 through 2019, respectively (in thousands); \$185, \$708, \$1,824, \$3,582 and \$4,793. The amounts set forth in this footnote are derived from MTA Bridges and Tunnels' audited financial statements for the years 2015 through 2019.

⁽²⁾ Excludes depreciation, other post-employment benefits other than pensions and asset impairment due to Superstorm Sandy.

(3) Net of Build America Bond interest subsidies of \$8.7 million in 2015, \$8.4 million in 2016, \$8.1 million in 2017, \$8.5 million in 2018 and \$8.4 million in 2019.

The following should be noted in MTA Bridges and Tunnels Subordinate Table 2:

• Bridge and Tunnel Revenues – Traffic in 2019 was the highest year ever with approximately 329.4 million paid vehicles crossing, surpassing the previous high of 322.3 million crossings in 2018 by 2.2%. The increase was primarily due to improvements in the regional economy, relatively favorable winter weather, stable gas prices, and the substantial completion of Sandy restoration work at the Queens Midtown Tunnel and the Hugh L. Carey Tunnel in the fourth quarter 2018. Additional revenue was due to higher traffic volume and a toll increase implemented on March 31, 2019.

- Operating Expenses Personnel Costs The 2015 to 2016 increase in personnel costs was primarily due to the additional wage and fringe benefits costs resulting from the full value of all vacation and sick leave balances, earned by employees to date if the leave was attributable to past service. The increase in 2017 was primarily due to wage and fringe benefits inflation for both contractually represented and non-represented employees. The increase in 2018 was mainly due to the recent changes to accounting for Other Post Employment Benefit ("OPEB") plans under GASB 75, a new accounting standard. The increase in 2019 was primarily due to an increase in retirement and other employee benefits.
- Operating Expenses Maintenance and Other Operating Expenses In 2015, the increase in non-labor expenses was primarily due to additional major maintenance and bridge painting costs and higher credit card fees associated with the toll increase. In 2016, the increase in non-labor expenses was mainly due to additional major maintenance and bridge painting costs. Most of the growth in 2017 non-labor expenses was due to implementation costs for Cashless Tolling and back-office costs for administering the Tolls by Mail program. In 2018, the increase in non-labor expenses was mainly due to higher costs relating to a full year of Cashless Tolling and additional major maintenance projects. In 2019, there was a slight increase in non-labor expenses mainly due to higher credit card fees associated with the toll increase implemented on March 31, 2019 and general inflationary adjustments across a variety of areas.

Security – General

MTA Bridges and Tunnels Subordinate Revenue Bonds are special obligations of MTA Bridges and Tunnels payable solely from the trust estate (described below) pledged for the payment of the MTA Bridges and Tunnels Subordinate Revenue Bonds and subordinate parity debt pursuant to the terms of the MTA Bridges and Tunnels Subordinate Resolution, after the payment of Operating Expenses and after payment of debt service as required by the MTA Bridges and Tunnels Senior Resolution.

Summaries of certain provisions of the MTA Bridges and Tunnels Subordinate Resolution, including certain defined terms used therein, have been filed with the MSRB through EMMA, all of which are incorporated by specific cross-reference herein. In addition, for convenience, copies of the summaries can be obtained on MTA's website under "MTA Info – Financial Information – Investor Information" at www.mta.info or from the MTA Finance Department at 2 Broadway, New York, New York 10004.

Capitalized terms used under this caption "MTA BRIDGES AND TUNNELS SUBORDINATE REVENUE BONDS" not otherwise defined herein have the meanings set forth in the MTA Bridges and Tunnels Subordinate Resolution, except that the term "MTA Bridges and Tunnels" is used herein in place of the defined term "TBTA." So, for example, the term "MTA Bridges and Tunnels Facilities" as used herein is referred to in the MTA Bridges and Tunnels Subordinate Resolution and in the summaries thereof as "TBTA Facilities."

MTA Bridges and Tunnels Subordinate Revenue Bonds are not a debt of the State or the City or any local governmental unit. MTA Bridges and Tunnels has no taxing power.

Pledge Effected by the MTA Bridges and Tunnels Subordinate Resolution

The lien on the trust estate described below created by the MTA Bridges and Tunnels Subordinate Resolution is junior and subordinate to the lien created by the MTA Bridges and Tunnels Senior Resolution.

Pursuant to, and in accordance with, the MTA Bridges and Tunnels Subordinate Resolution, MTA Bridges and Tunnels has pledged to the holders of the MTA Bridges and Tunnels Subordinate Revenue Bonds a "trust estate," which consists of:

- Revenues (after the application of those Revenues as required by the MTA Bridges and Tunnels Senior Resolution, including the payment of Operating Expenses and MTA Bridges and Tunnels Senior Resolution debt service);
- the proceeds from the sale of the MTA Bridges and Tunnels Subordinate Revenue Bonds; and

• all funds, accounts and subaccounts established by the MTA Bridges and Tunnels Subordinate Resolution (except those established pursuant to a related supplemental resolution, and excluded by such supplemental resolution from the Trust Estate as security for all MTA Bridges and Tunnels Subordinate Revenue Bonds in connection with variable interest rate obligations, put obligations, parity debt, subordinated contract obligations or subordinated debt).

Revenues and Additional Subordinate MTA Bridges and Tunnels Projects

Revenues from MTA Bridges and Tunnels Facilities. MTA Bridges and Tunnels does not currently derive any significant recurring Revenues from any sources other than the MTA Bridges and Tunnels Facilities and investment income. Income from capital projects for the Transit and Commuter Systems, MTA Bus and MTA Staten Island Railway financed by MTA Bridges and Tunnels is not derived by or for the account of MTA Bridges and Tunnels; consequently, no revenues from any portion of the capital projects for the Transit and Commuter Systems, MTA Bus and MTA Staten Island Railway financed by MTA Bridges and Tunnels are pledged to the payment of debt service on the MTA Bridges and Tunnels Subordinate Revenue Bonds.

For a discussion of other projects that MTA Bridges and Tunnels is authorized to undertake, see "TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY – Authorized Projects of MTA Bridges and Tunnels."

Additional Subordinate MTA Bridges and Tunnels Projects. One or more projects owned or to be owned by MTA Bridges and Tunnels or another Related Entity may become an Additional Subordinate MTA Bridges and Tunnels Project without satisfying any earnings or coverage test if MTA Bridges and Tunnels is authorized to undertake that project, including the CBD Tolling Program, and the project is designated by MTA Bridges and Tunnels to be an Additional Subordinate MTA Bridges and Tunnels Project.

Upon satisfaction of certain conditions, MTA Bridges and Tunnels is authorized to issue Subordinate Revenue Bonds to fund the Capital Costs of Additional Subordinate MTA Bridges and Tunnels Projects. See "—Additional Subordinate Revenue Bonds" below.

Flow of Revenues

The MTA Bridges and Tunnels Subordinate Resolution establishes the following funds and accounts, each held by MTA Bridges and Tunnels:

- Proceeds Fund; and
- Debt Service Fund.

MTA Bridges and Tunnels is required to transfer to the Debt Service Fund under the MTA Bridges and Tunnels Subordinate Resolution, from time to time, but no less frequently than on or before the 25th day of each calendar month, from amounts as shall from time to time be available for transfer from the Revenue Fund under the MTA Bridges and Tunnels Senior Resolution, free and clear of the lien of the MTA Bridges and Tunnels Senior Resolution, the amount, if any, required so that the balance in the fund is equal to Accrued Debt Service to the last day of the current calendar month; provided, however, that in no event shall the amount to be so transferred be less than the amount required for all payment dates occurring prior to the 25th day of the next succeeding calendar month.

Rate Covenant

MTA Bridges and Tunnels is required at all times to establish, levy, maintain and collect, or cause to be established, levied, maintained and collected, such tolls, rentals and other charges in connection with the MTA Bridges and Tunnels Facilities as shall always be sufficient, together with other money available therefor (including the anticipated receipt of proceeds of the sale of Obligations or other bonds, notes or other obligations or evidences of indebtedness of MTA Bridges and Tunnels that will be used to pay the principal of Obligations issued in anticipation of such receipt, but not including any anticipated or actual proceeds from the sale of MTA Bridges and Tunnels Facilities), to equal or exceed in each calendar year the greater of:

• an amount equal to the sum of amounts necessary in that calendar year

- o to pay all Operating Expenses of MTA Bridges and Tunnels, plus
- o to pay Calculated Debt Service on all senior lien and subordinate lien bonds and parity debt, plus
- to maintain any reserve established by MTA Bridges and Tunnels pursuant to the MTA Bridges and Tunnels Senior Resolution, in such amount as may be determined from time to time by MTA Bridges and Tunnels in its judgment, or
- an amount such that Revenues less Operating Expenses shall equal at least 1.10 times Calculated Debt Service on all senior lien and subordinate lien bonds and parity debt for such calendar year.

For a more complete description of the rate covenant and a description of the minimum tolls that can be charged at the MTA Bridges and Tunnels Facilities, see "SUMMARY OF CERTAIN PROVISIONS OF THE TBTA RESOLUTION – Rates and Fees" and "SUMMARY OF CERTAIN PROVISIONS OF THE SUBORDINATE REVENUE RESOLUTION — Additional Provisions Relating to the Series 2002D and Series 2002E Bonds—*Rate Covenant*" in the summaries of documents.

Additional Subordinate Revenue Bonds

Under the provisions of the MTA Bridges and Tunnels Subordinate Resolution, MTA Bridges and Tunnels may issue one or more series of Additional Subordinate Revenue Bonds to pay or provide for the payment of all or part of Capital Costs relating to any of the following purposes:

- MTA Bridges and Tunnels Facilities;
- capital projects of the Transit and Commuter Systems, MTA Bus and MTA Staten Island Railway; or
- any Additional Subordinate MTA Bridges and Tunnels Project.

In addition to meeting certain other conditions, all as more fully described in "SUMMARY OF CERTAIN PROVISIONS OF THE SUBORDINATE REVENUE RESOLUTION – Special Provisions for Capital Cost Obligations" in the summaries of documents, an Authorized Officer must certify that the historical Twelve Month Period Net Revenues are at least equal to 1.10 times the Combined Maximum Annual Calculated Debt Service for all MTA Bridges and Tunnels Subordinate Revenue Obligations, subordinate parity debt, MTA Bridges and Tunnels Senior Obligations and senior parity debt.

In addition, MTA Bridges and Tunnels covenants that, prior to the issuance of MTA Bridges and Tunnels Senior Revenue Bonds, an Authorized Officer must certify that the historical Twelve Month Period Net Revenues are at least equal to 1.10 times the Combined Maximum Annual Calculated Debt Service for all MTA Bridges and Tunnels Subordinate Revenue Obligations, subordinate parity debt, MTA Bridges and Tunnels Senior Obligations and senior parity debt. See "SUMMARY OF CERTAIN PROVISIONS OF THE SUBORDINATE REVENUE RESOLUTION —Additional Provisions Relating to the Series 2002D and Series 2002E Bonds—*Covenant Regarding Senior Resolution*" in the summaries of documents.

Refunding Subordinate Revenue Bonds

MTA Bridges and Tunnels Subordinate Revenue Bonds may be issued for the purpose of refunding MTA Bridges and Tunnels Subordinate Revenue Bonds, subordinate parity debt, MTA Bridges and Tunnels Senior Revenue Bonds or senior parity debt if:

 the Combined Maximum Annual Calculated Debt Service (including the refunding MTA Bridges and Tunnels Subordinate Revenue Bonds then proposed to be issued, but not including the MTA Bridges and Tunnels Subordinate Revenue Bonds, subordinate parity debt, MTA Bridges and Tunnels Senior Revenue Bonds or senior parity debt to be refunded) is equal to or less than the Combined Maximum Annual Calculated Debt Service as calculated immediately prior to the refunding (including the refunded MTA Bridges and Tunnels Subordinate Revenue Bonds, subordinate parity debt, MTA Bridges and Tunnels Senior Revenue Bonds or senior parity debt, but not including the refunding MTA Bridges and Tunnels Subordinate Revenue Bonds, or • the conditions referred to above under "- Additional Subordinate Revenue Bonds" are satisfied.

For a more complete description of the conditions that must be satisfied before issuing refunding MTA Bridges and Tunnels Subordinate Revenue Bonds, see "SUMMARY OF CERTAIN PROVISIONS OF THE SUBORDINATE RESOLUTION – Refunding Subordinate Revenue Obligations" in the summaries of documents.

Subordinate Parity Debt

MTA Bridges and Tunnels may incur subordinate parity debt pursuant to the terms of the MTA Bridges and Tunnels Subordinate Resolution that, subject to certain exceptions, would be secured by a pledge of, and a lien on, the Trust Estate on a parity with the lien created by the MTA Bridges and Tunnels Subordinate Resolution with respect to MTA Bridges and Tunnels Subordinate Revenue Bonds. Such subordinate parity debt may be incurred in the form of a Parity Reimbursement Obligation, a Parity Swap Obligation or any other contract, agreement or other obligation of MTA Bridges and Tunnels designated as constituting "Parity Debt" under the MTA Bridges and Tunnels Subordinate Resolution in a certificate of an Authorized Officer delivered to the Trustee.

DEDICATED TAX FUND BONDS

There is \$5,024,190,000 aggregate principal amount of outstanding Dedicated Tax Fund Bonds as of April 29, 2020. In addition, and not included in the above amount, MTA has outstanding \$750,000,000 aggregate principal amount of bond anticipation notes issued under the Dedicated Tax Fund Resolution. The following **DTF Table 1** sets forth, on a cash basis, the debt service thereon as of April 29, 2020.

	,
Year Ending	Aggregate Debt
December 31	Service ⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾
2020	\$410,627
2021	417,712
2022	417,706
2023	417,697
2024	417,691
2025	413,236
2026	403,471
2027	411,457
2028	409,983
2029	419,417
2030	419,511
2031	403,939
2032	374,283
2033	382,965
2034	299,995
2035	300,009
2036	371,532
2037	394,327
2038	375,992
2039	357,651
2040	74,216
2041	38,171
2042	38,169
2043	38,170
2044	38,163
2045	38,171
2046	38,167
2047	38,167
2048	21,459
2049	21,456
2050	21,457
2051	21,460
2052	21,454
2053	21,448
2054	21,447
2055	21,451
2056	21,448
2057	13,425
Total	\$ 8,367,099

DTF Table 1 – Aggregate Debt Service (\$ in thousands)

(1) Totals may not add due to rounding.

⁽³⁾ Excludes debt service on all outstanding DTF Bond Anticipation Notes.

⁽²⁾ Includes the following assumptions for debt service: variable rate bonds at an assumed rate of 4.0%; variable rate bonds swapped to fixed at the applicable fixed rate on the swap; floating rate notes at an assumed rate of 4.0% plus the current fixed spread; floating rate notes swapped to fixed at the applicable fixed rate on the swap plus the current fixed spread; interest paid monthly, calculated on the basis of a 360-day year consisting of twelve 30-day months.

⁽⁴⁾ Debt service has not been reduced to reflect expected receipt of Build America Bond interest subsidies relating to certain Outstanding Bonds; such subsidies do not constitute pledged revenues under the DTF Resolution.

Sources of Payment – Revenues from Dedicated Taxes

Under State law, MTA receives money from certain dedicated taxes and fees described in this section (the "Dedicated Taxes"). This money is deposited into MTA's Dedicated Tax Fund and is pledged by MTA for the payment of its Dedicated Tax Fund Bonds.

MTA Revenues from PBT, Motor Fuel Tax and Motor Vehicle Fees (MTTF Receipts). In 1991, as part of a program to address the need for continued capital investment in the State's transportation infrastructure, the Legislature established a State fund, called the Dedicated Tax Funds Pool, from which money is apportioned by statutory allocation under current Tax Law to a State fund, called the Dedicated Mass Transportation Trust Fund ("MTTF"). Currently, portions of the following taxes and fees are deposited into the Dedicated Tax Funds Pool, of which 34% is allocated to the MTTF for the benefit of MTA:

- A business privilege tax imposed on petroleum businesses operating in the State (the "PBT"), consisting of: a basic tax that varies based on product type; a supplemental tax on gasoline and highway diesel; and a carrier tax. Currently, 80.3% of net PBT receipts from the basic tax (excluding receipts from aviation fuel, which are deposited in an aviation purpose account from which no receipts are directed to MTTF) and all of the supplemental tax and the carrier tax are deposited in the Dedicated Tax Funds Pool.
- Motor fuel taxes on gasoline (50%) and diesel fuel (100%) are deposited in the Dedicated Tax Funds Pool.
- Certain motor vehicle fees administered by the State Department of Motor Vehicles ("DMV"), including both registration and non-registration fees.

Subject to appropriation by the Legislature, money in the MTTF is required by law to be transferred to the MTA Dedicated Tax Fund, held by MTA. Amounts transferred from the MTTF to the MTA Dedicated Tax Fund constitute MTTF Receipts.

A more detailed description of the MTTF Receipts is set forth below under the following headings below:

- MTTF Receipts Dedicated Petroleum Business Tax;
- MTTF Receipts Motor Fuel Tax; and
- MTTF Receipts Motor Vehicle Fees.

MTA Revenues from Special Tax-Supported Operating Subsidies (MMTOA Receipts). Starting in 1980, in response to anticipated operating deficits of State mass transit systems, the Legislature enacted a series of taxes, portions of the proceeds of which have been and are to be deposited in a special State Fund – the Mass Transportation Operating Assistance Fund – to fund the operations of mass transportation systems. The Metropolitan Mass Transportation Operating Assistance Account, or "MMTOA Account," was established in that State Fund to support operating expenses of transportation systems in the MTA Commuter Transportation District, including MTA New York City Transit, MaBSTOA and the commuter railroads operated by MTA's subsidiaries, MTA Long Island Rail Road and MTA Metro-North Railroad. After payment of Section 18-b general operating assistance to the various transportation systems, MTA receives 84.9% of the moneys deposited into the MMTOA Account, which constitute the MMTOA Receipts. The remaining 15.1% are available to other transportation properties within the MTA Commuter Transportation District, such as MTA Bus and county transit systems.

Since the creation of the MMTOA Account, MTA has requested and received in each year significant payments from that account in order to meet operating expenses of the Transit and Commuter Systems. It is expected that payments from the MMTOA Account will continue to be essential to the operations of the Transit and Commuter Systems. Although a variety of taxes have been used to fund the special tax-supported operating subsidies, the taxes levied for this purpose, which MTA refers to collectively as the "MMTOA Taxes," currently include:

MMTOA PBT. The products that are subject to the tax, the tax rates, and the transactions excluded from the tax are identical to those of the basic PBT dedicated to the Dedicated Tax Funds Pool and the MTTF Account in that Pool. Pursuant to State law, 10.835% of the PBT basic tax collections are deposited in the MMTOA Account (excluding receipts from aviation fuel, which are deposited in an aviation purpose account from which no receipts are directed to MMTOA).

- *District Sales Tax.* The District Sales Tax consists of a 0.375% sales and compensating use tax imposed on sales and uses of certain tangible personal property and services applicable only within the MTA Commuter Transportation District.
- *Franchise Taxes.* Also deposited in the MMTOA Account is a legislatively-allocated portion of the following three taxes imposed on certain transportation and transmission companies (such as trucking, telegraph and local telephone companies and mobile communication services)
 - o an annual franchise tax based on the amount of the taxpayer's issued capital stock (Section 183);
 - an annual franchise tax on the taxpayer's gross earnings (Section 184) from all sources calculated to have been generated statewide pursuant to statutory formulae; and
 - o an additional excise tax (Section 186-e) on the sale of mobile communication services.
- *Franchise Surcharges*. The Franchise Surcharges are imposed on the portion of the franchise and other taxes of certain corporations, insurance, transportation and transmission companies attributable (according to various complex formulae) to business activity carried on within the MTA Commuter Transportation District. In accordance with the Tax Law, the tax revenue generated under these provisions, after the deduction of administrative costs, is to be deposited to the MMTOA Account, as taxes are received.

MTA receives the equivalent of four quarters of MMTOA Receipts each year, with the first quarter of each succeeding calendar year's receipts advanced into the fourth quarter of the preceding year. This results in little or no MMTOA Receipts being received during the first quarter of each calendar year; MTA is required to make other provisions to provide for cash liquidity during this period.

A more detailed description of the MMTOA Taxes is set forth below under the heading "- MMTOA Account - Special Tax Supported Operating Subsidies."

Five-Year Summary of MTTF Receipts and MMTOA Receipts. **DTF Table 2** sets forth a five-year summary (based on the State's fiscal year ending March 31) of the following:

- actual collections by the State of receipts for each of the sources of revenues that, subject to appropriation and allocation among MTA and other non-MTA transit agencies, could become receipts of the MTA Dedicated Tax Fund;
- amount of MTTF Receipts and MMTOA Receipts; and
- debt service coverage ratio based upon MTTF Receipts, and MTTF Receipts plus MMTOA Receipts.

The information in the following **DTF Table 2** relating to MTTF Receipts and MMTOA Receipts was provided by the New York State Division of the Budget and the remaining information was provided by MTA.

	Actual	Actual	Actual	Actual	Projection ⁽⁸⁾
Dedicated Taxes (§ millions)	2017	2018	2019	2020	2021
MTTF ⁽¹⁾					
PBT ⁽²⁾	\$ 336.9	\$ 326.5	\$ 345.6	\$ 343.9	\$ 300.1
Motor Fuel Tax	100.5	100.5	102.0	99.4	88.0
Motor Vehicle Fees ⁽³⁾	128.7	132.5	130.7	131.9	132.6
Total Available	\$ 566.1	\$ 559.5	\$ 578.3	\$ 575.2	\$ 520.7
MMTOA ⁽¹⁾					
PBT ⁽²⁾	\$ 73.1	\$ 70.8	\$ 74.1	\$ 74.1	\$ 64.3
District Sales Tax	903.0	942.0	963.1	1,049.1	879.0
Franchise Taxes ⁽⁴⁾	41.4	37.2	41.3	39.3	37.8
Franchise Surcharges	1,017.1	1,087.4	1,169.1	1,392.4	1,367.0
Total Available	\$ 2,034.6	\$ 2,137.4	\$ 2,247.6	\$ 2,554.9	\$ 2,348.1
Disbursements					
MTTF ⁽³⁾⁽⁵⁾	\$ 616.4	\$ 623.4	\$ 630.8	\$ 642.5	\$ 576.6
MMTOA ⁽⁶⁾	\$ 1,668.0	\$ 1,668.0	\$ 1,686.6	\$ 1,829.7	\$ 2,037.8
Total Disbursed	\$ 2,284.4	\$ 2,291.4	\$ 2,317.4	\$ 2,472.2	\$ 2,614.4
Debt Service ⁽⁷⁾	\$ 365.1	\$ 390.2	\$ 383.0	\$ 382.8	\$ 393.4
Debt Service Coverage Ratio – MTTF Receipts Only Debt Service Coverage Ratio –	1.69x	1.60x	1.65x	1.68x	1.47x
MTTF and MMTOA Receipts	6.26x	5.87x	6.05x	6.46x	6.65x

DTF Table 2 Summary of MTTF Receipts and MMTOA Receipts⁽¹⁾ State Fiscal Year ending March 31 (\$ millions)

⁽¹⁾ As used in this Table, MTTF Receipts and MMTOA Receipts have the meaning given such terms in the DTF Resolution.

⁽²⁾ Effective December 1, 2017, all receipts from aviation fuel are directed to an aviation purpose account, from which no revenue is directed to MTTF or MMTOA.

(3) Pursuant to legislation enacted in 2014, beginning with State Fiscal Year 2014-2015 and each year thereafter, a portion of the Fiscal Year 2013-2014 Motor Vehicle General Fund transfer of \$169.4 million has been replaced with a direct transfer of \$62.7 million from the State General Fund to the Dedicated Mass Transportation Trust Fund. \$57.7 million of such amount flows to the MTA Dedicated Tax Fund as MTTF Receipts; the remainder flows to other transportation systems.

(4) Beginning with State Fiscal Year 2012-2013, the distribution to the MMTOA Account was changed from 80% to 54% of the taxes collected from Franchise Taxes. The remaining 26% is distributed to the Public Transportation Systems Operating Assistance PTOA Account.

(5) Represents the amount in the MTTF that was, subject to appropriation, paid to MTA by deposit into the MTA Dedicated Tax Fund, thereby becoming MTTF Receipts. The amount of MTTF Receipts in any State fiscal year may be greater than the amount collected for deposit into the MTTF due to, among other things, investment earnings or surplus amounts retained in the MTTF that were not paid out in prior years.

(6) Represents the amount in the MMTOA Account that was, subject to appropriation, paid to MTA by deposit into the MTA Dedicated Tax Fund, thereby becoming MMTOA Receipts. The difference between Total Available MMTOA Taxes and MMTOA Receipts generally represents the amount appropriated for operating expenses of the various non-MTA systems in the MTA Commuter Transportation District, as well as the amounts appropriated to MTA and other transportation agencies, primarily in accordance with the Section 18-b Program as described under the caption "PART 2. PUBLIC DEBT SECURITIES – REVENUES OF THE RELATED ENTITIES – State and Local General Operating Subsidies".

(7) Net of approximately \$26.0 million of Build America Bond interest credit payments in each State fiscal year. Projections based on debt service as budgeted in the MTA 2020 Adopted Budget February Financial Plan 2020-2023.

⁽⁸⁾ The State Fiscal Year 2020-2021 projections are based on the 2020-2021 Enacted Budget Financial Plan.

Factors Affecting Revenues from Dedicated Taxes

Legislative Changes. The requirement that the State pay the MTTF Receipts and the MMTOA Receipts (collectively, the "MTA Dedicated Tax Fund Revenues") to the MTA Dedicated Tax Fund is subject to and dependent upon annual appropriations being made by the Legislature for such purpose and the availability of moneys to fund such appropriations. The Legislature is not obligated to make appropriations to fund the MTA Dedicated Tax Fund, and there can

be no assurance that the Legislature will make any such appropriation. The State is not restricted in its right to amend, repeal, modify or otherwise alter statutes imposing or relating to the MTA Dedicated Tax Fund Revenues or the taxes or appropriations that are the source of such Revenues.

In connection with the financing of future capital programs, MTA may propose legislation affecting components of the taxes currently securing MTA Dedicated Tax Fund Bonds.

Litigation. Aspects relating to the imposition and collection of the Dedicated Taxes have from time to time been and may continue to be the subject of administrative claims and litigation by taxpayers.

Economic Conditions. Many of the Dedicated Taxes are dependent upon economic and demographic conditions in the State and in the MTA Commuter Transportation District, and therefore there can be no assurance that historical data with respect to collections of the Dedicated Taxes will be indicative of future receipts.

Government Assistance. The level of government assistance to MTA through Dedicated Taxes may be affected by different factors, two of which are as follows:

- The Legislature may not bind or obligate itself to appropriate revenues during a future legislative session, and appropriations approved during a particular legislative session generally have no force or effect after the close of the State fiscal year for which the appropriations are made. However, in the case of the PBT that is deposited as a portion of the MTTF Receipts, the Legislature has expressed its intent in the State Finance Law to enact for each State fiscal year an appropriation for the current and the next year. See the heading "—Appropriation by the Legislature" below.
- The State is not bound or obligated to continue to pay operating subsidies to the Transit or Commuter System or to continue to impose any of the taxes currently funding those subsidies.
- For information related to the impact of the COVID-19 pandemic on the finances and operations of MTA and its Related Entities, see "PART 1. BUSINESS UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES." See also "PART 1 CERTAIN RISK FACTORS *Respond to Developing Economic Environment*".

Security – General

by

The Dedicated Tax Fund Bonds are MTA's special obligations payable as to principal, redemption premium, if any, and interest solely from the security, sources of payment and funds specified in the DTF Resolution. Payment of principal of or interest on the Dedicated Tax Fund Bonds may not be accelerated in the event of a default.

Dedicated Tax Fund Bonds are secured primarily by the Sources of Payment described above, and are not secured

- the general fund or other funds and revenues of the State; or
- the other funds and revenues of MTA or any of its affiliates or subsidiaries.

The Dedicated Tax Fund Bonds are not a debt of the State or the City or any other local governmental unit. MTA has no taxing power.

Summaries of certain provisions of the DTF Resolution, including certain defined terms used therein, have been filed with the MSRB through EMMA, all of which are incorporated by specific cross-reference herein. In addition, for convenience, copies of the summaries can be obtained on MTA's website under "MTA Info – Financial Information – Investor Information" at www.mta.info or from the MTA Finance Department at 2 Broadway, New York, New York 10004.

Capitalized terms used under this caption "DEDICATED TAX FUND BONDS" not otherwise defined herein have the meanings set forth in the DTF Resolution.

Pledge Effected by the DTF Resolution

Trust Estate. The DTF Resolution provides that there are pledged to the payment of principal and redemption premium of, interest on, and sinking fund installments for, the Dedicated Tax Fund Bonds and Parity Debt, in accordance with their terms and the provisions of the DTF Resolution, subject only to the provisions permitting the application of that money for the purposes and on the terms and conditions permitted in the DTF Resolution, the following, referred to as the "trust estate":

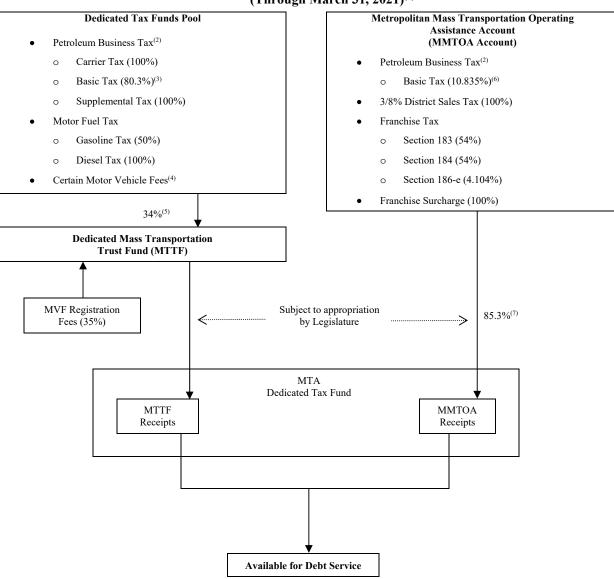
- the proceeds of the sale of the Dedicated Tax Fund Bonds, until those proceeds are paid out for an authorized purpose;
- the Pledged Amounts Account in the MTA Dedicated Tax Fund (which includes MTTF Receipts and MMTOA Receipts), any money on deposit in that Account and any money received and held by MTA and required to be deposited in that Account; and
- all funds, accounts and subaccounts established by the DTF Resolution (except funds, accounts and subaccounts established pursuant to Supplemental Resolution, and excluded by such Supplemental Resolution from the Trust Estate as security for all Dedicated Tax Fund Bonds, in connection with Variable Interest Rate Obligations, Put Obligations, Parity Debt, Subordinated Indebtedness or Subordinated Contract Obligations), including the investments, if any, thereof.

The DTF Resolution provides that the Trust Estate is and will be free and clear of any pledge, lien, charge or encumbrance thereon or with respect thereto prior to, or of equal rank with, the pledge created by the DTF Resolution, and all corporate action on the part of MTA to that end has been duly and validly taken.

Flow of Funds

The DTF Resolution establishes a Proceeds Fund held by MTA and a Debt Service Fund held by the Trustee. See the summaries of documents for a description of the provisions of the DTF Resolution governing the deposits to and withdrawals from the Funds and Accounts. Amounts held by MTA or the Trustee in any of such Funds shall be held in trust separate and apart from all other funds and applied solely for the purposes specified in the DTF Resolution or any Supplemental Resolution thereto.

The following two charts summarize (1) the flow of taxes into the MTA Dedicated Tax Fund, and (2) the flow of MTA Dedicated Tax Fund Revenues through the MTA Dedicated Tax Fund and the Funds and Accounts established under the DTF Resolution.

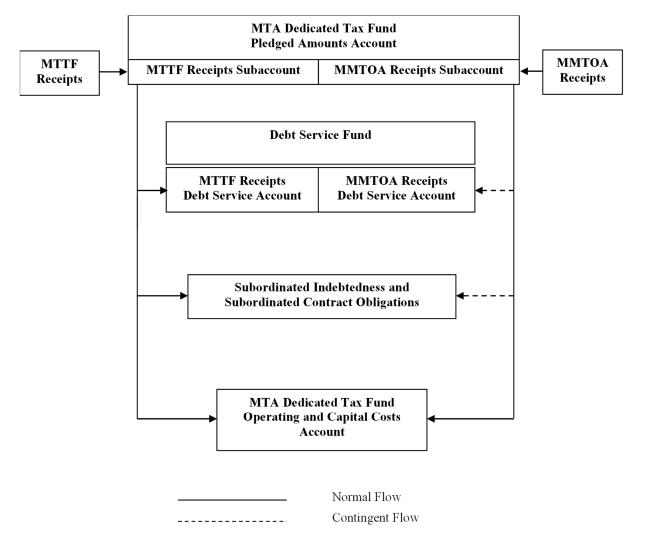


MTA DEDICATED TAX FUND BONDS SOURCES OF REVENUE (Through March 31, 2021)⁽¹⁾

Notes

- ⁽¹⁾ Parenthetical amounts and percentages, as well as flow of fund percentages, indicate the amount or percent of that tax or fund to be deposited for the year ending March 31, 2020 in the respective fund or account. The allocations shown may be changed at any time by the Legislature.
- (2) Effective December 1, 2017, all receipts from aviation fuel are directed to an aviation purpose account, from which no revenue is directed to MTTF or MMTOA. However, beginning in Fiscal Year 2018-2019 the enacted statutory "hold-harmless" provision directs transfers from the State General Fund to MTTF and MMTOA. In 2019-2020, these transfers totaled \$7.2 million of which \$4.0 million flowed to the MTA Dedicated Tax Fund as MTTF Receipts and \$1.6 million flowed to MMTOA for downstate transit systems including MTA.
- ⁽³⁾ In addition, the first \$7.5 million of the Basic Tax is appropriated to the Dedicated Tax Funds Pool prior to any percentage split of the Dedicated Tax Funds Pool.
- (4) Beginning with the State fiscal year 2014-2015, and each year thereafter, a portion of the State fiscal year 2013-2014 Motor Vehicle General Fund transfer of \$169.4 million has been replaced with a direct transfer of \$62.7 million from the State General Fund to the MTTF; \$57.6 million of such amount flows to the MTA Dedicated Tax Fund as MTTF Receipts as defined in the DTF Resolution.
- ⁽⁵⁾ Percentage of Dedicated Tax Funds Pool.
- ⁽⁶⁾ The remaining 8.865% share of the Basic Tax is deposited in an account for certain upstate transportation entities.
- ⁽⁷⁾ Percentage based upon appropriations for State fiscal year 2020-2021, including Section 18-b assistance.

MTA DEDICATED TAX FUND BONDS - RESOLUTION FLOW OF FUNDS



All amounts on deposit in the Pledged Amounts Account – MTTF Receipts Subaccount are paid out before any amounts on deposit in the Pledged Amounts Account – MMTOA Receipts Subaccount are paid out.

Amounts paid out from any fund or account for an authorized purpose (excluding transfers to any other pledged fund or account) are free and clear of the lien and pledge created by the DTF Resolution.

Debt Service Fund

Pursuant to the DTF Resolution, the Trustee holds the Debt Service Fund, consisting of the MTTF Receipts Debt Service Account and the MMTOA Receipts Debt Service Account. Moneys in the Debt Service Fund are applied by the Trustee to the payment of Debt Service on the Dedicated Tax Fund Bonds in the manner, and from the accounts and subaccounts, more fully described under "SUMMARY OF CERTAIN PROVISIONS OF THE DTF RESOLUTION – Debt Service Fund" in the summaries of documents.

MTA is required to make monthly deposits to the appropriate account of the Debt Service Fund of interest (1/5th of the next semiannual payment) and principal (1/10th of the next annual payment), first from MTTF Receipts and then, to the extent of any deficiency, from MMTOA Receipts.

Covenants

Additional Bonds. The DTF Resolution permits MTA to issue additional Dedicated Tax Fund Bonds from time to time to pay or provide for the payment of Capital Costs and to refund outstanding Dedicated Tax Fund Bonds.

Under the DTF Resolution, MTA may issue one or more Series of Dedicated Tax Fund Bonds for the payment of Capital Costs, provided, in addition to satisfying certain other requirements, MTA delivers a certificate that evidences MTA's compliance with the additional bonds test set forth in the DTF Resolution.

Such certificate must set forth:

- (A) for any 12 consecutive calendar months ended not more than six months prior to the date of such certificate: (i) MTTF Receipts, (ii) MMTOA Receipts, and (iii) investment income received during such period on amounts on deposit in the Pledged Amounts Account, the MTTF Receipts Subaccount, the MMTOA Receipts Subaccount and the Debt Service Fund; and
- (B) the greatest amount for the then current or any future Debt Service Year of the sum of (a) Calculated Debt Service on all Outstanding Dedicated Tax Fund Obligations, including the proposed Capital Cost Obligations and any proposed Refunding Obligations being treated as Capital Cost Obligations, but excluding any Obligations or Parity Debt to be refunded with the proceeds of such Refunding Obligations, plus (b) additional amounts, if any, payable with respect to Parity Debt; and then state:
 - (x) that the sum of the MTTF Receipts and investment income (other than investment income on the MMTOA Receipts Subaccount) set forth in clause (A) above is not less than 1.35 times the amount set forth in accordance with clause (B) above, and
 - (y) that the sum of the MTTF Receipts, MMTOA Receipts and investment income set forth in clause (A) above is not less than 2.5 times the amount set forth in clause (B) above.

See "SUMMARY OF CERTAIN PROVISIONS OF THE DTF RESOLUTION—Special Provisions for Capital Cost Obligations" in the summaries of documents for a description of further provisions which apply to the additional bonds test if the percentage of available existing taxes deposited into the MTA Dedicated Tax Fund is increased or additional taxes are added to the amounts so deposited.

For a discussion of the requirements relating to the issuance of Refunding Dedicated Tax Fund Bonds, see "SUMMARY OF CERTAIN PROVISIONS OF THE DTF RESOLUTION—Special Provisions for Refunding Obligations" in the summaries of documents.

Parity Debt

MTA may incur Parity Debt pursuant to the terms of the DTF Resolution that, subject to certain exceptions, would be secured by a pledge of, and a lien on, the Trust Estate on a parity with the lien created by the DTF Resolution with respect to Dedicated Tax Fund Bonds. Parity Debt may be incurred in the form of a Parity Reimbursement Obligation, a Parity Swap Obligation or any other contract, agreement or other obligation of MTA designated as constituting "Parity Debt" in a certificate of an Authorized Officer delivered to the Trustee.

Appropriation by the Legislature

The State Constitution provides that the State may not expend money without an appropriation, except for the payment of debt service on general obligation bonds or notes issued by the State. An appropriation is an authorization approved by the Legislature to expend money. The State Constitution requires all appropriations of State funds, including funds in the MTTF and the MMTOA Account, to be approved by the Legislature at least every two years. In addition, the State Finance Law provides that appropriations shall cease to have force and effect, except as to liabilities incurred thereunder, at the close of the State Fiscal Year for which they were enacted. To the extent liabilities are incurred thereunder, such appropriations shall lapse on the succeeding June 30th or September 15th, depending upon the nature of the appropriation. The Legislature may not be bound in advance to make any appropriation, and there can be no assurances that the Legislature will appropriate the necessary funds as anticipated. MTA expects that the Legislature will make

appropriations from amounts on deposit in the MTTF and the MMTOA Account in order to make payments when due. Until such time as payments pursuant to such appropriation are made in full, revenues in the MTTF shall not be paid over to any entity other than MTA.

The Legislature has expressed its intent in the State Finance Law to enact for each State Fiscal Year in the future in an annual budget bill an appropriation from the MTTF (with respect to the PBT portion only) to the MTA Dedicated Tax Fund for the then current State Fiscal Year and an appropriation of the amounts projected by the Director of the Budget to be deposited in the MTA Dedicated Tax Fund from the MTTF (with respect to the PBT portion only) for the next succeeding State Fiscal Year. In any State Fiscal Year, if the Governor fails to submit or if the Legislature fails to enact a current year appropriation from the MTTF (with respect to the PBT portion, or such appropriation has been delayed, MTA is required to notify the State of amounts required to be disbursed from the appropriation made during the preceding State Fiscal Year for payment in the current State Fiscal Year. The State Comptroller may not make any payments from the MTTF to the MTA Dedicated Tax Fund from such prior year appropriation prior to May 1st of the current State Fiscal Year.

The State Fiscal Year 2019-2020 Enacted Budget included two appropriations from the MTTF to the MTA Dedicated Tax Fund. One such appropriation is for the State Fiscal Year that ends March 31, 2020, and the other such appropriation is for the succeeding State Fiscal Year that ends March 31, 2021. MTA has periodically availed itself of the latter appropriation to meet operating costs in response to delays in the adoption of the State budget in such years.

A budgetary imbalance in the present or any future State Fiscal Year could affect the ability and willingness of the Legislature to appropriate and the availability of moneys to make the payments from the MTTF and the MMTOA Account. However, MTA believes that any failure by the Legislature to make appropriations as contemplated would have a serious impact on the ability of the State and its public benefit corporations to raise funds in the public credit markets.

For information related to the impact of the COVID-19 pandemic on the finances and operations of MTA and its Related Entities, see "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES." See also "PART 1 – CERTAIN RISK FACTORS – *Respond to Developing Economic Environment.*"

Agreement of the State

The MTA Act prohibits MTA from filing a voluntary petition in bankruptcy under Chapter 9 of the Federal Bankruptcy Code or such successor chapters or sections as may from time to time be in effect and the State has pledged that so long as any notes, bonds or lease obligations of MTA are outstanding, it will not limit or alter the denial of authority to MTA to so file.

Under the MTA Act, the State pledges to and agrees with the holders of any notes, bonds or lease obligations issued or incurred by MTA, including the Dedicated Tax Fund Bonds, that the State will not limit or alter the rights vested in MTA to fulfill the terms of any agreements made by MTA with the holders of its notes, bonds and lease obligations, including the Dedicated Tax Fund Bonds, or in any way impair the rights and remedies of such holders. Notwithstanding the foregoing, in accordance with State law, nothing in the DTF Resolution shall be deemed to restrict the right of the State to amend, repeal, modify or otherwise alter statutes imposing or relating to the MTA Dedicated Tax Fund Revenues or the taxes or appropriations which are the source of such Revenues. No default under the DTF Resolution would occur solely as a result of the State exercising its right to amend, repeal, modify or otherwise alter such taxes or appropriations.

MTTF Receipts – Dedicated Petroleum Business Tax

General. The PBT is the business privilege tax, which includes both a base tax and a supplemental tax, imposed on petroleum businesses operating in the State. The base of the PBT is the quantity of various petroleum products refined or sold in the State or imported into the State for sale or use therein.

<u>Tax Rates</u>. The basic and supplemental PBT tax rates are subject to separately computed annual adjustments on January 1 of each year, to reflect the change in the Producer Price Index ("PPI") for refined petroleum products for the 12 months ended August 31 of the immediately preceding year. The tax rates, therefore, increase as prices rise and decrease as prices fall. Current legislation provides that the PBT rates will be adjusted annually subject to a maximum change of plus or minus 5% of the current rate in any year. In addition to the 5% cap on rate changes, the statute also requires basic and

supplemental rates to be rounded to the nearest tenth of one cent. Subsequent legislation provided that diesel rates be rounded to the nearest hundredth of one cent. As a result, the tax rates usually do not change by the full 5% allowed under the statutory formula.

The table below shows the changes in the PPI for refined petroleum products and the capped PBT index change over the last ten years.

Year for PPI Change (September 1 to August 31)	PPI for Refined Petroleum Products Change	Year for PBT Index	PBT Index Change (January 1)
2009-10	18.6	2011	5.0
2010-11	29.8	2012	5.0
2011-12	9.2	2013	5.0
2012-13	-0.8	2014	-0.8
2013-14	-3.2	2015	-3.2
2014-15	-29.1	2016	-5.0
2015-16	-30.4	2017	-5.0
2016-17	13.3	2018	5.0
2017-18	26.1	2019	5.0
2018-19	-2.0	2020	-2.0

Petroleum Business Tax Index Change (percent)

Source: New York State Division of the Budget.

The table below shows the rates per gallon for the PBT in effect for 2018, 2019 and 2020, respectively.

		2018			2019			2020	
Petroleum Product	Base	Supp	Total	Base	Supp	Total	Base	Supp	Total
Automotive fuel									
Gasoline & other non-diesel	10.1	6.8	16.9	10.6	7.1	17.7	10.4	7.0	17.4
Diesel	10.1	5.05	15.15	10.6	5.35	15.95	10.4	5.25	15.65
Aviation gasoline or Kero-Jet									
fuel	6.8	0.0	6.8	7.1	0.0	7.1	7.0	0.0	7.0
Non-automotive diesel fuels									
Commercial gallonage	9.3	0.0	9.3	9.7	0.0	9.7	9.5	0.0	9.5
Nonresidential heating	5.0	0.0	5.0	5.2	0.0	5.2	5.1	0.0	5.1
Residual petroleum products									
Commercial gallonage	7.1	0.0	7.1	7.4	0.0	7.4	7.3	0.0	7.3
Nonresidential heating	3.8	0.0	3.8	4.0	0.0	4.0	3.9	0.0	3.9
Railroad diesel fuel	8.8	0.0	8.8	9.3	0.0	9.3	9.1	0.0	9.1

PETROLEUM BUSINESS TAX RATES FOR 2018, 2019 and 2020* (cents per gallon)

The Tax Rates are the net tax rate after credits.

<u>Tax Base</u>. Generally, transactions that are excluded from the basic PBT base are also excluded from the supplemental tax base. Exemptions include sales for export from the State, sales of fuel oil for residential heating purposes and manufacturing use, and sales to government entities when such entities buy petroleum for their own use. Sales of kerosene (other than kero-jet fuel) and liquefied petroleum gas and sales of residual fuel oil used as bunker fuel also are exempted. Regulated electric utilities that use petroleum to generate electricity obtain credits or reimbursements to offset a portion of the basic tax. These utilities receive no credit or reimbursement with respect to the supplemental tax.

The State also imposes a petroleum business carrier tax under the PBT on fuel purchased by motor carriers outside the State but consumed within the State. The carrier tax rates are the same as the PBT automotive gasoline and diesel rates listed above.

Legislative Changes. The Legislature has, from time to time, changed the percentage of the PBT basic tax which is available for distribution to the Dedicated Tax Funds Pool. The percentage of the Dedicated Tax Funds Pool which is, subject to appropriation, deposited in the MTA Dedicated Tax Fund has remained constant at 34%. The changes in the percentage of the PBT basic tax which is available for distribution to the Dedicated Tax Funds Pool have been designed to be, and were, revenue neutral to the Dedicated Tax Funds Pool.

Legislation adopted with the State Fiscal Year 2011-2012 Enacted Budget modernized motor fuel, diesel motor fuel and E-85 product definitions to reflect changes in the fuels marketplace that had rendered then current law definitions unworkable. There is no financial impact to the funds.

Legislation adopted with the State Fiscal Year 2012-2013 Enacted Budget reimburses volunteer fire departments and ambulances for PBT paid on motor fuel purchases and also imposes the PBT on diesel fuel at removal from a terminal below the rack effective August 1, 2013. The financial impact to the MTTF and MMTOA is minimal.

Legislation adopted with the State Fiscal Year 2013-2014 Enacted Budget extended the partial or full exemptions for certain alternative fuels for two years. The financial impact to the MTTF and MTA is approximately \$3 million.

Legislation adopted with the State Fiscal Year 2015-2016 Enacted Budget allowed PBT refunds for farm use of highway diesel motor fuel. There is no financial impact to the funds.

Legislation adopted with the State Fiscal Year 2016-2017 Enacted Budget extended the alternative fuels exemption for five years, conformed the State Tax Law to Federal Aviation Administration regulations regarding taxes on aviation fuel, and required motor fuel wholesalers to register and file informational returns with the State to increase the effectiveness of fuel tax evasion auditing.

<u>Tax Imposition and Payment</u>. Imposition of the tax occurs at different points in the distribution chain, depending upon the type of product. The tax is imposed on motor fuels at the same time as the eight-cent-per-gallon motor fuel tax. Gasoline, which represents the preponderance of automotive fuel sales in the State, is taxed upon importation into the State for sale or upon manufacture in the State. Other non-diesel automotive fuels such as compressed natural gas, methanol and ethanol become subject to the tax on their first sale as motor fuel in the State. Automotive diesel motor fuel is taxed when it leaves a fuel terminal below the rack. Nonautomotive diesel fuel (such as No. 2 fuel oil used for commercial heating) and residual fuel usually become taxable on the sale to the consumer or upon use of the product in the State.

Most petroleum businesses remit this tax on a monthly basis. Taxpayers with yearly motor fuel tax and PBT liability totaling more than \$5 million now remit tax for the first 22 days of the month by electronic funds transfer by the third business day thereafter. Tax for the balance of the month is paid with the monthly returns filed by the 20th of the following month. The Department of Taxation and Finance advises that, in State Fiscal Year 2018-2019, 36 taxpayers, accounting for 91% of all PBT receipts, participated in the electronic funds transfer program.

Historical Summary of PBT Revenue. The following table provides historical information for the last ten years on the basic PBT and the supplemental PBT, the major funding source for the MTTF.

State Fiscal Year	Basic PBT	Supplemental PBT
2010-11	\$660.4	\$412.8
2011-12	661.3	419.1
2012-13	688.4	430.2
2013-14	704.4	428.6
2014-15	700.4	435.9
2015-16	677.2	426.3
2016-17	682.3	423.1
2017-18	663.7	412.9
2018-19	705.3	443.5
2019-20	705.5	436.9

Basic and Supplemental PBT Collections (in millions)

Source: New York State Department of Taxation and Finance.

Receipts for State Fiscal Year 2010-2011 reflect the 5% decrease in PBT rates effective January 1, 2010, offset slightly by the 5% increase on January 1, 2011. In addition to basic tax and supplemental tax receipts, total PBT collections also include \$17.1 million from the carrier tax.

Receipts for State Fiscal Year 2011-2012 reflect the 5% increases in PBT rates effective January 1, 2011 and January 1, 2012, offset by a decline in taxable gallonage. In addition to basic tax and supplemental tax receipts, total PBT collections also include \$19.2 million from the carrier tax.

Receipts for State Fiscal Year 2012-2013 reflect the 5% increases in PBT rates effective January 1, 2012 and January 1, 2013, offset by a decline in taxable gallonage. In addition to basic tax and supplemental tax receipts, total PBT collections also include \$21.0 million from the carrier tax.

Receipts for State Fiscal Year 2013-2014 reflect the 5% increases in PBT rates effective January 1, 2013 and a 0.8% decrease effective January 1, 2014. In addition to basic tax and supplemental tax receipts, total PBT collections also include \$21.0 million from the carrier tax.

Receipts for State Fiscal Year 2014-2015 reflect the 0.8% decrease in PBT rates effective January 1, 2014 and a 3.2% decrease effective January 1, 2015, offset by slight growth in taxable gallonage. In addition to basic tax and supplemental tax receipts, total PBT collections also include \$21.0 million from the carrier tax.

Receipts for State Fiscal Year 2015-2016 reflect the 3.2% decrease in PBT rates effective January 1, 2015 and a 5.0% decrease effective January 1, 2016. In addition to basic tax and supplemental tax receipts, total PBT collections also include \$20.3 million from the carrier tax.

Receipts for State Fiscal Year 2016-2017 reflect the 5.0% decrease in PBT rates effective January 1, 2016 and a 5.0% decrease effective January 1, 2017. In addition to basic tax and supplemental tax receipts, total PBT collections also include \$18.3 million from the carrier tax.

Receipts for State Fiscal Year 2017-2018 reflect the 5.0% decrease in PBT rates effective January 1, 2017 and a 5.0% increase effective January 1, 2018. In addition to basic tax and supplemental tax receipts, total PBT collections also include \$15.5 million from the carrier tax.

Receipts for State Fiscal Year 2018-2019 reflect the 5.0% increase in PBT rates effective January 1, 2018 and a 5.0% increase effective January 1, 2019. In addition to the basic tax and supplemental tax receipts, total PBT collections also include \$16.3 million from the carrier tax.

Receipts for State Fiscal Year 2019-2020 reflect the 5.0% increase in PBT rates effective January 1, 2019 and a 2.0% decrease effective January 1, 2020. In addition to the basic tax and supplemental tax receipts, total PBT collections also include \$18.3 million from the carrier tax.

Historical Summary of Dedicated PBT. The following table provides historical information relating to PBT receipts for the last ten years.

State	Dedicated Tax		MTA's
Fiscal Year	Funds Pool	MTTF Total ⁽¹⁾	Share of MTTF ⁽²⁾
2010-11	\$961.8	\$355.9	\$327.0
2011-12	970.8	359.2	330.1
2012-13	1,005.7	372.1	341.9
2013-14	1,017.3	376.4	345.8
2014-15	1,021.9	378.1	347.4
2015-16	991.9	367.0	337.2
2016-17	990.8	366.6	336.9
2017-18	960.3	355.3	326.5
2018-19	1,016.4	376.1	345.6
2019-20	1,011.5	374.3	343.9

MTTF Revenues from Petroleum Business Taxes (in millions)

⁽¹⁾ Represents 37% of the Dedicated Tax Funds Pool.

⁽²⁾ Represents 34% of the Dedicated Tax Funds Pool.

Source: New York State Division of the Budget.

MTTF Receipts – Motor Fuel Tax

General. Motor fuel and diesel motor fuel taxes ("MFT") are derived from an eight-cent-per-gallon excise tax levied with respect to gasoline and diesel motor fuels, generally for highway use. The aggregate rate of tax on gasoline was last changed on February 1, 1972, when it was increased from seven cents to eight cents per gallon. The aggregate rate of tax on diesel motor fuel was last changed on January 1, 1996, when it decreased from ten cents per gallon to eight cents per gallon.

Effective April 1, 2000, 2.25 cents of the gasoline MFT and 4 cents of the diesel MFT is remitted to the Dedicated Tax Funds Pool. Legislation enacted in 2000 earmarked an additional 2.25 cents of the diesel MFT for the Dedicated Tax Funds Pool. Effective April 1, 2003, an additional 1.75 cents tax on gasoline and diesel motor fuels was earmarked for the Dedicated Tax Funds Pool.

Therefore, 4 cents of the gasoline MFT and 8 cents of the diesel MFT are deposited to the Dedicated Tax Funds Pool, of which 34% is deposited in the MTA Dedicated Tax Fund.

<u>Tax Imposition and Payment</u>. The tax on motor fuel is payable by distributors registered with the State. The gasoline motor fuel tax is imposed when gasoline is imported (or caused to be imported) into the State for sale or use in the State, or manufactured in the State. Generally, the tax on other nondiesel motor fuels earmarked to the Dedicated Tax Funds Pool (such as compressed natural gas, propane, methanol and ethanol) is remitted by the dealer selling them as motor fuels. The tax on diesel motor fuel is imposed on the first non-exempt sale of diesel in the State.

Most petroleum businesses remit these taxes on a monthly basis. Businesses with yearly MFT and PBT liability totaling more than \$5 million remit the PBT and MFT for the first 22 days of the month by electronic funds transfer by the third business day thereafter. Tax for the balance of the month is paid with the monthly returns filed by the 20th of the following month. In State Fiscal Year 2018-2019, 35 taxpayers, accounting for 92% of all motor fuel tax receipts, participated in the electronic funds transfer program.

Although the tax is remitted by distributors, the incidence of the tax falls primarily on final users of the fuel on the highways and waterways of the State. Governmental purchases are exempt from the tax. Fuel purchased for certain road vehicles (such as fire trucks, buses used in local transit, taxicabs and ambulances), upon which the tax has been paid, may be eligible for full or partial reimbursement of the MFT. Reimbursement of the tax is also available for fuel not used on the highways (e.g., fuel used in farming).

Historical Summary of Dedicated Motor Fuel Tax. The following table provides historical information relating to Motor Fuel Tax receipts for the last ten years.

State Fiscal Year	MTTF Portion of Gasoline MFT	MTTF portion of Diesel MFT	MTTF Total ⁽¹⁾	MTA's Share of MTTF ⁽²⁾
2010-11	\$82.5	\$25.8	\$108.3	\$99.6
2011-12	80.3	24.9	105.3	96.7
2012-13	79.0	24.2	103.2	94.8
2013-14	76.4	22.3	98.7	90.7
2014-15	79.3	21.6	100.9	92.7
2015-16	81.1	23.9	105.0	96.5
2016-17	82.7	26.7	109.4	100.5
2017-18	80.2	29.1	109.3	100.4
2018-19	84.4	26.6	111.0	102.0
2019-20	81.2	27.0	108.2	99.4

MTTF Revenues from Motor Fuel Tax (in millions)

⁽¹⁾ Represents 37% of the Dedicated Tax Funds Pool.

⁽²⁾ Represents 34% of the Dedicated Tax Funds Pool.

Source: New York State Division of the Budget.

MTTF Receipts – Motor Vehicle Fees

General. Motor vehicle fees are derived from a variety of sources, but consist mainly of vehicle registration and driver license fees. A percentage of State motor vehicle registration fees is earmarked to the MTA Dedicated Tax Fund. These motor vehicle fees derive from the registration of passenger vehicles, trucks, vans, motorcycles, trailers, semitrailers, buses and other types of vehicles operating on the public highways of the State.

The DMV administers motor vehicle registration provisions of the State Vehicle and Traffic Law. County clerks in most counties act as agents for the State in administering the issuance of most types of motor vehicle registration. Motor vehicle registration renewals generally are accomplished by mail.

With the exception of buses, which are charged according to seating capacity, and semitrailers, which are registered at a flat fee, motor vehicle registration fees in the State are based on vehicle weight.

Legislation enacted in 1989 mandated biennial registration of all motor vehicles weighing less than 18,000 pounds. Thus, most motor vehicle registrations are issued and renewed for two-year periods. Motor vehicle registrations are staggered evenly throughout the months to ensure an even workload for the DMV.

In the State Fiscal Year 2009-2010 Enacted Budget, fees for licenses and most registrations were increased by 25%. The revenues from this increase were directed to the Dedicated Highway and Bridge Trust Fund. In addition, the fee for plate issuance was increased from \$15 to \$25. The revenues from this increase were included as part of the non-dedicated fees, of which \$169.4 million were transferred to the Dedicated Tax Funds.

Beginning with State Fiscal Year 2014-2015, and each year thereafter, a portion of the Fiscal Year 2013-2014 Motor Vehicle General Fund transfer of \$169.4 million has been replaced with a direct transfer of \$62.7 million from the State General Fund to the MTTF; \$57.6 million of such amount flows to the MTA Dedicated Tax Fund as MTTF Receipts, and the remainder flows to other transportation systems.

To reduce the overall number of funds and improve programmatic efficiencies, legislation enacted in the State Fiscal Year 2016-2017 Enacted Budget dedicated several categories of motor vehicle fees to the Dedicated Highway and Bridge Trust Fund that had previously flowed to four Special Revenue Funds ("SROs"). The SROs include DMV Compulsory Insurance, DMV Seized Assets, Motorcycle Safety, and the Accident Prevention Course Program.

Historical Summary of Dedicated Motor Vehicle Fees. The following table provides historical information relating to Motor Vehicle Fee receipts for the last ten years.

State Fiscal Year	MTTF Total ⁽¹⁾	MTA's Share of MTTF ⁽²⁾
2010-11 ⁽³⁾	\$201.3	\$178.3
2011-12	195.2	179.3
2012-13	168.2	154.7
2013-14	197.7	181.6
2014-15	131.3	120.7
2015-16	138.7	127.4
2016-17	140.1	128.7
2017-18	144.2	132.5
2018-19	142.3	130.7
2019-20	143.6	131.9

MTTF Revenues from Motor Vehicle Fees (in millions)

(1) Represents 37% of the Dedicated Tax Funds Pool. Does not include SRF Motor Vehicle Fees.

⁽²⁾ Represents 34% of the Dedicated Tax Funds Pool. Does not include SRF Motor Vehicle Fees.

(3) In mid-2010, the Office of the State Comptroller re-classified motor vehicle fees as miscellaneous receipts. Previously, motor vehicle fees were classified in two receipt categories, user taxes and fees and miscellaneous receipts.

Source: New York State Division of the Budget

MMTOA Account – Special Tax Supported Operating Subsidies

General. Like other U.S. mass transit systems, the Transit System and Commuter System have historically operated at a deficit and have been dependent upon substantial amounts of general operating subsidies from the State as well as the City. Over time, the ongoing needs of State mass transportation systems led the State to supplement the general operating subsidies with additional operating subsidies supported by special State taxes.

Starting in 1980, in response to anticipated operating deficits of State mass transportation systems, the Legislature enacted a series of taxes, portions of the proceeds of which have been and are to be deposited in a special State fund, the MTOA Fund, to fund the operations of mass transportation systems. The MMTOA Account was established in the MTOA Fund to fund the operating expenses of transportation systems in the MTA Commuter Transportation District, including MTA New York City Transit, MaBSTOA and the commuter railroads operated by MTA Long Island Rail Road and MTA Metro-North Railroad. Payments from this Account are made to MTA and its affiliates periodically to the extent that: (1) appropriations are made by the Legislature, (2) the State Director of the Budget certifies that the MMTOA Account contains sufficient funds to make such payments, and (3) State officials determine that the funds are necessary to finance operations of MTA and its affiliates and subsidiaries. Such payments are allocated among the various public transportation. Such payments to MTA are first deposited in the Pledged Amounts Account of the MTA Dedicated Tax Fund to meet the requirements of the DTF Resolution and then any remaining amounts are transferred to the Operating and Capital Costs Account to be used to meet operating costs of the Transit System and MTA Staten Island Railway and the Commuter System.

The table below summarizes the historical amounts appropriated and paid to MTA from the MMTOA Account (including investment income) for the last ten years.

MMT	OA Account
(\$ iı	n millions)

State Fiscal Year	Appropriations to MTA ⁽¹⁾	Payments to MTA
2010-11	\$1,269.8	\$1,344.7 ⁽²⁾
2011-12	1,232.3	1,243.0(3)
2012-13	1,343.5	1,343.5
2013-14	1,518.2	1,518.2
2014-15	1,563.9	1,563.9
2015-16	1,563.9	1,563.9
2016-17	1,668.0	1,668.0
2017-18	1,668.0	1,668.0
2018-19	1,686.6	1,686.6
2019-20	1,823.7	1,829.7(4)

(1) Does not include \$175.1 million in State Fiscal Years 2008-2009 through 2014-2015, and \$182.1 million in State Fiscal Years 2015-2016 through 2018-2019 through the Section 18-b program.

(2) MMTOA appropriations for MTA for State Fiscal Year 2010-2011 amounted to \$1,269.8 million, but an additional \$30 million was paid to MTA utilizing existing supplemental MMTOA reappropriations and \$44.9 million was rolled from State Fiscal Year 2009-2010 into State Fiscal Year 2010-2011. These additional payments brought the total MMTOA Receipts to \$1,344.7 million.

(3) MMTOA appropriations for MTA for State Fiscal Year 2011-2012 amounted to \$1,232.3 million, but an additional \$10.7 million was paid to MTA utilizing existing supplemental MMTOA reappropriations. This payment brought the total MMTOA receipts to \$1,243 million.

(4) MMTOA appropriations for MTA for State Fiscal Year 2019-2020 amounted to \$1,823.7 million, but an additional \$6 million was paid to MTA utilizing existing supplemental MMTOA reappropriations. This payment brought the total MMTOA receipts to \$1,829.7 million

Source: New York State Division of the Budget.

Although a variety of taxes have been used to fund the special tax supported operating subsidies, the taxes levied for this purpose currently include the MMTOA PBT, the District Sales Tax, the Franchise Taxes and the Franchise Surcharge ("MMTOA Taxes"), all described in more detail below. State law gives State officials the authority to disburse funds to MTA from the MMTOA Account to the extent such officials determine that the funds are necessary to finance operations of the Transit System and MTA Staten Island Railway and the Commuter System. Fluctuations in the economic and demographic conditions of the MTA Commuter Transportation District are directly related to the growth of economically sensitive taxes, including the District Sales Tax and the Franchise Surcharge. Therefore, there can be no assurance that such taxes will generate tax receipts at current levels. If shortfalls are experienced in the collection of MMTOA Taxes, the Commissioner of Transportation is authorized to reduce each recipient's payment from the MTOA Fund proportionately. MTA has historically received approximately 86% of such amounts deposited in the MMTOA Account. However, starting in 2012 a split in the Franchise Taxes component of the MMTOA taxes between the upstate Public Transportation Systems Operating Assistance Account ("PTOA Account") and the MMTOA account diverted 26% of the transportation and transmission taxes that were allotted previously to MMTOA to the upstate PTOA Account.

MMTOA PBT.

General. The products that are subject to the tax, the tax rates and the transactions excluded from such tax are identical to the basic PBT as described above under "MTTF Receipts – Dedicated Petroleum Business Tax" which is dedicated to the MTTF.

As of April 1, 2001, the share of the PBT basic tax earmarked to the MMTOA Account is 10.835%.

As described above in "MTTF Receipts – Dedicated Petroleum Business Tax," aspects relating to the imposition and collection of the MMTOA PBT have from time to time been and may continue to be the subject of administrative claims and litigation by taxpayers.

Historical Summary of MMTOA PBT. The following table provides historical information relating to MMTOA PBT receipts deposited into the MMTOA Account for the last ten years.

MMTOA Petroleum Business Taxes

State Fiscal	Net Receipts
Year	(in millions)
2010-11	\$70.7
2011-12	71.0
2012-13	73.8
2013-14	75.5
2014-15	75.1
2015-16	72.6
2016-17	73.1
2017-18	70.8
2018-19	74.1
2019-20	74.1

Source: New York State Division of the Budget.

District Sales Tax.

General. The District Sales Tax consists of a 0.375% sales and compensating use tax imposed on sales and uses of certain tangible personal property and services applicable only within the MTA Commuter Transportation District.

District Sales Tax receipts have been a significant source of tax receipts deposited in the MMTOA Account. The level of District Sales Tax receipts is necessarily dependent upon economic and demographic conditions in the MTA Commuter Transportation District, and therefore there can be no assurance that historical data with respect to collections of the District Sales Tax will be indicative of future receipts.

The base of the District Sales Tax is identical to the base of the State's 4% sales and compensating use tax. The tax now applies to (1) sales and use of most tangible personal property; (2) certain utility service billings; and (3) charges for restaurant meals, hotel and motel occupancy, and for specified admissions and services. The base of the tax has been amended periodically by the Legislature to exempt various purchases.

Clothing and footwear costing less than \$110 were permanently exempted from State sales tax on April 1, 2006. Localities have an option to also offer this exemption. Pursuant to Tax Law, localities opting to remove their tax must reimburse MTA for one-half of the foregone District Sales Tax revenue, while the State will provide the other half, but these reimbursements are paid to MTA and such reimbursements are not deposited into the MMTOA.

On June 1, 2006, the State placed a cap on the amount of State sales tax collected on motor fuel and diesel motor fuel at eight cents per gallon. Localities have an option to continue to use the percentage rate method or to change to a centsper-gallon method of computing sales tax. Pursuant to the Tax Law, the State must reimburse MTA for the entire foregone District Sales Tax revenue, but these reimbursements are paid from the State General Fund to MTA and such reimbursements are not deposited into the MMTOA.

MTA is held harmless from the impact of the clothing and footwear exemption and the cap on motor fuel and diesel motor fuel. This entire held harmless amount is reflected in the following table, but such amounts are not deposited into the MMTOA.

Historical Summary of District Sales Tax. The following table provides historical information relating to District Sales Tax receipts deposited into the MMTOA Account for the last ten years.

State	Net	Held Harmless	
Fiscal Year	Receipts	Amount ⁽¹⁾	Total
2010-11	\$756.0 ⁽²⁾	\$32.2 ⁽³⁾	\$794.2
2011-12	749.5	59.0 ⁽⁴⁾	808.5
2012-13	757.5	54.6 ⁽⁵⁾	812.1
2013-14	801.7	52.6 ⁽⁶⁾	854.3
2014-15	854.0	50.7 ⁽⁷⁾	904.7
2015-16	874.2	39.2 ⁽⁸⁾	913.4
2016-17	903.0	35.9 ⁽⁹⁾	938.9
2017-18	942.0	38.4(10)	980.4
2018-19	963.1	41.9(11)	1,005.0
2019-20	1,049.1	38.4(12)	1,087.5

District Sales Tax (\$ in millions)

(1) This amount includes moneys paid by both the State and the localities. Such amounts are not deposited into the MMTOA.

⁽²⁾ The March closeout number was increased to \$44.1 million (in comparison, March 2010 was \$5.1 million).

(3) Includes \$23.2 million from the State and localities for the clothing exemption and \$9 million from the State for the cap on motor fuel and diesel fuel. The State eliminated the sales tax exemption on clothing and footwear costing less than \$110 from October 1, 2010 to March 31, 2011.

(4) Includes \$41.8 million from the State and localities for the clothing exemption and \$17.2 million from the State for the cap on motor fuel and diesel fuel. The State had a sales tax exemption on clothing and footwear costing less than \$55 from April 1, 2011 to March 31, 2012.

(5) Includes \$34.7 million from the State and localities for the clothing exemption and \$19.9 million from the State for the cap on motor fuel and diesel fuel.

(6) Includes \$36.6 million from the State and localities for the clothing exemption and \$16 million from the State for the cap on motor fuel and diesel fuel.

(7) Includes an estimated \$34.7 million from the State and localities for the clothing exemption and \$16 million from the State for the cap on motor fuel and diesel fuel.

⁽⁸⁾ Includes an estimated \$34.1 million from the State and localities for the clothing exemption and \$5.1 million from the State for the cap on motor fuel and diesel fuel.

⁽⁹⁾ Includes an estimated \$34.4 million from the State and localities for the clothing exemption and \$1.5 million from the State for the cap on motor fuel and diesel fuel.

⁽¹⁰⁾ Includes an estimated \$34.9 million from the State and localities for the clothing exemption and \$3.5 million from the State for the cap on motor fuel and diesel fuel.

⁽¹¹⁾ Includes an estimated \$35.6 million from the State and localities for the clothing exemption and \$6.3 million from the State for the cap on motor fuel and diesel fuel.

⁽¹²⁾ Includes an estimated \$33.4 million from the State and localities for the clothing exemption and \$5.0 million from the State for the cap on motor fuel and diesel fuel.

Source: New York State Division of the Budget and New York State Department of Taxation and Finance.

Franchise Taxes.

General. A legislatively allocated portion of two taxes imposed on certain transportation and transmission companies (such as trucking, telegraph and local telephone companies), consisting of (a) an annual franchise tax based on the amount of the taxpayer's issued capital stock, and (b) an annual franchise tax on the taxpayer's gross earnings from all sources calculated to be in the State pursuant to statutory formulae are deposited in the MMTOA Account.

In addition to the two taxes described in the previous paragraph, effective May 1, 2015, Section 186-e was amended to include an additional excise tax of 0.4% (2.9% vs. 2.5%) that is imposed on the sale of mobile communication services. The receipts from the additional excise tax are deposited in the MMTOA Account using the same statutory formulae as the two franchise taxes described in the previous paragraph. Previously, mobile communication providers were taxed under (b) above.

The percentage of franchise receipts required to be deposited in the MMTOA Account has been modified from timeto-time. At present, this percentage is 54%. These changes were made to preserve the dedicated funds revenue flow subsequent to changes enacted in prior years reducing the base of the gross earnings tax and/or reducing the tax rates. *Historical Summary of the Franchise Taxes.* The following table provides historical information relating to the portion of Franchise Tax receipts deposited into the MMTOA Account for the last ten years. A one-time election to remain under the taxes imposed on trucking and railroad companies was enacted in 1996 for elections made before March 15, 1998. Companies not electing to remain under Sections 183 and 184 were taxed under the general corporate franchise tax. As part of the same legislation, the Section 184 rate was reduced from 0.75% to 0.6% on gross earnings. The MMTOA revenue distribution was held harmless. Additional rate reductions occurred beginning in 1998 that do not affect MMTOA. Effective State Fiscal Year 2012-2013, the distribution to MMTOA was changed from 80% to 54% of the Franchise Taxes. The remaining 26% is distributed to the Public Transportation Systems Operating Assistance PTOA Account.

The following table provides historical information relating to Franchise Tax receipts deposited into the MMTOA Account for the last ten years.

Franchise Taxes

(in millions)				
State Fiscal Year	Net Receipts			
2010-11	\$65.6			
2011-12	53.1			
2012-13	39.5			
2013-14	36.5			
2014-15	25.7			
2015-16	39.4			
2016-17	41.4			
2017-18	37.2			
2018-19	41.3			
2019-20	39.3			

Source: New York State Division of the Budget.

Franchise Surcharge.

General. This surcharge, originally imposed in 1982, was extended by the Legislature in March 2013 and was made permanent in the State Fiscal Year 2014-2015 Enacted Budget. The Franchise Surcharge is imposed on the portion of the franchise and other taxes of certain corporations, insurance, utility, and transportation and transmission companies attributable (according to various complex formulae) to business activity carried on within the MTA Commuter Transportation District. The MTA surcharge rate for Tax Year 2015 was 25.6%. Since 2015, the Tax Department has determined the surcharge tax rate needed to maintain revenue neutrality. Revenue neutrality is defined as the rate necessary to achieve the MTA surcharge revenue for the Article 9A franchise tax published in the State Fiscal Year 2014-2015 Enacted Budget. This calculation is repeated annually at a similar time. Determination of an annual rate is necessary because certain tax reform provisions took effect with tax year 2016 that lower State Article 9A receipts. These reforms will be fully implemented in tax year 2021.

For tax year 2020, the surcharge rate for corporate franchise taxpayers is 29.4%. Insurance (Article 33) and corporate and utility (Article 9) taxpayers continue to pay a 17% surcharge rate and be subject to the 1997 Tax Law calculation since they were not part of corporate tax reform. Effective May 1, 2015, an additional surcharge rate of 0.721% (17.721% vs. 17.0%) is imposed on the sale of mobile communication services (this corresponds to the higher excise tax rate described in the Franchise Taxes section). In accordance with Section 171-a of the Tax Law, the tax revenue generated under these provisions, after the deduction of administrative costs, is to be deposited to the MMTOA Account, as such taxes are received.

Aspects relating to the imposition and collection of the Franchise Surcharge have from time to time been, are currently and may continue to be, the subject of administrative claims and litigation by taxpayers. The financial impact of such challenges commenced to date has not been and is not expected to be material.

Historical Summary of the Franchise Surcharge. The following table provides historical information relating to the Franchise Surcharge receipts deposited into the MMTOA Account for the last ten years.

Franchise Surcharges (\$ in millions)

State Fiscal Year	Net Receipts
2010-11	\$ 827.7
2011-12	951.7
2012-13	997.9
2013-14	989.9
2014-15	1,032.0
2015-16	1,039.7
2016-17	1,017.1
2017-18	1,087.4
2018-19	1,169.1
2019-20	1,392.4

Source: New York State Division of the Budget.

SPECIAL OBLIGATION TAXABLE REFUNDING BONDS

Special Obligation Taxable Refunding Bonds

On August 14, 2014, MTA issued \$348,910,000 MTA Special Obligation Taxable Refunding Bonds, Series 2014 (the "SOBs"). The SOBs are MTA's special obligations, payable solely from the money pledged for payment under the "Bond Resolution Authorizing Special Obligation Taxable Refunding Bonds, Series 2014," adopted on July 28, 2014. The SOBs were issued to redeem at an early redemption date certain MTA bonds that were issued to finance transit and commuter projects and to provide operation and maintenance moneys to the MTA New York City Transit and the commuter railroads operated by MTA Long Island Rail Road and MTA Metro-North Railroad.

There are \$214,665,000 aggregate principal amount of outstanding SOBs as of April 29, 2020. **SOB Table 1** below sets forth, on an annual cash basis, the Released Escrow Amounts and the aggregate debt service on the SOBs.

SOB Table 1 Estimated Released Escrow Amounts and Debt Service on the SOBs (\$ in thousands)⁽¹⁾

Maturity	Future Receipts From Released	Debt Service on the SOBs				Cumulative
Date (July 1)	Escrow Amounts ⁽²⁾	Principal	Interest	Principal and Interest	Excess Receipts ⁽³⁾	Excess Receipts ⁽³⁾
2020	\$38,336	\$32,335	\$5,969	\$38,304	\$ 32	\$ 232
2021	38,336	33,045	5,268	38,313	23	255
2022	38,340	33,885	4,434	38,319	20	275
2023	34,793	31,270	3,512	34,782	11	286
2024	34,794	32,175	2,615	34,790	4	291
2025	29,587	28,230	1,644	29,874	(286)	5
2026	29,587	23,725	763	24,488	5,098	5,103

(1) Totals may not add due to rounding.

⁽²⁾ The Future Receipts from Released Escrow Amounts assume the future investment of certain amounts at a 0% interest rate.

⁽³⁾ Includes \$200 thousand of cumulative excess receipts accumulated from 2015 through 2019.

Sources of Payment - General

The SOBs are secured solely by the income generated by certain securities, and not by the revenues of any of the Related Entities.

HUDSON RAIL YARDS TRUST OBLIGATIONS

Hudson Rail Yards Trust Obligations

On September 22, 2016, \$1,057,430,000 MTA Hudson Rail Yards Trust Obligations, Series 2016A were issued to finance and refinance approved capital program transit and commuter projects for the Related Entities. The HY Trust Obligations are payable in part by amounts due under the Ground Leases described below. There are \$845,090,000 aggregate principal amount of outstanding HY Trust Obligations as of April 29, 2020.

During the past year, several early mandatory redemptions occurred in connection with Fee Purchase Payments on commercial units in 30 Hudson Yards (Tower A) and a portion of residential condominiums in 15 Hudson Yards (Tower D). The redemptions were on the earliest maturity of the Series 2016A Obligations, the 2046 maturity. A total of \$212,340,000 was redeemed via early mandatory redemptions as follows:

- May 15, 2019, \$105,500,000
- July 15, 2019, \$67,960,000
- November 15, 2019, \$12,225,000; and
- February 15, 2020, \$26,655,000

On March 27, 2020, the remaining principal amount of the 2046 maturity of the Series 2016A Obligations, \$162,660,000, was redeemed via an optional redemption. In conjunction with the redemption, the Trustee (Wells Fargo Bank, N.A.) issued \$162,660,000 principal amount of MTA Hudson Rail Yards Refunding Trust Obligations, Series 2020A, with the same maturity date and bearing the same interest rate as the Series 2016A Obligations maturing on November 15, 2046, and delivered the Series 2020A Obligations to MTA in return for MTA providing sufficient moneys to redeem the 2046 maturity of the Series 2016A Obligations.

For additional information on MTA's HY Trust Obligations see "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS – Non-Capital Program Projects - Hudson Yards Development and Financing" and Part II – Tab 2 – "Details of Each Issue of Obligations – Hudson Rail Yards Trust Obligations (Schedule 1 to Financing Agreement)" of MTA's 2018 Combined Continuing Disclosure Filings.

Security – General

The HY Trust Obligations are MTA's special limited obligations, payable solely from the trust estate (the "HY Trust Estate") established under the HY Trust Agreement. The HY Trust Estate consists principally of (i) monthly Ground Lease rent payments (the "Monthly Ground Rent") to be paid by any tenants of Ground Leases (the "Ground Lease Tenants") of certain parcels being developed on and above the Eastern Rail Yard and Western Rail Yard portions of the John D. Caemmerer West Side Yards ("Hudson Rail Yards") currently operated by MTA Long Island Rail Road, (ii) monthly scheduled transfers from the capitalized interest fund established by the HY Trust Agreement (the "Capitalized Interest Fund") during the limited period that the Monthly Ground Rent is abated under the applicable Ground Lease, (iii) payments made by the Ground Lease Tenants if they elect to exercise their option to purchase the fee interest in such parcels ("Fee Purchase Payments"), (iv) certain Contingent Support Payments (as discussed below) made by MTA, (v) rights of MTA to exercise certain remedies under the Ground Leases and (vi) rights of the HY Trustee to exercise certain remedies under the Ground Leases and the separate fee mortgages (the "Fee Mortgages") from MTA in favor of the HY Trustee. Pursuant to the HY Trust Agreement, MTA has unconditionally and irrevocably assigned and transferred to the HY Trustee its rights in the HY Trust Estate and the HY Trustee has agreed to execute and deliver HY Trust Obligations, each evidencing the interests of the Owners thereof in the MTA Financing Agreement Amount (consisting of the principal components (the "Principal Components") and the interest components (the "Interest Components") of the MTA Financing Agreement Amount payable by MTA pursuant to the Interagency Financing Agreement dated as of September 1, 2016 (the "Financing Agreement"), by and among MTA, MTA New York City Transit, MaBSTOA, MTA Long Island Rail Road, MTA Metro-North Railroad, and MTA Bus (collectively, the "HY Related Transportation Entities") and the HY Trustee).

Overview of the Ground Leases

Both the Eastern Rail Yard ("ERY") and Western Rail Yard ("WRY") are ground leased for 99 years by MTA to limited liability entities controlled by Related-Oxford (collectively, the "Ground Lease"). The property that is ground leased by MTA consists of the airspace above a limiting plane above the tracks (from 31st to 33rd Streets) and the area where there are no rail tracks (from 30th to 31st Streets) within the boundary of the Hudson Rail Yards (collectively, the "Ground Leased Property"). The commencement date of the ERY Original Ground Lease was December 3, 2012 and the expiration date is December 2, 2111^{*}. The commencement date of the WRY Original Ground Lease was December 3, 2013 and the expiration date is December 2, 2112. Five of the eight individual ground-leased parcels (each, a "Severed Parcel Ground Lease") on the ERY (and on the WRY, when entered into) have the same commencement date, expiration date and rent adjustment dates as the respective ERY and WRY Original Ground Lease. Each Ground Lease Tenant has the option to purchase fee title to the Ground Leased Property at any time following completion of construction of the building on the Ground Leased Property.

The Ground Leases do not encumber the railroad tracks, which will continue to be used for transportation purposes. Related-Oxford, or a limited liability development entity created by them for developing an individual parcel, is responsible for constructing a platform over the railroad tracks and improvements on, in and under such platform, and for the development of buildings on the Ground Leased Property, including designing, financing, constructing, leasing, selling, and operating such buildings.

The primary sources of revenue available for the payment of the Principal Components and Interest Components represented by the HY Trust Obligations will be the Monthly Ground Rent and any Fee Purchase Payments payable by the Ground Lease Tenants under the Ground Leases. These Ground Lease revenues are being pledged to the HY Trustee by MTA under the Financing Agreement and the HY Trust Agreement, and Ground Lease Tenants are directed to pay the revenues directly to the Depositary (as defined under "–Flow of Funds" below) for deposit into a deposit account with the HY Trustee (the "Dedicated Deposit Account"). Such payments are then transferred daily from the Depositary to the HY Trustee for deposit into the rent payment fund established under the HY Trust Agreement (the "Rent Payment Fund").

Monthly Ground Rent under the Ground Leases

Monthly Ground Rent is due on the first day of each month from each of the Ground Lease Tenants. A failure to timely pay Monthly Ground Rent following the applicable notice and grace period is an event of default under the affected Ground Lease (a "Ground Lease Payment Event of Default"). The amount of Monthly Ground Rent due under each Ground Lease is a fixed dollar amount established in each Ground Lease, subject to a 10% escalation every five years, except for the 30th, 55th and 80th years when the escalations will be based on fair market value (but no less than a 0% increase and no greater than a 20% increase from the previous year's amount). The timing of each escalation is calculated from the commencement date for the Original Ground Lease.

Fee Purchase Payments

Under each Severed Parcel Ground Lease, following substantial completion of construction of the building on the Ground Leased Property, a Ground Lease Tenant has the option to (a) continue to pay Monthly Ground Rent due on a monthly basis or (b) at any time, purchase the fee interest in its Ground Leased Property (and thus terminate its Ground Lease) by exercising its option to purchase the fee interest in its Severed Parcel and related improvements upon substantial completion thereof (a "Fee Conversion Option") and making the required Fee Purchase Payment under its applicable Ground Lease. The required Fee Purchase Payment under each Ground Lease is equal to (a) the present value to the purchase date of all remaining Monthly Ground Rent due for the 99-year ground lease term, including escalations, plus (b) the present value to the purchase date of a pre-established reversionary value of the property after the 99th year. The calculation of the required Fee Purchase Payment is set forth in each Ground Lease. The required Fee Purchase Payment is set forth in each Ground Lease. The required Fee Purchase Payment set forth by the terms of the Ground Leases increase approximately 2.2% per year for at least the first 30 years of each Ground Lease. The receipt of a Fee Purchase Payment will result in a redemption of the HY Trust Obligations. In addition, upon MTA's receipt of a Fee Purchase Payment, the fee interest purchased by the Ground Lease Tenant will be released from the applicable Fee Mortgage.

Ground Lease Tenants are not obligated to exercise their Fee Conversion Options but can instead continue to pay Monthly Ground Rent for the full 99-year ground lease term.

^{*} The ERY Original Ground Lease has since been terminated and substituted with separate Severed Parcel Ground Leases.

All Fee Purchase Payments received are pledged by MTA and directed to be paid to the Depositary and are required to be applied by the HY Trustee on a no less than quarterly basis to redeem Principal Components of HY Trust Obligations at the then applicable redemption price plus accrued interest. The aggregate par amount of HY Trust Obligations issued is limited such that at any time after issuance there is calculated to be sufficient funds (assuming Ground Lease Tenants meet all their obligations) to redeem prior to the scheduled maturity dates all outstanding Principal Components of HY Trust Obligations at the applicable redemption price plus accrued interest in the event all Ground Lease Tenants decide to exercise their respective Fee Conversion Options and pay their required Fee Purchase Payments.

Limitations on Related Entities' Obligations

Neither MTA nor any of the other HY Related Transportation Entities are obligated to make any payment with respect to the MTA Financing Agreement Amount or the HY Trust Obligations (and the related Principal Components and Interest Components) from any source other than the HY Trust Estate (which includes the Financing Agreement Payments) and Contingent Support Payments. Contingent Support Payments consist of Interest Reserve Advances and Direct Cost Rent Credit Payments. Under the Financing Agreement, MTA has an obligation to make advances to replenish the Interest Reserve Fund (an "Interest Reserve Advance") upon the occurrence of a Ground Lease Payment Event of Default, which obligation is generally limited to seven years after the Ground Lease Payment Event of Default. "Direct Cost Rent Credit Payments" are made upon determination that the Ground Lease Tenant is entitled to a Direct Cost Rent Credit (a partial credit against Monthly Ground Rent under certain limited circumstances as a result of an action or failure to take certain action by MTA or MTA Long Island Rail Road). Contingent Support Payments are subordinate to debt service on MTA's Transportation Revenue Bonds and payable from the same pool of revenues that are available to pay operating and maintenance expenses of the Related Entities.

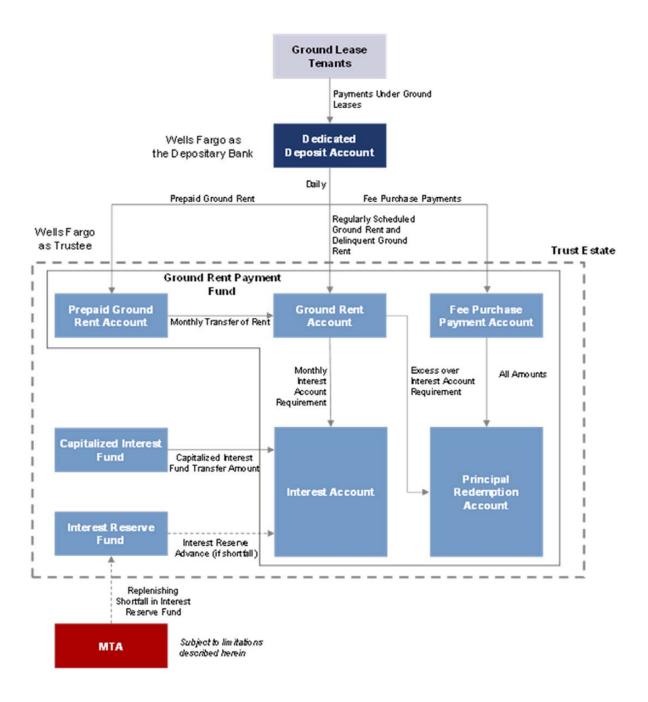
Flow of Funds

MTA has established a deposit account with the HY Trustee, as depositary (the "Depositary"), and MTA has directed all Ground Lease Tenants to make Monthly Ground Rent and Fee Purchase Payments directly to the Depositary, which deposits will be transferred daily to the Trustee.

The chart which follows describes the flow of funds from the payments by Ground Lease Tenants of Monthly Ground Rent and Fee Purchase Payments to the Depositary for deposit to the Dedicated Deposit Account to the account and fund flow under the HY Trust Agreement for payment of the Principal Components and Interest Components relating to the HY Trust Obligations.

MTA Hudson Rail Yards Trust Obligations

Illustrative Flow of Funds



Covenants of MTA with respect to the HY Trust Obligations

MTA has undertaken, among others, the following covenants and agreements in the HY Trust Agreement:

- MTA covenants and agrees, on behalf of itself and the other HY Related Transportation Entities, with the Owners of the HY Trust Obligations to perform all obligations and duties imposed on them, as applicable, under the HY Trust Agreement, the Financing Agreement, certain instructions requiring the Depositary to transfer the amounts deposited into the Dedicated Deposit Account to the HY Trustee, the Fee Mortgages and the Ground Leases.
- MTA covenants and agrees that it shall use commercially reasonable efforts to timely pursue any and all actions to enforce its rights to collect (or to direct the payment to the Depositary of) all amounts due under the Ground Leases, the completion guaranties (the "Completion Guaranties") and the payment guaranties (the "Payment Guaranties") described in the Ground Leases.
- MTA covenants and agrees that it shall not take any action and will use its best efforts not to permit any action to be taken by others under the Ground Leases, the Completion Guaranties, the Payment Guaranties and the Fee Mortgages that would result in a Prohibited Modification.

Prohibited Modifications means (i) any modification to the Ground Leases or to the Severed Parcel Pro Forma Rent Schedule attached to a Ground Lease which reduces the annual base rent payable thereunder, (ii) any modification to the Ground Leases which reduces the Fee Purchase Payments and/or the Residential Unit Purchase Price payable in connection with a Fee Purchase Payment, (iii) any modification to the Ground Leases which increases or extends abatements set forth in the Ground Leases, (iv) any waiver of a Ground Lease Tenant's obligation to make payments of Annual Base Rent and/or the Fee Purchase Payments in the amounts and at the times due as set forth in the Ground Leases, (v) any acceleration of a Ground Lease Tenant's right to exercise the Fee Conversion Option earlier than the Fee Conversion Closing Date set forth in the Ground Leases, (vi) any modification of the Ground Leases which would grant a Ground Lease Tenant an express right to deduction, counterclaim, set-off or offset against the Annual Base Rent, or constitute a Ground Lease not to be a "triple net lease" as set forth in the Ground Leases, (vii) any modification to the application of funds to be used to restore the premises following a casualty pursuant to the Ground Leases, and (ix) any modification to the Ground Leases with respect to Ground Lease Tenant Events of Default (as further described in the Ground Leases) and landlord remedies relating thereto.

PART 4. OPERATIONS

PART 4. See also "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES" herein.

TRANSIT SYSTEM

(popular names – MTA New York City Transit and MaBSTOA)

Legal Status and Public Purpose

MTA New York City Transit was created in 1953 pursuant to the MTA New York City Transit Act for the purposes of acquiring the transit facilities then operated by the City and operating them for the convenience and safety of the public.

MaBSTOA was created as a public benefit corporation in 1962 as a statutory subsidiary of MTA New York City Transit to operate the bus routes that had been operated by Surface Transit, Inc. and Fifth Avenue Coach Lines, Inc. prior to their acquisition by the City.

Pursuant to the MTA New York City Transit Act, MTA New York City Transit and the City entered into an agreement of lease, dated June 1, 1953, providing for the lease to MTA New York City Transit of the transit facilities then owned or thereafter to be acquired or constructed by the City for use in the fulfillment of MTA New York City Transit's corporate purposes. In connection with the creation of MaBSTOA, MTA New York City Transit agreed that bus lines acquired by the City would be leased to MaBSTOA by the City for operation and maintenance by MaBSTOA. Such lease with MaBSTOA was entered into on March 20, 1962.

MTA New York City Transit became an affiliate of MTA in 1968. The Chairman and Members of MTA, by statute, are also the Chairman and Members of MTA New York City Transit and Directors of MaBSTOA, and the CEO of MTA is, *ex officio*, CEO of MTA New York City Transit. The CEO is responsible for the discharge of the executive and administrative functions and powers of MTA New York City Transit. The President of MTA New York City Transit is primarily responsible for the general management and operation of MTA New York City Transit. The executive personnel of MTA New York City Transit and MaBSTOA report to the President of MTA New York City Transit.

Management

The following are brief biographies of MTA New York City Transit's senior officers, who also serve as MaBSTOA's senior officers.

Sarah E. Feinberg, Interim President of MTA New York City Transit since March 9, 2020. As Interim President of MTA New York City Transit, Ms. Feinberg is responsible for the general management and operation of North America's largest mass transit system. Prior to that, Ms. Feinberg was a member of the MTA Board and Chairperson of the New York City Transit and Bus Committee, and the founder of Feinberg Strategies, LLC, a strategic business and communications consulting practice focused on the tech sector. Previously, she served as Administrator of the FRA, as Chief of Staff of the USDOT, as Special Assistant to the President and Senior Advisor to the White House Chief of Staff in the Obama Administration, and in several capacities on Capitol Hill. In the private sector, Ms. Feinberg was Director of Policy Communications at Facebook and Director of Communications and Business Strategy at Bloomberg LP. She was formerly a member of the Amtrak Board of Directors and is currently a member of the StoryCorps Board of Directors. Ms. Feinberg holds a bachelor's degree from Washington and Lee University and also attended the National Defense University.

Craig Cipriano, Acting Senior Vice President, Department of Buses since June 2019. As Acting Senior Vice President, Department of Buses, Mr. Cipriano oversees the MTA New York City Transit bus system (including MaBSTOA bus operations). He also serves as Acting President of the MTA Bus Company. Previously, Mr. Cipriano served as Executive Vice President of the Department of Buses and the Executive Vice President of MTA Bus Company from 2014 to 2019, and as Vice President, Business Strategies and Operations Support, MTA New York City Transit from 2011 to 2014. Prior to that, Mr. Cipriano held positions of increasing responsibility involving subway and bus operations. Mr. Cipriano holds a bachelor's degree in Mechanical Engineering from Stony Brook University and a master's degree in City and Regional Planning from Rutgers University.

Sally Librera, Senior Vice President, Department of Subways, appointed April 29, 2018. Ms. Librera is responsible for overseeing all aspects of the Department of Subways, including development and delivery of long-term strategy for modernization and improvement of subway operations. Ms. Librera has worked at MTA New York City Transit for 15 years, assuming positions of increasing responsibility. Most recently, Ms. Librera served as Vice President & Chief Officer for Subways Operations Support and as Vice President & Chief Officer for Staten Island Railway. Ms. Librera holds a

bachelor's degree from Cornell University and master's degrees in City and Regional Planning and Transportation Engineering from the University of California, Berkeley.

Frank Jezycki, Executive Vice President & Chief Operating Officer, Department of Subways, appointed April 29, 2018. Mr. Jezycki is responsible for day-to-day subway operations, overseeing Service Delivery, Car Equipment and Maintenance of Way divisions. Mr. Jezycki, a 34-year veteran of MTA New York City Transit, has risen through the ranks of the Department of Subways. Prior to his appointment as Chief Operating Officer, Mr. Jezycki served as Acting Senior Vice President of Subways, Vice President & Chief Officer, Car Equipment, and Vice President and Chief Officer of Maintenance of Way. Among others, he has held prior positions within the Department of Subways as Line General Manager, Chief of Infrastructure/Maintenance of Way, and Vice President and Chief Officer of Staten Island Railway.

Sarah Meyer, Senior Vice President/Chief Customer Officer since March 2018. The purpose of this senior management position is to institutionalize the priority of placing the customer at the center of how MTA New York City Transit does business. Prior to joining MTA New York City Transit, Ms. Meyer served as Senior Vice President at Edelman, a global communications marketing firm, and worked there on a recent project overhauling communication protocols at MTA New York City Transit's Rail Control Center. Ms. Meyer has also worked with Fortune 500 companies and non-profits, creating communication campaigns and digital platforms that raise awareness and built reputation. Ms. Meyer holds a bachelor's degree from Wellesley College.

Deborah Prato, Senior Vice President of People and Business Transformation since August 2018. The purpose of this senior management position is to formally recognize the importance and priority of engaging and empowering employees. With over 30-years of public sector experience and holding previous executive leadership roles in public transportation, Ms. Prato brings a deep knowledge and expertise in business transformation, labor relations, human resource management, benefits, training, civil service and organizational and process redesign. Ms. Prato holds a bachelor's degree from SUNY Potsdam.

Alok Saha, Acting Senior Vice President, Capital Program Management Department since December 2018. Mr. Saha has been employed with MTA New York City Transit for more than 28 years, most recently as Vice President and Chief Engineer, Engineering Services in Capital Program Management and before that, as Program Executive, Recovery and Resiliency. In 2015, he assumed responsibilities as Vice President and Chief Engineer, Engineering Services in Capital Program Management's staff of over 950 high level engineers and architects, responsible for the technical direction, quality of engineering and design of all project in the Capital Program.

Jaibala Patel, Chief Financial Officer joined MTA New York City Transit in October 2017. Ms. Patel oversees the functions of the Controller's Office, the Office of Management and Budget, and the Office of Strategic Initiatives. Ms. Patel brings over 17 years of experience within the areas of finance and budgets. Prior to joining MTA, Ms. Patel served as the Acting Chief Financial Officer and Treasurer at NJ Transit managing several areas including the Office of the Controller, Treasury, Budgets, Risk Management, Real Estate, Payroll, Pensions, Health Benefits, Financial Operations and Compliance, and Business Development. Ms. Patel holds a Bachelor's of Science in Finance and a Master's in Business Administration from Rutgers University – School of Business.

David Farber, Vice President and General Counsel since November 2019. Mr. Farber also serves as Vice President and General Counsel of the MTA Bus Company. Previously, Mr. Farber served as General Counsel and Executive Vice President for Legal Affairs as well as Acting Chief Administrative Officer and Acting Chief of Staff at the New York City Housing Authority, as General Counsel and Senior Vice President of the Hudson Yards Development Corporation, and as General Counsel to the New York City Department of Small Business Services. Mr. Farber holds a bachelor's degree from Brandeis University and a law degree from the UCLA School of Law.

History of the Transit System

General. Mass transit has played a vital role in the development of the City from its earliest days. It continues to be essential to the economic life of the metropolitan area and for a substantial portion of the population of the metropolitan area it represents the principal means of transportation within the City and to and from places of employment. The intense concentration of commercial, financial, cultural, industrial and residential development that exists in the 22 square miles comprising the Borough of Manhattan, particularly its central business district, would not be feasible without an extensive system of mass transit.

Subway System. Construction of the first subway in the City began in 1900 and was completed in 1904. Although built with City funds, it was leased to and operated by a private company, the IRT. A major expansion of the subway system was completed in various stages between 1918 and 1922. A portion of the expanded system was incorporated into the IRT and the remainder was leased to another private company, the BMT. In 1924, the City Board of Transportation was created to plan, construct and operate a third subway system, the IND. That system was completed in various stages between 1932 and 1940.

In 1940, the City acquired the franchise rights and properties of the IRT and BMT from the private companies that had operated those lines and that were then in reorganization. The entire subway system was placed under the control of the City Board of Transportation. In 1953, the subway system was leased to the then newly-formed MTA New York City Transit Authority, which later became an affiliate of the MTA in 1968.

Although a number of changes have been made to the fixed physical plant of the subway system since 1940, such as the closing of the oldest elevated lines and the integration of the several systems, there were no significant alterations of the basic physical configuration of the subway network since that time until MTA New York City Transit opened the Archer Avenue Line extension and the 63rd Street Tunnel in 1988 and 1989, respectively, along with three new subway stations along each of these routes.

More recently, MTA has developed new expansions and improvements to the Transit System. These include the extension of the No. 7 subway line from Times Square south to 34th Street and 11th Avenue in Manhattan and the opening of the Lower Manhattan Fulton Center. In December of 2016, installation of the first phase of the Second Avenue Subway was completed. The Second Avenue Subway began service on January 1, 2017, with Q train service running from 96th Street, 86th Street, 72nd Street, and 63rd Street, and continuing through Manhattan and into Brooklyn, to Coney Island. For more information about these projects, see "MTA CONSTRUCTION AND DEVELOPMENT COMPANY" below.

Bus System. During the 1940s and 1950s, the City acquired the properties and franchises of a number of private bus companies operating within the City, all of which were leased to MTA New York City Transit at the time of its creation. MaBSTOA was created in 1962 to operate the bus lines formerly operated by Fifth Avenue Coach Lines, Inc. and Surface Transit, Inc. Both MTA New York City Transit and MaBSTOA have since assumed the operation of additional franchises and routes.

Most bus service within the City is operated by MTA New York City Transit, MaBSTOA and MTA Bus. MTA Bus is currently operating the bus routes formerly operated by seven former franchise private bus companies, and only a very small number of private bus companies continue to operate local service within the City or between the outer boroughs and the Manhattan central business district. See "MTA BUS COMPANY" below.

Description of the Transit System

Subway System. The City's rapid transit system is by far the largest in the nation. Only a few cities in the world have a subway system comparable in physical size and ridership. The subway system has over 665 miles of mainline track extending 248 route miles. It operates 24 hours a day, 365 days a year, although certain lines are not in service the entire day and frequency of service varies by route and time of day. In calendar year 2019, 1.7 billion revenue passengers used the subway. It currently has a fleet of 6,714 subway cars, two major subway car overhaul shops, 14 maintenance shops, 24 subway car storage yards and 472 active passenger stations. As of December 31, 2019, MTA New York City Transit employed 29,988 full-time workers in rapid transit.

Bus System. MTA New York City Transit and MaBSTOA presently operate bus service on 237 local and express routes throughout the City. The majority of bus routes are designed to serve passengers traveling within a particular borough or to serve as feeders to the subway system. In calendar year 2019, 557 million revenue passengers used the bus system. The bus system operates on a continuous basis, although certain bus routes are not in service the entire day and frequency of service varies by route and time of day. As of December 31, 2019, the bus system employed 14,696 full-time persons and operated 4,609 buses, including 10 leased all-electric buses.

Paratransit. On July 1, 1993, MTA New York City Transit assumed responsibility from the City for the Access-A-Ride paratransit service, in order to increase the efficiency of providing such services by vesting responsibility in a single entity. Access-A-Ride service is provided by private vendors under contract with MTA New York City Transit. Paratransit fares are currently equivalent to the regular undiscounted passenger fare rate of \$2.75. Paratransit operations are also

supported by 6% of the revenue from the Urban Tax (a portion of a mortgage recording tax and a portion of a property transfer tax imposed upon commercial property in the City). The City contributes an operating subsidy to support paratransit, equal to the lesser of (1) one third of the operating deficit, calculated after deducting paratransit passenger revenue, the above-described Urban Tax revenue, and MTA New York City Transit administrative expenses, or (2) an amount that is 20% greater than the amount required to be paid by the City for the preceding calendar year. Any remaining operating deficit is funded by MTA New York City Transit. For a description of certain additional City support for paratransit in the years 2020-2023, see "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES – New York State Fiscal Year 2020-2021 Budget Provisions of Importance to MTA".

Relationships with the State, the City and the Federal Government

State and City. MTA New York City Transit and MaBSTOA receive substantial amounts of funding for the operating costs of the Transit System from subsidies provided by the State and the City. In the calendar year 2019, State and City operating assistance, special tax supported subsidies and reimbursements for the Transit System constituted, on a cash basis, approximately 45.2% of the total pledged revenues of MTA New York City Transit and MaBSTOA; up from 43.2% in 2018, due primarily to the increase in Special Tax Supported Subsidies. To the extent that future operating assistance from the State and City are subject to their receipt of tax revenues, the level of such funding may be affected by the general economic conditions in, and the financial condition of, the State and City.

In addition to the operating and capital assistance received by MTA New York City Transit and MaBSTOA from the City, MTA New York City Transit and MaBSTOA are dependent upon the City for the maintenance and repair of Citymaintained bridges, streets and other infrastructure necessary for the operation of the Transit System. Water main breaks and other infrastructure problems, including problems on bridges, have in the past and may in the future cause service disruptions.

City infrastructure problems that restrict or preclude service on the Transit System could decrease ridership and revenue levels of the Transit System. The materiality of any such decrease would depend on the nature, severity and duration of the service interruptions.

Federal. MTA New York City Transit and MaBSTOA also receive substantial amounts of funding for the capital costs of the Transit System from grants provided by the federal government. The federal government also supplied substantial capital funds for prior Transit Capital Programs. Federal operating assistance is not currently authorized by federal law for mass transit operations, including the Transit System.

Other. Officials of the State, City and federal governments and the Inspector General of MTA periodically conduct audits and reviews of the operations of MTA New York City Transit and MaBSTOA. Officers of MTA New York City Transit and MaBSTOA respond to these reports and adopt some of the recommendations made therein or take other appropriate remedial actions.

MTA New York City Transit and MaBSTOA are subject to regulation by federal and State agencies with responsibilities for safety. In general, they must maintain and equip their tracks and rolling stock in compliance with minimum standards, file reports with respect to certain accidents and incidents and respond to recommendations for improving transit system safety.

MTA BUS COMPANY

(popular name – MTA Bus)

Legal Status and Public Purpose

MTA Bus was created as a public benefit corporation subsidiary of MTA in 2004. At its meeting in December 2004, the MTA Board approved a letter agreement with the City with respect to MTA Bus' establishment and operation of certain bus routes (the "City Bus Routes") in areas then served by seven private bus companies pursuant to franchises granted by the City. The letter agreement with the City provides for the following:

• A lease by the City to MTA Bus of the bus assets to operate the City Bus Routes.

- The City agrees to pay MTA Bus the difference between the actual cost of operation of the City Bus Routes (other than certain capital costs) and all revenues and subsidies received by MTA Bus and allocable to the operation of the City Bus Routes.
- If the City fails to timely pay any of the subsidy amounts due for a period of 30 days, MTA Bus has the right, after an additional 10 days, to curtail, suspend or eliminate service and may elect to terminate the agreement. The City can terminate the agreement on one year's notice.

MTA Bus completed the consolidation of the seven bus lines in the first quarter of 2006. As discussed under "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS," the CPRB and MTA have included certain capital funding for MTA Bus in the 2000-2004 and subsequent MTA Capital Programs.

Effective as of April 1, 2006, MTA Bus pledged its operating revenues to the Trustee under the Transportation Resolution and became a signatory to the Interagency Agreement securing the Transportation Revenue Bonds. All or a portion of MTA Bus' capital needs may be financed from the proceeds of the Transportation Revenue Bonds. The City is not responsible for paying debt service on bonds issued by MTA for the benefit of MTA Bus in connection with the 2000-2004 and 2005-2009 MTA Capital Programs. The debt service expense associated with bonds issued by MTA for the benefit of MTA Bus in connection with the 2010-2014 and 2015-2019 Capital Programs is billable to the City. In addition, debt service expenses relating to the approved 2020-2024 Capital Program will be submitted to the City for reimbursement to MTA Bus and MTA.

Description of the MTA Bus System

MTA Bus presently operates bus service on 44 local routes in the Bronx, Brooklyn and Queens, 43 express routes between Manhattan and the Bronx, Brooklyn and Queens and three Select Bus Service routes in Queens. In calendar year 2019, over 120 million revenue passengers used the MTA Bus System. As of December 31, 2019, the MTA Bus System employed 3,889 persons and operated 1,328 buses. The MTA Bus System operates on a continuous basis, although certain bus routes are not in service the entire day and frequency of service varies by route and time of day.

Management

Craig Cipriano, Acting Senior Vice President, MTA New York City Transit Department of Buses, is also the Acting President of MTA Bus.

STATEN ISLAND RAPID TRANSIT OPERATING AUTHORITY

(popular name – MTA Staten Island Railway)

Legal Status and Public Purpose

MTA Staten Island Railway was created as a public benefit corporation subsidiary of MTA in 1970. MTA Staten Island Railway is responsible for the operation of a rapid transit railroad system on Staten Island pursuant to a lease and operating agreement with the City.

MTA Staten Island Railway service runs 24 hours daily between the St. George and Tottenville stations. At the St. George station, customers can make connections with Staten Island Ferry service. MTA Staten Island Railway's capital needs are funded as a part of the Transit Capital Program approved by the CPRB and its operating losses are funded by the City and/or MTA.

Management

Sarah Feinberg, the Interim President of MTA New York City Transit, is also the Interim President of MTA Staten Island Railway.

COMMUTER SYSTEM

(popular names – MTA Long Island Rail Road and MTA Metro-North Railroad)

Legal Status and Public Purpose

MTA Long Island Rail Road. Through MTA Long Island Rail Road, MTA operates commuter railroad service between the City and Long Island and within Long Island (the "MTA Long Island Rail Road Commuter Service").

MTA Long Island Rail Road was incorporated as a privately-held railroad company in 1834. In 1966, MTA acquired all of the capital stock of MTA Long Island Rail Road from its parent, the Pennsylvania Railroad Company. In February 1980, MTA Long Island Rail Road's Certificate of Incorporation was amended to convert it into a subsidiary public benefit corporation of MTA. MTA Long Island Rail Road owns, leases or has easements or other rights to the rolling stock, physical plant and equipment material to its operations. It is noted that the lease between the Atlantic Avenue Railroad Company of Brooklyn and MTA Long Island Rail Road, dated March 26, 1877 (the "Atlantic Avenue Lease") expired by its terms in 2000 and has not been renewed. MTA Long Island Rail Road continues to operate service on the tracks covered by the Atlantic Avenue Lease.

MTA Metro-North Railroad. Through MTA Metro-North Railroad, MTA operates the New Haven Line (pursuant to a joint service agreement with CDOT) and the Harlem and Hudson commuter rail services (collectively, the "MTA Metro-North Commuter Service") and subsidizes and performs certain other services relating to the State portion of the Port Jervis and Pascack Valley Lines operated, pursuant to a joint service agreement, by NJ Transit. The MTA Metro-North Commuter Service between the City and the northern New York suburban counties of Westchester, Putnam and Dutchess and from the City through New Haven and Fairfield Counties in the southern portion of Connecticut to New Haven, Connecticut. The Port Jervis and Pascack Valley Lines provide service from the northern New York suburban counties of Orange and Rockland to northern New Jersey and the City (known as "West of Hudson" service). MTA Metro-North Railroad also contracts out ferry services connecting to Rockland County and Orange County.

MTA Metro-North Railroad was incorporated on September 22, 1982 as a subsidiary public benefit corporation of MTA. MTA or MTA Metro-North Railroad owns, leases or has easements or other rights to the rolling stock, physical plant and equipment material to the operation of the Harlem and Hudson Lines, and to the physical plant and equipment material to the operation of the New Haven Line. On February 28, 2020, MTA closed on the purchase of Grand Central Terminal, and the Harlem and Hudson railroad lines for approximately \$33 million. These properties were formerly held under a long-term lease. With respect to the New Haven Line, MTA or MTA Metro-North Railroad owns approximately 35% of the non-diesel rolling stock and CDOT owns the remainder.

The New Haven Line is operated by MTA Metro-North Railroad pursuant to the terms of an Amended and Restated Service Agreement dated as of June 21, 1985, among Connecticut (by CDOT), MTA and MTA Metro-North Railroad (the "ARSA"). Under the provisions of the ARSA, at the expiration of each term, it is automatically extended for five years, subject to the right of CDOT or MTA to terminate the ARSA on 18 months' written notice. The current term of the ARSA expires December 31, 2024.

The Port Jervis and Pascack Valley Lines are operated by NJ Transit pursuant to the terms of an Agreement for Operation dated as of July 27, 2006, between NJ Transit and MTA Metro-North Railroad (the "AFO"), the initial term of which expired on June 30, 2012. Under the provisions of the AFO, at the expiration of each term, it is automatically extended for an additional year, subject to the right of NJ Transit or MTA Metro-North Railroad to terminate the AFO by no later than March 15, in which case the AFO will terminate on June 30 of that same year.

Management

The following are brief biographies of the presidents of MTA Long Island Rail Road and MTA Metro-North Railroad.

Phillip Eng was named President of MTA Long Island Rail Road as of April 2018. He has served as Chief Operating Officer ("COO") of MTA since March 2017. As COO, Mr. Eng oversaw major operating initiatives at all the Related Entities including the delivery of new fare payment systems and mobile ticketing apps, advertising contracts, technology integration, overall procurement strategy, oversight of best practices used across all agencies, and other key MTA

priorities. Mr. Eng most recently served as Executive Deputy Commissioner and Chief Engineer of NYSDOT, where he oversaw all aspects of engineering, operations and capital planning. Mr. Eng has served the public at NYSDOT for more than 33 years, starting in 1983 as a junior engineer. He has held a number of key positions since then, including construction supervisor, director of operations, and as the regional director of the NYSDOT's New York City office. He is a licensed professional engineer in New York State, received his Bachelor of Engineering Degree from Cooper Union, and is a member of the American Society of Civil Engineers.

Catherine A. Rinaldi was named President of MTA Metro-North Railroad on February 21, 2018, after serving as Acting President following the retirement of Joseph J. Giulietti in 2017. Ms. Rinaldi joined MTA Metro-North Railroad in 2015 as Executive Vice President, overseeing the railroad's Strategic Planning Initiatives as well as its Capital Programs, Customer Service and Stations, Planning, Corporate and Public Affairs, Procurement, and Human Resources departments. Prior to that, Ms. Rinaldi was named MTA's Chief of Staff in 2011. She has also served as Vice President and General Counsel at MTA Long Island Rail Road. She joined MTA as Deputy Executive Director and General Counsel in 2003. Ms. Rinaldi is a *summa cum laude* graduate of Yale College and received her law degree from the University of Virginia School of Law.

Description of the Commuter System

MTA Long Island Rail Road Commuter Service and MTA Metro-North Commuter Service are the two largest commuter railroad services in the nation. MTA Long Island Rail Road uses 19 yards, two major repair shops and one support facility which have staff. In providing the Metro-North Commuter Railroad Service, MTA Metro-North Railroad uses 10 yards, Grand Central Terminal, two major repair shops and four support facilities. The commuter services operate every day of the year, although frequency of service varies by route, day of the week and time of day. The following table further details the MTA Long Island Rail Road Commuter Service and the MTA Metro-North Commuter Service.

MTA Long Island Rail Road and MTA Metro-North Commuter Service
as of December 31, 2019 ⁽¹⁾

	Revenue Passengers (in thousands) ⁽²⁾	Stations	Actual Route Miles	Main Line Track Miles	Passenger Cars
MTA Long Island Rail Road MTA Metro-North Railroad Totals	91,105 <u>84,980</u> 176,085	124 <u>112</u> 236	336.1 <u>285.5</u> 621.6		$\frac{1,124^{(4)}}{1,084^{(6)}}$ 2,208

(1) Certain of the stations, track and passenger cars are not owned by MTA, MTA Long Island Rail Road or MTA Metro-North Railroad.
 (2) The number of revenue passengers is determined in part by ascribing an assumed frequency of use to holders of weekly and monthly commutation tickets. MTA Metro-North Railroad's numbers do not include West of Hudson service.

(3) MTA Long Island Rail Road track miles total includes MTA Long Island Rail Road yards and sidings as well as track that is owned by Amtrak or maintained by New York and Atlantic Railway.

⁽⁴⁾ The number of MTA Long Island Rail Road passenger cars includes 14 that are not usable (10 M-7's and 4 M-3's).

⁽⁵⁾ Includes 40.96 miles along the Beacon Line, which is not in regular revenue service.

⁽⁶⁾ The number of MTA Metro-North Railroad passenger cars represents a reduction of cars from 2019, due to the retirement and disposal of older cars and heavily damaged cars that were long-term out of service and beyond economic repair.

Relationships with the State, Certain Local Governments and the Federal Government

State and Local Governments. MTA receives substantial amounts of funding for the operating and capital costs of the Commuter System from appropriations and subsidies provided by the State and certain local governments; typically that support provides between 45% - 49% of the Commuter System's revenues. To the extent that future operating assistance and the funding of the capital costs of subsequent capital programs projected to be funded by the State are subject to its receipt of tax revenues and the making of annual appropriations, the level of such funding may be affected by the current economic conditions in, and the financial condition of, the State.

Federal. MTA also receives substantial amounts of funding for the capital costs of the Commuter System from grants provided by the federal government. Federal operating assistance is not currently authorized by federal law for mass transit operations, including the Commuter System.

Other. Officials of the State, City and federal governments and the Inspector General of MTA periodically conduct audits and reviews of the operations of MTA Long Island Rail Road and MTA Metro-North Railroad. Officers of MTA Long Island Rail Road and MTA Metro-North Railroad respond to these reports and adopt some of the recommendations made therein or take other appropriate remedial actions.

MTA Long Island Rail Road and MTA Metro-North Railroad are subject to regulation by federal and State agencies and, with respect to MTA Metro-North Railroad, by Connecticut agencies with responsibilities for railroad safety. In general, they must maintain and equip their roadbed and rolling stock in compliance with minimum standards, file reports with respect to certain accidents and incidents and respond to recommendations for improving Commuter System safety.

Safety Initiatives

In 2019 MTA Metro-North Railroad made significant advances in its safety initiatives, enhancing current safety efforts to ensure a safe work environment. MTA Metro-North Railroad's goal is a 100% incident free operation, and it focuses on continuous safety improvement to achieve this through its System Safety Program Plan.

- Cameras on Rolling Stock: Installation of crash and fire-protected inward and outward-facing audio and image
 recorders was completed in the first quarter of 2020. The system has capacity for 30 days of continuous
 recording. The on-board cameras assist MTA Metro-North Railroad in accident/incident investigation and are
 used by management in carrying out efficiency testing and system wide performance monitoring programs.
- Confidential Close Call Reporting System ("C³RS"): MTA Metro-North Railroad has fully implemented C³RS, an industry-leading initiative. It is designed to encourage employees to report any potential safety hazard or breach of procedures that they may observe by providing them with a convenient, non-confrontational and anonymous method to do so. It is a partnership between the National Aeronautics and Space Administration (NASA) and the FRA, in conjunction with MTA Metro-North Railroad and its labor organizations.
- Positive Train Control ("PTC"): PTC enhances train safety by eliminating the potential for human error to contribute to train-to-train collisions, injuries stemming from trains traveling into zones where MTA Metro-North Railroad employees are working on tracks, or derailments caused by a train traveling too fast into a curve or into a misaligned switch. In early 2020, PTC was fully activated along MTA Metro-North Railroad's Harlem and Hudson lines. PTC is scheduled to be fully implemented throughout MTA Metro-North Railroad's system by the December 31, 2020 deadline.
- Enhanced Employee Protection System: The fully developed in-house system provides protection for Maintenance of Way employees by placing a blocking device on the track that can only be removed after Rail Traffic Controllers are provided a unique release code from the protected worker.
- First Responder Training: The program teaches first responders how to respond to incidents involving MTA Metro-North Railroad and provides guidance on safe operations around railroad equipment and the right-of-way. In 2019, there were over 2,000 first responders trained. The 2019 simulation exercise took place on September 29, 2019 on the Cos Cob Bridge on the New Haven Line in Greenwich, Connecticut.
- Obstructive Sleep Apnea: MTA Metro-North Railroad has continued its Obstructive Sleep Apnea ("OSA") program, which began in 2015, with the screening of all of MTA Metro-North Railroad's locomotive engineers. Locomotive engineers are screened for OSA as part of their pre-employment physical as well as their annual physical. OSA screening for conductors began in 2017. Through December 31, 2019, 838 conductors have been screened.
- Public Safety Program: Continued public safety outreach efforts are ongoing and include TRACKS (Together Railroads and Communities Keeping Safe), to promote grade-crossing awareness and rail safety to communities, schools, and others along with a new series of social media safety posts, along with printed safety promotions. The reach of the TRACKS program has grown by over 100% since its 2016 inception. In 2016, MTA Metro-North Railroad reached just over 50,000 individuals. In 2019, MTA Metro-North Railroad reached over 110,000 people.
- Safety Focus Week: MTA Metro-North Railroad holds a "Quarterly Safety Focus Week" at work locations throughout the railroad. Originally named "Safety Focus Day," it was extended to a week and has since been rebranded to "Safety Focus Week". This allows supervisors the time and ability to take part in multiple Safety

Focus events throughout their area. These events provide opportunities for employees to discuss relevant safety topics and provide feedback and safety concerns. Safety concerns are tracked and corrective actions are developed as necessary.

- Safety Leadership Structure: Safety Committees covering all six districts throughout MTA Metro-North Railroad's territory were reinvigorated to ensure continuity of communication from the district level to the local level. The overall goal is to ensure communication of safety awareness at all levels of MTA Metro-North Railroad from the President to front-line employees.
- Safety Training: The New Employee Safety Orientation ("NESO") training introduces new and promoted employees to safe work practices on the railroad and includes time in the field to ensure all employees are safe while working on the railroad. Supervising for Safety is an in-depth training program for all employees in a supervisory or management role. Supervising for Safety ("SFS") is a full day course that provides supervisors, foremen and managers the tools needed to identify risks, mitigate hazards and provide their employees with a safe working environment. In 2019, NESO trained 391 new employees and SFS trained 477 employees.
- Suicide Prevention Program: In March 2019, MTA Metro-North Railroad began a new suicide prevention pilot called QPR Training. QPR (Question, Persuade, Refer) teaches individuals how to recognize the warning signs of a suicide crisis, how to approach someone and bring them to safety and get them the help they need. QPR is not intended to be a form of counseling or treatment; QPR is intended to offer hope through positive action. Over 455 MTA Metro-North Railroad employees were trained in QPR, and training is on-going. The most recent enhancement to the suicide prevention program took place in April 2019 when Metro-North partnered with the Crisis Text Line, a free text messaging service with 24/7 support for those in a mental health crisis. MTA Metro-North Railroad worked with the Crisis Text Line to develop a unique keyword (NEXT2U) and effective messaging for a new poster campaign. Any commuter who is experiencing a mental health crisis and sees one of the posters, can text Metro-North's NEXT2U to 741741 and instantly connect with a trained Crisis Counselor to get the help they need.
- Safety Enterprise System Application: MTA Metro-North Railroad utilizes a Safety Enterprise System Application to proactively mitigate risks, manage compliance requirements, identify problem areas, manage/track incidents and monitor performance.
- Accident Investigation Unit: MTA Metro-North Railroad continued developing its Accident Investigation Unit, which conducts investigations of major accidents and incidents in an objective manner, making recommendations for corrective actions, ensuring their implementation and monitoring for effectiveness.
- Rail Safety Week: MTA Metro-North Railroad participated in the 3rd Annual U.S. Rail Safety Week, September 22-28, 2019, promoting rail and grade-crossing safety at stations and grade crossings. MTA Metro-North Railroad held 16 separate customer events and reached an estimated 5,500 individuals.
- Grade Crossing Safety: MTA Metro-North Railroad has partnered with WAZE (GPS application) to alert drivers, using the app to railroad crossings along their route. All of MTA Metro-North Railroad's grade crossings have a real-time verbal alert and/or a hazard icon that will display on screen each time a driver comes within 500 feet of the crossing using the WAZE Application.

The continuing goal of MTA Long Island Rail Road's corporate safety program is to work towards an accident-free workplace through the implementation of a comprehensive, sustainable, and measurable safety initiative designed to engage every level of the organization in promoting the value of safety. This initiative is a collaborative effort between the Corporate Safety Department; all MTA Long Island Rail Road operating, support, and administrative departments; and labor partners. Communication of safety as a core agency value begins at the highest executive levels and is constantly reinforced to all employees.

The Corporate Safety Department develops and oversees MTA Long Island Rail Road's comprehensive Safety Management System. MTA Long Island Rail Road's System Safety Program Plan ("SSPP") is in accordance with American Public Transportation Association standards and is a critical component of the Safety Management System approach. For more than a decade, MTA Long Island Rail Road had voluntarily participated in a triennial audit of its SSPP by the American Public Transportation Association, which has routinely recognized the strength of MTA Long Island Rail Road's safety program. Also in 2019, MTA Long Island Rail Road's SSPP was recertified by The Public Transportation Safety Board (PTSB) and approved at the May 23, 2019 board meeting. In 2019, a consultant continued working on a more in-depth

review of the program for both internal compliance and to ensure compliance with future FRA regulatory mandates. In March 2020, the FRA reissued their final rule and MTA Long Island Rail Road has begun the planning process to execute the mandate. Due to the current COVID-19 pandemic, MTA Long Island Rail Road has submitted waivers to the FRA for a delay to this rule's implementation as well as other FRA mandated programs.

Key 2019 safety initiatives included:

- Quarterly "Safety FOCUS Days" across MTA Long Island Rail Road, each attended by approximately 4,000 employees. Weeklong Safety, Health, and Wellness Events throughout the property on all tours focusing on seasonal safety trends, personal protective equipment, fire extinguisher safety, physical fitness, fatigue, and electrical safety. The President and Vice President of Corporate Safety also meet with a small group of frontline supervisors from various departments to discuss how they are experiencing safety in the field.
- Continued participation in C3RS, a collaborative effort between management, labor, and the FRA, that provides a mechanism for employees to confidentially report "close calls" that could have resulted in operating and safety incidents.
- Continued working with MTA Headquarters, NYSDOT, Nassau and Suffolk counties, local government authorities, and a third-party consultant to develop improved safety measures at railroad grade crossings.
- Continued working with a third-party vendor making improvements to the recently developed new enterprise safety system. This system replaced MTA Long Island Rail Road's existing mainframe-based Accident Control System that had served as the railroad's FRA accident-reporting system and the official depository of accident and incident data.
- Continued implementation of a "Safety Management Systems" approach to MTA Long Island Rail Road's overall safety program. The Safety Management Systems approach, which has been endorsed by the FTA, the FRA, the U.S. Department of Transportation, other transportation authorities, supplements an engineering-centered process with increased attention to the "human element," data sharing, and measurements of safety performance.
- Continued screening of locomotive engineers for sleep disorders, including obstructive sleep apnea.
- Continued Customer Safety Awareness Days in partnership with NJ Transit, Amtrak, and MTA New York City Transit at Penn Station. Messaging focuses on "Let's Travel Safely Together" highlighting how customer behaviors can help reduce customer accidents and injuries.
- Continued labor-management partnership committee meetings focusing on track safety. The committee is comprised of representatives from Corporate Safety, Employee Training, and Engineering Department management and labor representatives.
- A dedicated Roadway Worker Compliance Unit conducts field observations of employees in compliance with Title 49 Code of Federal Regulation Part 214 requirements to achieve safety and operational goals. All observations are recorded in the corporate Employee Compliance Reporting System.
- A dedicated Accident Investigation Unit conducts investigations of major accidents and incidents in an objective manner, making recommendations for corrective actions; ensuring their implementation; and monitoring for effectiveness. The Corporate Safety Department also revised its current Accident Investigation Policy. The new corporate policy SAFE-019, is scheduled for implementation in the first quarter 2020
- Cameras on Rolling Stock: Installation of crash and fire-protected inward and outward facing audio and image recorders started on August 2017 and continued throughout 2019. Installation is expected to be completed the second quarter of 2020. The devices are capable of providing recordings to verify that train crew actions are in accordance with rules and procedures. The system has capacity for 30 days of continuous recording. The on-board cameras assist the railroad in accident/incident investigation and are used by management in carrying out efficiency testing and system wide performance monitoring programs.
- Participated in the National Safety Council Employee Safety Perception Survey for all MTA Long Island Rail Road employees: Following collection of survey results, Corporate Safety began working with labor organizations and operating departments to address survey findings and implement new safety initiatives.

• MTA Long Island Rail Road Safety program: T.R.A.C.K.S. (Together Railroads And Communities Keeping Safe) is a joint venture between MTA Long Island Rail Road's Corporate Safety Department and the MTA Police Department to reach out to schools, camps, day care and community groups. The programs stress the importance of safety at grade crossings and the dangers of being on or near the tracks. The T.R.A.C.K.S. program is a free program open to all schools, daycare centers, professional driver groups, civic, senior and fraternal organizations, In 2019 almost 125,000 individuals were trained through the T.R.A.C.K.S. and Operation Lifesaver programs.

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

(popular name - MTA Bridges and Tunnels)

Legal Status and Public Purpose

MTA Bridges and Tunnels, a public benefit corporation, became an affiliate of MTA effective March 1, 1968. MTA Bridges and Tunnels is empowered, among other things, to construct and operate certain vehicle bridges, tunnels and highways and other public facilities in the City. The following are the vehicular toll facilities operated by MTA Bridges and Tunnels:

MTA Bridges and Tunnels Facilities

Seven Bridges Robert F. Kennedy Bridge Verrazzano-Narrows Bridge Bronx-Whitestone Bridge Throgs Neck Bridge Henry Hudson Bridge Marine Parkway-Gil Hodges Memorial Bridge Cross Bay Veterans Memorial Bridge <u>Two Tunnels</u> Hugh L. Carey Tunnel Queens Midtown Tunnel

A more detailed description of the MTA Bridges and Tunnels Facilities is set forth below.

MTA Bridges and Tunnels also operates, pursuant to a management agreement with a private contractor, the Battery Parking Garage located adjacent to the Manhattan plaza of the Hugh L. Carey Tunnel. The garage was opened in 1950, has since been renovated, and has space for 2,100 vehicles.

Title to the MTA Bridges and Tunnels Facilities and the Battery Parking Garage is vested in the City, but MTA Bridges and Tunnels has the use and occupancy of such facilities so long as its corporate existence continues.

As more fully described herein under "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Central Business District Tolling Program" MTA Bridges and Tunnels will also operate the CBD Tolling Program.

Management

The following are brief biographies of certain senior operating officers of MTA Bridges and Tunnels.

Daniel F. DeCrescenzo Jr., Acting President since January 2019. Mr. DeCrescenzo has been with MTA Bridges and Tunnels for over 28 years, most recently as the Vice President and Chief of Operations. Mr. DeCrescenzo also serves on the MTA Board of the Transportation Operations Coordination Committee. Throughout his career, Mr. DeCrescenzo has worked at every level within the Operations Department, holding key management roles through Super Storm Sandy and the 9/11 World Trade Center Attacks, when he served as MTA Bridges and Tunnels' primary contact for regional coordination. More recently, as Vice President and Chief of Operations, Mr. DeCrescenzo oversaw the transition of the Operations Department to agency-wide Cashless Tolling in 2017. Mr. DeCrescenzo holds numerous certifications in Incident and

Emergency Management such as Enhanced Incident Management Unified Command Course from Texas A&M Extension Services.

Joe Keane, Vice President since 2013 and Chief Engineer since 2010. Mr. Keane has been at MTA Bridges and Tunnels since 1988 and previously worked for NYCDOT. Mr. Keane is a licensed professional engineer in both New York and New Jersey. He holds a BS in Civil Engineering from the National University of Ireland and a MS in Structural Engineering from City College of New York as well as an Executive Construction Management Diploma from Polytechnic University, New York.

Julia R. Christ, Acting Senior Vice President and General Counsel since April 2020. Ms. Christ had served as Executive Agency General Counsel since 2017 and Deputy General Counsel from 2013 to 2017, among various other attorney positions. Before joining MTA Bridges and Tunnels in February 1999, Ms. Christ was an Assistant Attorney General and Managing Attorney for the Appeals and Opinions Division of the New York State Attorney General's Office. Ms. Christ received a JD degree from Hofstra Law School and a BA in Criminal Justice and Political Science from Long Island University-C.W. Post College.

Dore Abrams, Acting Vice President and Chief Financial Officer since January 2019. Mr. Abrams joined MTA Bridges and Tunnels in 2000 and has served in various positions including Acting Assistant Vice President and Deputy Chief Financial Officer, Operating Budget Director and Economist/Revenue Analyst. Before joining MTA Bridges and Tunnels, he was a Supervising Analyst in the Tax Policy, Revenue Forecasting and Economic Analysis Task Force of New York City's Office of Management and Budget. Mr. Abrams received an MPA in Public Finance, an MA in Music Education and a BS in Classical Piano Performance, all from New York University.

MTA Bridges and Tunnels Facilities*

The following is a brief description of the MTA Bridges and Tunnels Facilities, listed in order of revenue generation:

<u>Robert F. Kennedy Bridge</u> - Crosses the East River and the Harlem River and connects the Boroughs of Queens, The Bronx and Manhattan. Opened to traffic in 1936, it generally carries eight traffic lanes between Queens and The Bronx via Wards Island and Randall's Island except where the Wards Island Viaduct has been widened to nine lanes; the bridge also generally carries six traffic lanes between Randall's Island and Manhattan. These three major crossings are interconnected by viaducts.

<u>Verrazzano-Narrows Bridge</u> - Connects the Boroughs of Brooklyn and Staten Island. It is a double deck structure with the upper level deck carrying seven traffic lanes including a reversible lane and the lower level deck carrying six lanes. The upper deck was opened to traffic in 1964 and the lower deck in 1969. The fully reversible lane on the upper level was implemented in September 2017.

<u>Throgs Neck Bridge</u> - Crosses the upper East River between the Boroughs of Queens and The Bronx approximately two miles east of the Bronx-Whitestone Bridge. Opened in 1961, it carries six traffic lanes.

<u>Bronx-Whitestone Bridge</u> - Crosses the East River and connects the Boroughs of Queens and The Bronx. The roadways of the bridge, which was opened to traffic with four lanes in 1939, were widened so as to carry six traffic lanes commencing in 1946.

<u>Queens Midtown Tunnel</u> - Crosses under the East River and connects the Boroughs of Queens and Manhattan. Opened to traffic in 1940, it consists of twin tubes, carrying an aggregate of four traffic lanes.

<u>Hugh L. Carey Tunnel</u> - Crosses under the East River at its mouth and connects the Boroughs of Brooklyn and Manhattan. Opened to traffic in 1950, it consists of twin tubes, carrying an aggregate of four traffic lanes.

Henry Hudson Bridge - Crosses the Harlem River between the Spuyten Duyvil section of The Bronx and the northern end of Manhattan. It has two roadway levels, each level carrying three traffic lanes, the lower level having been

^{*} For purposes of the bond resolutions, the MTA Bridges and Tunnels Facilities are referred to as the "TBTA Facilities."

opened to traffic in 1936 and the upper level in 1938. The operation of this bridge includes the maintenance of a small part of the Henry Hudson Parkway.

<u>Cross Bay Veterans Memorial Bridge</u> - Crosses Beach Channel in Jamaica Bay to Rockaway Peninsula, and is located in Queens. Reconstructed and opened to traffic in May 1970, this bridge carries three traffic lanes in each direction, dropping to two lanes in each direction just before the Cashless Tolling gantry. Its operation includes the maintenance of a small part of the Cross Bay Parkway.

<u>Marine Parkway-Gil Hodges Memorial Bridge</u> - Crosses Rockaway Inlet and connects Rockaway Peninsula in Queens, with Brooklyn. Opened in 1937, it carries four traffic lanes. The operation of this bridge includes the maintenance of the Marine Parkway from the Cashless Tolling gantries to Jacob Riis Park.

MTA Bridges and Tunnels also operates the Battery Parking Garage. Only the bridges and tunnels constitute MTA Bridges and Tunnels Facilities under the MTA Bridges and Tunnels bond resolutions, though the net revenues derived from the operation of the Battery Parking Garage are included as net revenues that are pledged to the payment of such bonds.

MTA Bridges and Tunnels is a founding member of the E-ZPass Interagency Group ("IAG"), which is a consortium of 31 agencies in 17 states that operate an interoperable electronic toll collection system.

Authorized Projects of MTA Bridges and Tunnels

MTA Bridges and Tunnels' powers have been broadened by the Legislature beyond its traditional role as a vehicular toll facility authority within the City. MTA Bridges and Tunnels is also authorized to participate in the financing of capital projects for the Transit and Commuter Systems, the MTA Bus System and MTA Staten Island Railway. The CBD Tolling Program is also an authorized project of MTA Bridges and Tunnels. See "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Central Business District Tolling Program." Under the MTA Bridges and Tunnels for CBD Tolling Program purposes, but moneys in the CBD Tolling Capital Lockbox Fund may not be used for MTA Bridges and Tunnels Facilities and cannot be comingled with any other MTA Bridges and Tunnels monies. Currently, the proceeds of bonds issued under the MTA Bridges and Tunnels Senior and Subordinate Resolutions may not be used to finance CBD Tolling Program facilities, though they may in the future qualify as additional projects that can be financed thereunder.

The capital assets constructed or acquired by MTA Bridges and Tunnels as part of the Transit and Commuter Systems, the MTA Bus System and MTA Staten Island Railway are to be transferred or leased for nominal consideration to MTA, MTA New York City Transit or a designated subsidiary of either of them, and neither such conveyance nor any capital grants made by MTA Bridges and Tunnels will produce revenues for MTA Bridges and Tunnels. Alternatively, such capital assets may be sold to parties other than a Related Entity and leased back by MTA Bridges and Tunnels for subleasing for a nominal consideration to MTA, MTA New York City Transit or a designated subsidiary or leased directly to such Related Entity at the expense of MTA Bridges and Tunnels.

Under existing law, MTA Bridges and Tunnels has no obligation with respect to the operation and maintenance of the equipment or facilities financed as part of the Transit and Commuter Systems or MTA Staten Island Railway. The MTA Reform and Traffic Mobility Act, enacted in April 2019, authorized MTA Bridges and Tunnels Bridge and Tunnel Officers ("Bridge and Tunnel Officers") to provide violation enforcement on facilities owned by MTA, MTA New York City Transit or a designated subsidiary. The first official deployment of the Bridge and Tunnel Officers to the New York City Transit Authority Buses was on August 5, 2019.

MTA CONSTRUCTION AND DEVELOPMENT COMPANY (formerly known as MTA CAPITAL CONSTRUCTION COMPANY)

(popular name – MTA Construction and Development)

Legal Status and Public Purpose

MTA Construction and Development was created as an MTA subsidiary in 2003 and is responsible for administration of the planning, design and construction of major MTA projects which span multiple Capital Programs.

Current projects include East Side Access, Second Avenue Subway, Penn Station Access, the Long Island Rail Road Expansion project, and the Canarsie Tunnel Rehabilitation Project, as well as MTA-wide capital security projects. Recently opened projects include Second Avenue Subway Phase One and the No. 7 subway line extension. For information related to the impact of the COVID-19 pandemic on the finances and operations of MTA and its Related Entities, see "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES." See also "PART 1 – CERTAIN RISK FACTORS – *Respond to Developing Economic Environment - Funding of Capital Programs and Operations*".

In June 2019, AlixPartners submitted to the MTA Board the Transformation Plan. That Transformation Plan contained a series of key recommendations, including that the construction and development function be centralized across the Related Entities and across the lifecycle of the capital projects.

The MTA Board officially adopted the Transformation Plan in July 2019. Since that time, the Related Entities have been working to implement AlixPartners' recommendation of consolidating the agencies' construction and development work into one central organization. After considering all available options, MTA determined that the best and most efficient way to establish the new central organization was to repurpose the MTA's Capital Construction agency and rename it as "MTA Construction and Development Company," which change was effectuated in December 2019. In accordance with the Transformation Plan, commencing in 2020, MTA Construction and Development will be taking on responsibility for additional capital funded construction and development work.

The new MTA Construction and Development organization will better reflect the way MTA will be managing its capital projects going forward. At the center of this new organization will be four business function teams that will be responsible for the core agency functions of planning, development, project delivery and contracting. The Planning team will focus on building the right projects, and on establishing an MTA-wide vision and priorities that meet the region's needs. The Development team will focus on using a more cost-efficient and effective design-build contracting approach, allowing MTA to bundle contracts and achieve greater accountability by contractors. The Delivery team will focus on building projects on time, within budget and more effectively, working hand-in-hand with the leaders of each construction project, and requiring agency accountability for projects from concept through close-out. The Contracting team will work with the development and project delivery teams to develop and administer the construction and consultant contracts. Together, the organization will be focused on establishing an MTA-wide vision for investments, which maximizes the impacts on system reliability, customer experience and regional mobility, and delivers those investments in the most cost-efficient way.

Management

John N. "Janno" Lieber is the Chief Development Officer of MTA and also serves as the President of MTA Construction and Development.

From 2003 to 2017, Mr. Lieber served as President of World Trade Center Properties LLC, where he was responsible for managing all aspects of the Silverstein organization's efforts to rebuild at the World Trade Center ("WTC") site, including planning, design and construction issues; business, financing and legal matters; and public affairs, government and community relations.

Mr. Lieber previously served as Senior Vice President of the Lawrence Ruben Company and as an independent consultant specializing in public-private development issues. During the Clinton Administration, Mr. Lieber worked at the U.S. Department of Transportation, where his most recent position was Assistant Secretary for Transportation Policy.

East Side Access

The East Side Access project consists of construction of a 3.5-mile commuter rail connection between the MTA Long Island Rail Road's Main and Port Washington lines in Queens and a new terminal being constructed beneath Grand Central Terminal. The project also includes upgrades to the Harold Interlocking infrastructure. The new connection will increase MTA Long Island Rail Road's capacity into Manhattan, dramatically shortening the travel time for Long Island and eastern Queens commuters traveling to the east side of Manhattan and improve the reliability and operational flexibility of the Harold Interlocking. MTA began construction of certain portions of the East Side Access project in 2001.

Based upon a recently completed review of the East Side Access project, the estimated cost to complete the project has increased to \$11.133 billion. Additional budget for the project, reflecting the revised estimate to complete, was approved

and is part of the 2020-2024 Capital Program. The expected revenue service date for the East Side Access project, however, remains December 2022.

Federal funds for the project, primarily received through an FFGA with the FTA are \$2.70 billion, all of which have been received. The State is contributing \$450 million in direct funding for this project. MTA is financing the remaining portion of the cost of the East Side Access project using MTA bond proceeds.

MTA's Regional Investment program, which was to be progressed concurrently with the East Side Access program, includes improvements to Harold Interlocking that will benefit the regional transportation network by separating Amtrak and MTA Long Island Rail Road train operations and increase Amtrak train speeds between Penn Station and the New Haven line. The Regional Investment program is funded in the 2010-2014, 2015-2019 and 2020-2024 Capital Programs and is partially funded by the FRA's High Speed Intercity Passenger Rail Program. The balance of funding to complete Regional Investment scope will be requested in the 2025-2029 Capital Program.

Three major East Side Access contracts reached substantial completion in March 2019. The Manhattan North Structures contract (CM006) was declared substantially complete at a cost of \$362 million. This included the installation of the permanent lining, duct bench and embedded MEP in all running tunnels and structures north of the Grand Central Terminal station caverns, construction of the 50th Street air plenum cavern and the underground 55th Street ventilation facility as well as rehabilitation to the existing 63rd Street tunnel. East Side Access also substantially completed the Plaza Substation and Queens Structures contract (CQ032) at a cost of \$265 million. This contract carried out structural and architectural rehabilitation to existing facilities along with the existing 63rd St. Tunnel, construction of the Plaza Interlocking below grade facilities for Mainline Traction Power Substation C06, the Yard Lead Service Building, Facility Power Substation B11, ventilation, signal, emergency power, mechanical and communication rooms and construction of the Mid-Day Storage Yard Traction Power Substation. It also included installation of Con Edison manholes and conduits for permanent power services and miscellaneous site work for the Mid-Day Storage Yard. The Harold Structures Part 3 contract (CH057D) was completed at a cost of \$29.6 million. This contract included removal and replacement of existing tracks with new track and special track work in Harold Interlocking in Queens.

During 2019, no new contracts were awarded in connection with the East Side Access project.

Second Avenue Subway

The Second Avenue Subway is a multi-phased project to provide MTA customers with a new subway service ultimately stretching approximately 8.5 miles under the East Side of Manhattan from 125th Street to Hanover Square.

Under the current plan, the project is expected to be built in four phases.

- *Phase One*: Construction includes tunnels from 105th Street and 2nd Avenue to 63rd Street and Third Avenue, with new stations along 2nd Avenue at 96th, 86th and 72nd Streets and new entrances to and newly opened portions of the existing Lexington Avenue/63rd Street Station. The new service will run from 96th Street and 2nd Avenue to the existing Lexington Avenue/63rd Street Station, where it will connect with the N/Q/R Line.
- *Phase Two*: The new subway line will be extended north from 96th Street to 125th Street. Subway service will run from 125th Street to the existing Lexington Avenue/63rd Street Station, where it will connect with the N/Q/R Line.
- *Phase Three*: The new subway line will be extended south to Houston Street. Subway service will run from 125th Street to Houston Street and 2nd Avenue.
- *Phase Four*: In this final phase the new subway line will be extended south to Hanover Square. Subway service will run from 125th Street to Hanover Square in Lower Manhattan.

Second Avenue Subway Phase One started revenue service on January 1, 2017. The capital cost for Phase One is \$4.601 billion. As of December 2019, MTA received from the FTA approximately \$1.54 billion, primarily through an FFGA. The State is contributing \$450 million in direct funding for this project. The remainder of the necessary funding for this project will be achieved through the issuance of MTA bonds.

Second Avenue Subway Phase Two, which will complete the project's northern operational phase, commenced in December 2016 with the award of the environmental and design contracts. As of December 2019, \$205 million has been committed for Phase Two. Initial funding for this project was \$1.735 billion to address environmental work, design, real estate, project support, and preliminary construction work. Additional funding of \$4.555 billion is included in the 2020-2024 Capital Program, bringing the total Phase Two budget to \$6.290 billion. Work on the environmental and design phases of this project is ongoing.

Penn Station Access

The Penn Station Access project will allow MTA Metro-North Railroad to initiate service between its New Haven Line and Penn Station via Amtrak's Hell Gate Line through the East Bronx and Queens. Construction of new intermediate stations in the East Bronx is proposed in the vicinity of Co-op City, Morris Park, Parkchester/Van Nest and Hunts Point.

As of December 2019, \$64 million has been committed for the Penn Station Access project. The 2020-2024 Capital Program contains \$1.131 billion for Penn Station Access. It includes the replenishment of \$243 million, which MTA Long Island Rail Road borrowed in the 2015-2019 Capital Program to advance the purchase of M-9 railcars for fleet growth related to future East Side Access service assumptions.

Funds totaling \$452 million have been allocated in the MTA's 2015-2019 Capital Program, bringing the total project budget to \$1.583 billion.

MTA entered into a Memorandum of Understanding with Amtrak in connection with the Penn Station Access project in February 2019 and is currently forecasting award of the Design-Build contract for the project in the fourth quarter of 2020.

MTA Long Island Rail Road Expansion Project

In December 2017, the MTA Board granted approval to award two contracts for the MTA Long Island Rail Road Expansion project. The first contract, a design-build contract, calls for the awardee to design and construct approximately 10 miles of third track on the Main Line, remove seven street-level grade crossings, and provide grade-separated vehicular and pedestrian crossings at five locations. This contract contains options for various completion work and for up to five parking facilities. The second contract is a project management consulting services contract for a period of three years, with options to extend the contract period for two additional one-year terms.

Heavy construction commenced in October 2018. Bridge replacements, grade crossing work, station improvements, and parking structure construction are also underway. The project is over 30% compete and is currently forecasted to be completed in April 2023.

As of December 2019, \$1.79 billion of the \$2.050 billion in the 2015-2019 Capital Program for the MTA Long Island Rail Road Expansion Project has been committed for the project management consultant contract and the base scope of the design-build contract. Additional funding of \$538 million was included in the 2020-2024 Capital Program, bringing the total project budget to \$2.589 billion.

Canarsie Tunnel Rehabilitation Project

In April 2017, the MTA Board granted approval for MTA New York City Transit to award construction of the Canarsie Tunnel Rehabilitation Project on the L Line in Manhattan and Brooklyn. This project will address damage caused by Superstorm Sandy in the tunnel and other capital work in the vicinity of the tunnel in order to improve service and reliability. Construction commenced on April 13, 2017. Weeknight and weekend subway tunnel closures began in April 2019.

This federally-funded MTA New York City Transit project is included in the 2010-2014 and 2015-2019 MTA Capital Programs.

In January 2019, MTA announced that MTA Construction and Development will manage the construction of this project, which is now over 80% complete and forecasted to be completed in November 2020.

PART 5. STATISTICAL INFORMATION

See also "PART 1. BUSINESS – UPDATE REGARDING IMPACTS FROM THE CORONAVIRUS PANDEMIC AND CERTAIN MTA, FEDERAL AND STATE RESPONSES" herein.

RIDERSHIP AND FACILITIES USE

Transit System (MTA New York City Transit and MaBSTOA) Ridership

General. Subway revenue passengers in 2019 totaled 1.7 billion, a decrease of approximately 1.1% from 2018. Bus ridership in 2019 was 557 million, 2.2% lower than in 2018.

To meet the overall growth in demand, MTA New York City Transit expanded service from 1996 to 2009, adding new capacity on its subway lines and bus routes. MetroCard fare incentives were introduced beginning in 1997. Due to financial circumstances in 2010, bus and subway service cuts were required along with other budget reduction programs in order to balance the 2011 budget. In more recent years, there have been expansions in service. In 2013 and 2014, MTA New York City Transit restored some of the bus service eliminated in 2010, and added four new bus routes. In 2015, service on the No. 7 line was extended to 34th Street-Hudson Yards and two new Select Bus Service routes were established. In 2016, an additional two Select Bus Service routes were added, followed by two additional routes added in 2017 and one additional route in 2018. And on January 1, 2017, the Second Avenue Subway began service, with Q train service running from three newly opened stations (96th Street, 86th Street, 72nd Street) to 63rd Street, and continuing through Manhattan and into Brooklyn. In November 2018, the WTC Cortlandt Street station reopened for the first time since 2001.

While some of the Transit System changes in use in the past few years have been attributable to the changes in the economy, overall ridership changes are also attributable to other factors including efforts to reduce fare evasion and improve security. Significant factors which impact ridership, discussed more fully below, include fare increases and fare incentives, Transit System performance and levels of services, Transit System security and employment in the City generally as well as the relative level and cost of service provided by competing transportation modes such as taxis, competing taxi services such as Uber and Lyft, licensed and unlicensed vanpools, private car and bus services and charter operators. Interruptions to service or temporary closures of lines resulting from major capital improvement projects to the Transit System by MTA New York City Transit or service disruptions caused by City infrastructure problems not under the control of MTA New York City Transit and MaBSTOA or from repairs to or rehabilitation of City infrastructure by the City or its agencies could adversely impact ridership and revenues. The effect would depend on the nature, severity and duration of the service interruptions.

Historical Ridership. The following table sets forth annual ridership on the Transit System since 2010 and the percentage increase (decrease) each year. Relative to the 2010 levels, subway revenue passengers have increased by 6%, bus revenue passengers have decreased by 20%, paratransit revenue passengers have increased by 21%, and total revenue passengers have decreased by 2%. From 2010 to 2019, average weekday subway passengers increased 7%, while average weekend subway passengers increased by 2%. As indicated below, annual subway ridership has declined in the past four years, including a 2.7% decrease in 2018, and a 1.7% decrease in 2017. Factors contributing to the 2017 and 2018 subway ridership declines include several major construction projects underway in 2017 and 2018, more maintenance work resulting in off-peak and weekend service changes, and increased competition from for-hire services (Uber, Lyft, etc.). Annual bus ridership has declined over the past six years, including a 2.2% decrease in 2019. Factors contributing to the recent bus ridership declines include fare evasion, increased congestion resulting in slow bus speeds, the availability of alternate travel options such as CitiBike and for-hire services, and fare increases in 2015, 2017 and 2019.

Revenue Passengers⁽¹⁾ (in thousands)

Years	Subway	Subway Increase/ (Decrease)	Bus	Bus Increase/ (Decrease)	Para- Transit ⁽²⁾	Paratransit Increase/ (Decrease)	Total Revenue Passengers ⁽³⁾	Total Increase/ (Decrease)
2010	1,604,198	1.5	696,923	(4.1)	9,017	6.2	2,310,138	(0.2)
2011	1,640,435	2.3	670,699	(3.8)	8,947	(0.8)	2,320,080	0.4
2012	1,654,582	0.9	667,911	(0.4)	9,343	4.4	2,331,836	0.5
2013	1,707,556	3.2	677,569	1.4	9,266	(0.8)	2,394,391	2.7
2014	1,751,288	2.6	667,051	(1.6)	8,884	(4.1)	2,427,223	1.4
2015	1,762,565	0.6	650,682	(2.5)	8,829	(0.6)	2,422,076	(0.2)
2016	1,756,815	(0.3)	638,413	(1.9)	8,938	1.2	2,404,166	(0.7)
2017	1,727,367	(1.7)	602,620	(5.6)	8,585	(3.9)	2,338,572	(3.4)
2018	1,680,060	(2.7)	569,361	(5.5)	9,867	14.9	2,259,288	(3.4)
2019	1,697,787	1.1	557,037	(2.2)	10,918	10.6	2,265,742	0.3

(1) "Revenue Passengers" are defined as all passengers for whom revenue is received, either through direct fare payment (cash, MetroCards) or fare reimbursements (senior citizens, school children, the physically disabled). "Revenue Passengers" statistics count passengers that use a free intermodal or bus-to-bus transfer as an additional passenger though they are not paying an additional fare.

⁽²⁾ Paratransit ridership includes trips made by personal care attendants and guests.

⁽³⁾ Includes subway, bus and paratransit.

Fares. Since September 1975 when the base fare was 50 cents, the base fare charged for use of the Transit System has been raised eleven times. The most recent fare increase, which became effective April 21, 2019, did not adjust the base fare.

Date of Increase	New Base Fare	Amount of Increase	Percent Increase
1980 – June	\$0.60	\$0.10	20.0%
1981 – July	0.75	0.15	25.0
1984 – January	0.90	0.15	20.0
1986 – January	1.00	0.10	11.1
1990 – January	1.15	0.15	15.0
1992 – January	1.25	0.10	8.7
1995 – November	1.50	0.25	20.0
2003 – May	2.00	0.50	33.3
2009 – June	2.25	0.25	12.5
2013 – March	2.50	0.25	11.1
2015 – March	2.75	0.25	10.0

Each fare increase listed in the chart above, except the 1986 increase, has been followed by an immediate decrease in ridership.

The above-referenced increases in the base fare have also been accompanied by other changes in the pricing of various products, including express bus fares and MetroCards of various durations. The following describes the pricing changes during the last decade.

In addition to the \$0.25 increase in the base fare in June 2009, on June 28, 2009, MTA New York City Transit increased the cost of a 1-day unlimited-ride MetroCard from \$7.50 to \$8.25, the cost of a 7-day unlimited-ride MetroCard from \$25 to \$27, the cost of a 14-day unlimited-ride MetroCard from \$47 to \$51.50, and the cost of a 30-day unlimited-ride MetroCard from \$81 to \$89. The bonus on Pay-Per-Ride MetroCards remained at 15%, while the minimum purchase required to receive the bonus increased from \$7 to \$8. The express bus base fare increased from \$5.00 to \$5.50 and the cost of the 7-day Express Bus Plus MetroCard increased from \$41 to \$45.

On December 30, 2010, MTA New York City Transit eliminated the 1-day and 14-day unlimited-ride MetroCards, increased the cost of a 7-day unlimited-ride MetroCard from \$27 to \$29 and increased the cost of a 30-day unlimited-ride MetroCard from \$89 to \$104. The bonus on Pay-Per-Ride MetroCards was changed from 15% on purchases of \$8 or more to 7% on purchases of \$10 or more. The express bus fare remained \$5.50, while the cost of a 7-day Express Bus Plus MetroCard increased from \$45 to \$50.

In addition to the \$0.25 increase in the base fare on March 3, 2013, MTA New York City Transit increased the cost of a 7-day unlimited-ride MetroCard from \$29 to \$30, and the cost of a 30-day unlimited-ride MetroCard from \$104 to \$112. In addition, the bonus on Pay-Per-Ride MetroCards was changed from 7% on purchases of \$10 or more to 5% on purchases of \$5 or more. The express bus fare increased from \$5.50 to \$6.00, while the cost of a 7-day Express Bus Plus MetroCard increased from \$50 to \$55.

In addition to the \$0.25 increase in the base fare on March 22, 2015, MTA New York City Transit increased the cost of a 7-day unlimited-ride MetroCard from \$30 to \$31, and the cost of a 30-day unlimited-ride MetroCard from \$112 to \$116.50. In addition, the bonus on Pay-Per-Ride MetroCards was changed from 5% on purchases of \$5 or more to 11% on purchases of \$5.50 or more. The express bus fare increased from \$6.00 to \$6.50, while the cost of a 7-day Express Bus Plus MetroCard increased from \$55 to \$57.25.

On March 19, 2017, MTA New York City Transit increased the cost of a 7-day unlimited ride MetroCard from \$31 to \$32, the cost of 30-day unlimited ride MetroCard from \$116.50 to \$121, and the cost of 7-day Express Bus Plus MetroCard from \$57.25 to \$59.50. The bonus on Pay-Per-Ride MetroCards was changed from 11% to 5% on purchases of \$5.50 or more. The subway and local bus fare remain unchanged at \$2.75 and the express bus fare remains at \$6.50.

On April 21, 2019, MTA New York City Transit increased the cost of a 7-day unlimited ride MetroCard from \$32 to \$33, the cost of 30-day unlimited ride MetroCard from \$121 to \$127, and the cost of 7-day Express Bus Plus MetroCard from \$59.50 to \$62. The 5% bonus on Pay-Per-Ride MetroCard purchases of \$5.50 or more has been eliminated. The subway and local bus fare remain unchanged at \$2.75 and the express bus fare increased from \$6.50 to \$6.75.

The following chart shows historical fare information since 2010.

Historical Fare Information

Year	CPI ⁽¹⁾	Base Fare	Base Fare Real Fare \$ ⁽²⁾	Average Fares ⁽³⁾	Non-Student Average Fares ⁽⁴⁾
2010 ⁽⁵⁾	240.9	2.25	0.890	1.407	1.492
2011	247.7	2.25	0.866	1.543	1.637
2012	252.6	2.25	0.849	1.555	1.646
2013(6)	256.8	2.50	0.928	1.665	1.763
2014	260.2	2.50	0.916	1.704	1.799
2015 ⁽⁷⁾	260.6	2.75	1.006	1.773	1.867
2016	263.4	2.75	0.995	1.803	1.896
2017(8)	268.5	2.75	0.976	1.886	1.980
2018	273.6	2.75	0.958	1.936	2.026
2019 ⁽⁹⁾	278.2	2.75	0.942	1.998	2.09

⁽¹⁾ CPI All Urban Consumers, New York, N.Y. – Northeastern N.J.; 1982-84=100.0. The Consumer Price Index ("CPI") levels listed are the annual average for each year. 2010 estimate based on IHS Global Insight forecast of 1.20% increase in NY/NJ CPI.

⁽²⁾ Base fare after adjusting for inflation since 1982 (1982 CPI = 95.3).

⁽³⁾ Total farebox revenue divided by revenue passenger trips (including students). Average fares in the table are for the full year.

⁽⁴⁾ Non-student revenue divided by revenue passenger trips (excluding students).

(5) Effective December 30, 2010, 1-day and 14-day unlimited-ride MetroCards were eliminated, the cost of a 7-day unlimited-ride MetroCard increased from \$27 to \$29 and the cost of a 30-day unlimited-ride MetroCard increased from \$89 to \$104. The bonus on Pay-Per-Ride MetroCards was changed from 15% on purchases of \$8 or more to 7% on purchases of \$10 or more. The express bus fare remained \$5.50, while the cost of a 7-day Express Bus Plus MetroCard increased from \$45 to \$50.

(6) Effective March 3, 2013, the base fare increased from \$2.25 to \$2.50, the express bus fare increased from \$5.50 to \$6.00, the bonus on Pay-Per-Ride MetroCards was changed from 7% on purchases of \$10.00 or more to 5% on purchases of \$5.00 or more and 7-day and 30-day unlimited-ride MetroCard fares increased. Average fare shown in table is for full year.

(7) Effective March 22, 2015, the base fare increased from \$2.50 to \$2.75, the express fare increased from \$6.00 to \$6.50, the bonus on Pay-Per-Ride MetroCards was changed from 5% on purchases of \$5.00 or more to 11% on purchases of \$5.50 or more, and 7-day and 30-day unlimited-ride MetroCard fares increased. Average fare shown is for full year.

⁽⁸⁾ Effective March 19, 2017, 7-day and 30-day unlimited-ride MetroCard fare increased, and the MetroCard bonus on purchases of \$5.50 or more decreased from 11% to 5%.

⁽⁹⁾ Effective April 21, 2019, 7-day and 30-day unlimited-ride MetroCard fares increased, and the 5% MetroCard bonus on purchases of \$5.50 or more were eliminated.

MTA New York City Transit offers the following MetroCard discount and bonus programs as of April 21, 2019, which was the last day such discount and bonus programs were adjusted:

- free intermodal (subway-to-bus and bus-to-subway) transfers;
- unlimited-ride 7-day and 30-day passes;
- unlimited-ride 7-day combined express bus and regular bus and subway pass;
- free and half-fare student programs;
- half-fare programs for senior citizens and persons with disabilities; and
- free replacement of lost or stolen unlimited-ride 30-day and 7-day express passes (limit of two per calendar year per holder) if the holder paid by credit or debit card.

Subway System Performance and Level of Service. A number of measures are used to quantify Transit System performance and the level of Transit System service, including total vehicle miles traveled ("VMT"), on-time performance and mean distance between failures ("MDBF"), which are discussed in further detail below.

Since implementation of the capital programs began in early 1982, Transit System performance, on the whole, has improved. MTA New York City Transit has replaced or overhauled its entire fleet since then. The entire fleet is now free of painted graffiti, and subway cars in 2019 ran an average of 127,743 miles between breakdowns, up from an average of 7,145 in 1982. Since the end of 1992, all the Transit System's 665 miles of mainline track have been maintained in a state of good repair, which has reduced track related mainline derailments and delays. Other aspects of the passenger environment have also experienced significant improvement. Almost all cars have adequate climate control and are displaying the correct signage.

Further improvements, as well as the maintenance of significant improvements since the inception of the capital programs in 1982 and the improvements in Transit System performance produced as a result thereof, are dependent upon the completion of final work of the 2010-2014 Transit Capital Program, the 2015-2019 Transit Capital Program, and subsequent capital programs.

In late July 2017, a MTA New York City Transit Subway Action Plan was set forth to address service disruptions, service delays, overcrowding and infrastructure disrepair. The initial phase of the Subway Action Plan focuses on stabilizing the subway system and preparing it for modernization by addressing key factors which account for a large percentage of the major incidents causing delays on the system. The Subway Action Plan includes focus on signal and track maintenance; car reliability; system safety and cleanliness; and customer communications. In 2017, MTA New York City Transit introduced new customer-focused performance measures, including Service Delivered, Additional Train Time, and Additional Platform Time, as well as an online Subway Performance Metrics Dashboard. These steps were designed to provide customers with more information relevant to their experience using the system.

Beginning in 2018, MTA New York City Transit reversed recent declines in system performance. For example, weekday terminal on-time performance was 80.2% compared to 63.4% for the year 2017, a 16.8% improvement. Moreover, December 2019 was the 7th consecutive month with weekday on-time performance above 80% and 2019 was the first full-year average over 80% since 2013. These metrics reflect many factors, including changes to the operating environment and a significant increase in work on the right of way, specifically Capital Program work and maintenance requirements.

The following table shows the VMT for subways since 2010.

	Subway VMT	% Increase /
Year	(in millions)	(Decrease)
2010	361	(0.7)
2011	353	(2.2)
2012	352	(0.3)
2013	356	1.1
2014	356	0.0
2015	356	0.0
2016	358	0.6
2017	360	0.6
2018	359	(0.3)
2019	355	(1.1)

Vehicle Miles Traveled by Subways

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Subway vehicle miles traveled was above 350 million vehicle miles over the last ten years. In 2019, the decline in vehicle service miles was attributable to the Hurricane Sandy related repairs on the L line, which reduced evening and weekend service from every 4-6 minutes to every 10 minutes in Brooklyn and every 20 minutes along the full line. These changes in service were in effect starting in the end of April 2019. In 2016, the increase in VMT was mostly due to the 7 Line Extension functioning on a full year basis, versus a partial year basis in 2015. VMT remained stable (at 356 million vehicle miles traveled) from 2013 through 2015. The decrease from 2011 to 2012 would have been an increase if the impact of Superstorm Sandy were excluded, representing higher ridership, including an additional leap year day. The increase from 2012 to 2013 was due to the impact of Superstorm Sandy in 2012 and higher ridership in 2013.

The Transit Capital Program has necessitated and will continue to necessitate temporary service disruptions that adversely affect certain aspects of Transit System performance. These disruptions are required to facilitate work on certain capital projects. Such disruptions include the rerouting of subway trains, the closing of either part or all of certain passenger stations, cessation of either local or express service, train delays and reduction of train speeds.

Subway MDBF represents total revenue car miles divided by the number of car failures. A car failure is any incident, including delays, relating to equipment in revenue service that is attributable to that equipment and/or its maintenance.

The following table shows subway MDBF since 2010.

Subway MDBF

		% Increase/
Year	(in miles)	(Decrease)
2010	170,217	15.0
2011	172,700	1.5
2012	162,138	(6.1)
2013	153,382	(5.4)
2014	141,202	(7.9)
2015	131,325	(7.0)
2016	112,208	(14.6)
2017	121,220	8.0
2018	121,116	(0.1)
2019	127,743	5.5

Subway MDBF improvements are attributable to many factors, including: increased supervision and management control of the MTA New York City Transit work force, improved maintenance and inspection procedures, better training of employees, and the influx of replacement and overhauled subway cars funded through the capital program. The Scheduled

Maintenance System (the "Scheduled Maintenance System") program is the agency's primary means of maintaining fleet reliability. Under the Scheduled Maintenance System, important car components and subsystems are overhauled or replaced at regular intervals – seven years for most subsystems.

In 2018, MDBF was almost unchanged from 2017, which had reversed a previous five-year trend of declining MDBF. The decreases experienced from 2011 to 2016 were due mostly to the aging of the fleet in several car classes. The average age of the fleet had grown over the previous five years (i.e., between 2011 and 2016) from 16.9 to 21.5 years. In addition, in 2016, the hotter-than-normal summer season impacted HVAC equipment and the Millennium fleet, which had been boosting the MDBF with above standard MDBF levels, settled into lower MDBF levels which, in turn, decreased overall MDBF. Improvements in MDBF experienced in 2017 are attributable to a variety of factors, including focus on replacing specific car components with high failure rates, and initiatives included in the Subway Action Plan. In 2019, MDBF improved by 5.5%, as seven of the older, lower performing car classes completed their Scheduled Maintenance System, including the R160s, which make up 25% of the fleet, and newer cars are added to the fleet. In addition, by the end of 2019, 278 of 316 R-179 rail cars were delivered and the Subway Action Plan further contributed to the improvement. In January 2018, a contract was awarded for the purchase of 535 new R-211 rail cars for both the subway and Staten Island Railway, with options for additional rail cars; delivery of these rail cars is expected to begin in 2022.

Bus System Performance and Level of Service. Bus MDBF measures the average rate of bus failure in terms of miles of operation. While declining bus MDBF affects the quality of bus service, it generally is not expected to have as significant an impact on bus ridership as MDBF has on subway ridership, since the breakdown of one bus generally does not affect the operations of other buses on the same route.

There has been an overall increase in bus MDBF since the beginning of the capital program process and MDBF for the last three years has reached record levels not achieved in prior periods. MDBF performance improvements have resulted from a variety of factors, including integrating new buses into the fleet, improved maintenance practices, and a focus on datadriven solutions to address issues that have previously led to declining reliability. MDBF of 4,221 in 2014 decreased by 14.6% from 2013, due to a population of significantly over-age buses that pose a greater challenge for bus operations. A large number of these buses were replaced in 2015 and 2016 under the 2010-2014 Capital Program, with additional buses delivered in 2017 under that program. The remaining over-age fleet is anticipated to be replaced under the 2015-2019 Capital Program. From 2015, MDBF has increased from an average of 4,618 miles between mechanical breakdowns to 7,749 miles, a cumulative increase in MDBF of 68% over the past five years, following the decline in 2014. These significant increases over the past five years were due primarily to noted replacement in 2015 through 2018 of many overage buses (those over their useful life of 12 years). Overage buses are significantly less reliable when utilized beyond their expected life. In addition, the new buses have improved reliability over their expected life relative to the models they replaced due to focused efforts by the organization to review new fleets, identify and correct problem areas, and introduce new technologies.

The following table shows bus MDBF since 2010.

Bus MDBF

		% Increase/
Year	(in miles)	(Decrease)
2010	3,678	(6.2)
2011	3,340	(9.2)
2012	4,546	36.1
2013	4,941	8.7
2014	4,221	(14.6)
2015	4,618	9.4
2016	5,957	29.0
2017	6,225	4.5
2018	6,244	0.3
2019	7,967	27.6

Numerous schedule and route adjustments have been and continue to be made to better match bus availability to passenger demand. The following table shows the VMT for buses since 2010.

Vehicle Miles Traveled by Buses

		% Increase/
Year	(in millions)	(Decrease)
2010	115	(6.2)
2011	113	(1.7)
2012	114	0.9
2013	117	2.6
2014	116	(0.5)
2015	117	0.9
2016	118	0.9
2017	118	0.0
2018	118	0.0
2019	120	1.7

For the last seven years VMT has been quite stable, with values within a range of 117 to 120 million vehicle miles traveled. The reduction from 2010 to 2011 was due to annualization of the June 2010 service reductions and service suspensions during severe winter snow storms and Hurricane Irene. The increase from 2011 to 2012 would have been higher if the impact of Superstorm Sandy were excluded, representing higher mileage, including an additional leap year day. The increase from 2012 to 2013 was due mostly to the impact of Superstorm Sandy in 2012.

Transit System Security. Ridership is also affected by the public's perception of security and order in the Transit System. Security around the Transit System has been increased since the terrorist attacks on the WTC. The public's perception of security and order is also affected by the presence of homeless people, beggars, illegal vendors and fare evaders in the Transit System. MTA New York City Transit and the New York City Police Department have taken significant steps over the past three decades to address these problems. These include instituting an outreach program to transport the homeless from the Transit System to City shelters, increasing the uniformed police presence throughout the Transit System and reducing fare evasion and serious crimes. The fare evasion ratio was 4.95% in 2019. Police presence has been important to reductions in subway crime and fare evasion.

Employment. City employment levels generally have a significant impact on the level of subway ridership. The weak economy in 2009 adversely affected both employment and subway ridership, with both employment and subway ridership declining 2.7%. With the local economy recovering in 2010 and 2011, subway ridership again outpaced the local economy, increasing 3.8% from 2009 to 2011 compared with a 2.8% employment increase over the same period. However, employment has outpaced subway ridership since 2011, increasing 20.8% from 2011 to 2019, compared to a 3.5% subway ridership increase over the same period. From 2015 to 2019, City employment increased 8.2%, compared to a 3.5% subway ridership decrease over the same period. The 2016-2018 subway decline was due in part to major construction projects, off-peak and weekend service changes, increased competition from for-hire vehicles, and the trend was reversed in 2019 with less construction and service disruptions.

Automated Fare Collection. MTA New York City Transit employs an automated fare collection, or AFC, system in all subway stations and on all MTA New York City Transit, MaBSTOA, and MTA Bus routes. AFC includes, among other elements, subway turnstiles and bus fare boxes that accept a magnetic farecard ("MetroCard") in payment. AFC provided the technical capability to eliminate two-fare zones as well as to implement flexible intermodal and interagency fare structures. MetroCard enables passengers to purchase multiple rides and use the MetroCard to enter the Transit System through AFC turnstiles that automatically deduct the cost of each use. The subway turnstiles are designed to be tamper-resistant and to inhibit fare evasion by being more difficult to pass without payment. The bus fareboxes issue magnetically encoded transfers that are designed to reduce fare evasion resulting from the use of invalid transfers.

In May 2019, MTA began the roll out of the OMNY fare payment system at select subway stations and on all Staten Island buses. Between December 2019 and late 2020, the remainder of the subway system, all buses, and Staten Island Railway is expected to become accessible through OMNY payment. Throughout the expansion, the only fare product to be offered through OMNY is the full fare, pay per ride. OMNY is a design/build project that is expected to be fully functional and complete in 2023. In the interim, additional features will be introduced and layered onto the system, including the introduction of all fare products; new self-service online sales channels; and an OMNY Card. In 2023, it is expected that MetroCard will be fully decommissioned. The development and roll out of OMNY is being performed by Cubic pursuant to a contract awarded by MTA in November 2017. Cubic delivered similar technology for London's public transit system.

In 2019, 97.1% of non-student trips were made with MetroCard. 45.9% of 2019 non-student trips were made with Pay-Per-Ride MetroCards, and 51.3% were made on unlimited-ride MetroCards (29.4% with 30-day cards and 21.9% with 7-day cards). Also in 2019, 0.2% trips were made by the newly-initiated OMNY cards. The market share of all non-MetroCard fare media (cash, single-ride tickets and OMNY) was 2.9% in 2019.

Out-of-system sales outlets, including over 3,955 active retail locations, generated approximately \$599 million in MetroCard sales in 2019, a 1% decrease from 2018. Market share for MetroCard out-of-system sales is approximately 12.1%. During 2019, sales of nearly 3.0 million MetroCards valued at \$334 million were made to transit benefit companies delivering tax-advantaged transportation benefits through MetroCard to their client employers/employees. Unlimited ride products accounted for approximately 82% of these sales in 2019, including total annual card sales of \$185 million, with more than 126,000 employees enrolled in this annual card program at year's end. In 2019, the amount that mass transit commuters were permitted for monthly payroll deductions was \$260.

MetroCard Vending Machines ("MVMs") allow riders to purchase MetroCards using cash, credit, debit or Electronic Benefits Transfer ("EBT") cards. The MetroCard Express Machine ("MEM") is a compact vending unit that accepts only credit, debit or EBT cards for payment. A total of 1,690 MVMs were servicing 472 active stations throughout MTA New York City Transit's subway system in 2019, as well as the MTA Staten Island Railway, Staten Island Ferry's St. George terminal, Orchard Beach in the Bronx, the NICE Bus Hempstead Terminal, Roosevelt Island Tramway, and Grand Central Terminal. In addition, 599 MEMs were in service in 281 active stations by the end of 2019. 898 MetroCard Fare Collectors were in service serving 457 active Select Bus Service bus stops. Vending machine sales totaled \$3.37 billion in 2019, accounting for 81% of total in-system sales.

Purchasers of a 30-day or 7-day express unlimited ride MetroCard with a credit or debit card through the MVMs and MEMs are the beneficiaries of a free replacement if their MetroCards are lost or stolen, subject to a limit of two per holder per calendar year.

Commuter System Ridership

From 2009 to 2019, ridership on MTA Metro-North Railroad increased by 9.0% and ridership on MTA Long Island Rail Road increased by 9.8%. In 2019, MTA Metro-North Railroad ridership increased slightly, totaling 84.9 million and MTA Long Island Rail Road ridership increased to 91.1 million.

The following table details annual commuter services ridership over the last ten years and the percentage increase/(decrease) each year.

Revenue Passengers⁽¹⁾ (in thousands)

Year	MTA Long Island Rail Road	MTA Long Island Rail Road Percent Increase/(Decrease)	MTA Metro- North Railroad ⁽²⁾	MTA Metro-North Railroad Percent Increase/(Decrease)
2010	81,556	(1.7)	79,211	1.6
2011	81,027	(0.6)	80,364	1.5
2012	81,754	0.9	81,341	1.2
2013	83,384	2.0	81,802	0.6
2014	85,868	3.0	82,975	1.4
2015	87,648	2.1	84,272	1.5
2016	89,352	1.9	84,808	0.6
2017	89,159	(0.2)	84,879	0.1
2018	89,773	0.7	84,911	0.0
2019	91,105	1.5	84,980	0.1

⁽¹⁾ A single rider traveling to and from the same destination is counted as two revenue passengers. The number of revenue passengers is determined in part by ascribing an assumed frequency of use to holders of weekly and monthly commutation tickets.

(2) MTA Metro-North Railroad ridership totals do not include West of Hudson riders. In 2019, West of Hudson ridership on MTA Metro-North Railroad totaled 1.6 million passengers. A variety of factors affect ridership on the Commuter System. Among the most important are level of fares, Commuter System performance and regional employment discussed below. Other factors that may be important to Commuter System ridership include the amount and level of service provided and security.

In 2019, MTA Metro-North Railroad ridership was 69,700 or 0.01% greater than 2018, with 2019 representing the tenth consecutive year of ridership growth. Ridership increased on the Hudson Line which had the largest growth with record ridership. Both the Harlem and New Haven lines were slightly below 2018, down 0.3% and 0.2% respectively. MTA Metro-North Railroad's annual West of Hudson ridership decreased by 0.1%, due to a decrease on Pascack Valley Line of 2.0%, largely offset by a 1.2% increase on the Port Jervis Line.

In 2019, MTA Long Island Rail Road ridership finished the year with a new modern-day record, carrying 91.1 million customers, compared to the post-war high of 91.8 million customers in 1949. Total ridership increased by 1.5% for the full year 2019 compared to 2018, while non-commutation ridership increased by 4.1% for the year 2019 with 40.5 million customers, outpacing the growth in the commutation market that finished the year 2019 slightly down 0.5% with 50.6 million customers when compared to 2018.

Fares. The chart below identifies the years in which the base fares charged for the use of the Commuter System within the State have been raised. The most recent increase became effective on April 21, 2019, following the MTA Board's approval of an increase in fares for travel on MTA Long Island Rail Road and the State portion of MTA Metro-North Railroad.

	Approximate Increase in New York State
Date of Increase	Average Fares
1984 – January	20%
1986 – January	11
1990 – January	15
1995 – November	9
2003 – May	25
2005 – March	$7.6/6.2^{*}$
2008 – March	3.85
2009 – June	10
2010 – December	9
2013 – March	9
2015 – March	4
2017 – March	4
2019 – April	4

^{*} Effective March 1, 2005, the average fare increased by 7.6% on MTA Long Island Rail Road and by 6.2% on MTA Metro-North Railroad for service between points in the State.

In addition, CDOT, with the MTA Board's approval, has authorized implementation of increased fare levels for travel to and from Connecticut stations on a number of occasions. A cumulative increase of approximately 16.2% for New Haven Line fares for travel to or from stations located in Connecticut was phased in, beginning January 1, 2012 (5.3%), with additional increases on January 1, 2013 (5.04%) and January 1, 2014 (5.04%). Another cumulative fare increase was phased in, which commenced as of January 1, 2015 (1.0%), with an additional increase on January 1, 2016 (1.0%). On December 1, 2016, a 6% increase was implemented, which subsumed the previously-planned 1.0% increase that was to have occurred on January 1, 2017. Another 1.0% was implemented on January 1, 2018.

MTA Long Island Rail Road and MTA Metro-North Railroad offer several discounts that enable customers to purchase transportation at fares below the cost of a one-way peak ticket. Discounted fares are available based on the ticket type (e.g., Monthly ticket, Weekly, 10-Trip Off Peak, Group, Family, Child, CityTicket) and the purchase option selected (e.g., Mail and Ride, Commuter Benefit Programs, Buy Before Boarding).

The following chart shows historical fare information from 2010.

			ng Island Road	Harlem		MTA Metro-North Railroad Hudson		New Haven	
Year	CPI ⁽¹⁾	Average Nominal Fare ⁽²⁾	Real Fare 1982\$	Average Nominal Fare	Real Fare 1982\$	Average Nominal Fare	Real Fare 1982\$	Average Nominal Fare	Real Fare 1982\$
2010	240.9	6.42	2.54	5.96	2.36	7.29	2.88	6.85	2.71
2011	247.7	7.06	2.71	6.54	2.51	8.01	3.08	7.01	2.70
2012	252.6	7.11	2.68	6.57	2.48	8.06	3.04	7.32	2.76
2013	256.8	7.58	2.81	7.00	2.60	8.57	3.18	7.57	2.81
2014	260.2	7.67	2.81	7.08	2.59	8.65	3.17	8.00	2.93
2015	260.6	7.93	2.90	7.34	2.68	8.94	3.27	8.14	2.98
2016	263.4	7.97	2.88	7.39	2.68	9.00	3.26	8.27	2.99
2017	268.5	8.16	2.90	7.63	2.71	9.31	3.31	8.70	3.09
2018	273.6	8.25	2.89	7.69	2.68	9.38	3.27	8.78	3.06
2019	278.2	8.44	2.89	7.93	2.71	9.64	3.30	8.89	3.04
2020 (Est) ⁽³⁾	282.3	8.51	2.87	8.01	2.69	9.77	3.28	9.01	3.03

(1) CPI All Urban Consumers, New York-Northern New Jersey-Long Island, NY-NJ-CT-PA, 1982-84=100.0. The CPI levels listed are the annual average for each year. CPI is estimated by IHS Global Insight.

⁽²⁾ Average Nominal Fare means the fare paid per ride, determined by dividing total passenger revenues by total revenue passengers.

⁽³⁾ 2020 fares estimates based on 2020 budget and reflect the impact of the average 4% MTA fare increase effective April 21, 2019.

Characteristics of Commuter System Performance. Characteristics of performance potentially affecting ridership include on-time performance, the fleet's mean distance between failures, the number of standees and platform waiting time. Since implementation of the capital program began in early 1982, Commuter System performance as measured by those indicia has, on the whole, improved, although some of those indicia have shown declines during certain periods. Implementation of certain capital projects that are part of the Commuter Capital Programs may involve temporary disruptions of service as various portions of the Commuter System are refurbished or replaced. MTA Long Island Rail Road and MTA Metro-North Railroad schedule capital project work so as to minimize disruption of operations. In addition, as the Commuter Capital Program for rolling stock replacement progresses from its normal system replacement and the rolling stock is retired at the end of its useful life, further fluctuations may appear in various measures of Commuter System performance.

The following table shows on-time performance for MTA Long Island Rail Road and MTA Metro-North Railroad for the last ten years.

On-Time Performance (%)

		MTA Metro-North
Year	MTA Long Island Rail Road	Railroad
2010	92.8	97.7
2011	93.7	96.9
2012	94.3	97.6
2013	93.5	94.8
2014	92.0	91.5
2015	91.6	93.5
2016	92.7	93.7
2017	91.4	93.4
2018	90.4	90.1
2019	92.4%	94.4

For MTA Metro-North Railroad, on-time performance ("OTP") for 2019 totaled 94.4%, 1.4% above the goal of 93.0% and a 4.3% improvement over 2018.

MTA Long Island Rail Road's OTP in 2019 was 92.4%, an increase of 2.0% from the previous year. The increase in OTP was attributable to the positive impacts of MTA Long Island Rail Road's "LIRR Forward" strategy, which strategy prioritized identifying and proactively addressing the root causes of system malfunctions. These measures enabled MTA Long Island Rail Road to mitigate and avoid service interruptions and delays and, combined with favorable weather, helped further MTA Long Island Rail Road's goal of providing safe and more reliable service.

The following table shows the fleet's MDBF for MTA Long Island Rail Road and MTA Metro-North Railroad for the last ten years.

	MTA Long Is	MTA Long Island Rail Road		MTA Metro-North Railroad	
Year	MDBF (in miles)	Increase/ (Decrease)	MDBF (in miles)	Increase/ (Decrease)	
2010	149,651	2.7	129,329	11.4	
2011	169,724	13.4	114,347	(11.6)	
2012	194,382	14.5	165,694	44.9	
2013	205,890	5.9	156,617	(5.5)	
2014	206,226	0.2	147,063	(6.1)	
2015	208,383	1.0	199,838	35.9	
2016	211,975	1.7	216,772	8.0	
2017	205,270	(3.2)	193,883	(10.6)	
2018	185,217	(9.8)	144,017	(25.7)	
2019	185,829	0.3	239,188	66%	

MDBF

In 2019, MTA Metro-North Railroad's fleet MDBF experienced an increase to 239,188 miles. Car availability also improved as installation of PTC equipment was completed, resulting in a 99.4% "consist compliance rate," which is the percentage of cars required for service to provide customer with seats each day.

For MTA Long Island Rail Road, the MDBF for the entire fleet in 2019 was 185,829 miles, above the railroad's 2019 goal of 185,000 miles, and represents a 0.3% increase from 2018.

Regional Employment. Regional employment levels, primarily in the City, have a significant impact on commuter railroad ridership. See "RIDERSHIP AND FACILITIES USE – Transit System (MTA New York City Transit and MaBSTOA) Ridership – *Employment*" above in this Part 5.

MTA Bus Ridership

General. MTA Bus was created as a public benefit corporation subsidiary of MTA in 2004 to integrate seven private bus companies into MTA. The final MTA Bus company merger was completed in February 2006.

Since MTA Bus launched operations, bus performance has improved significantly. MTA Bus has replaced most of its fleet and currently operates 516 express buses, 416 low-floor hybrid electric local buses, 216 low-floor compressed natural gas standard buses, 45 clean diesel standard buses and 135 articulated clean diesel local buses. The bus fleet age fluctuates based on the number of new buses being purchased and how many over-age buses remain in service. On February 20, 2006 (the first day of complete consolidated operations), the fleet age was 9.43 years; it was 10.94 years at the end of 2019. MTA Bus relies on the timely procurement and delivery of new buses to replace over-age buses in order to improve MDBF and equipment reliability. However, by the end of the 2015-2019 Capital Program, MTA Bus will still have buses greater than 12 years of age in service.

Historical Ridership. MTA Bus has been enhancing service since 2006, incrementally increasing capacity on all of its bus routes. MTA Bus revenue passengers in 2019 totaled 120.55 million, a decrease of 0.74% from 2018. Local bus ridership similarly decreased by 0.32%, and express ridership decreased by 6.48%. In 2019, average weekday ridership was 1.16% lower than in 2018, while average weekend combined ridership increased by 1.13% compared to 2018. The average weekend ridership growth was due to an increase in local bus ridership on Saturdays (1.69%), while Sundays experienced a more modest growth, and express bus ridership decreased on both Saturdays and Sundays. MTA Bus ridership began its current decline in 2014 and follows a national and international trend experienced by other transit agencies. Several factors have contributed to the decline, including increased congestion and slower travel speeds. A portion of the ridership decline is also in areas where there is a high overlap with subways. Specifically, MTA Bus express bus riders are more sensitive to travel time issues as they have other options (local bus-to-subway or direct access to the subway). Biking has also become more popular over the years. The following table sets forth total annual ridership and the year-over-year percentage increase/decrease for MTA Bus since 2010.

Revenue Passengers⁽¹⁾ (in thousands)

		Bus Increase/
Years	<u>Ridership</u>	(Decrease)
2010	120,237	0.2%
2011	119 , 381 ⁽²⁾	(0.7)
2012	120,877	1.3
2013	124,951	3.4
2014	125,581	0.5
2015	125,400	(0.01)
2016	125,617	0.2
2017	122,214	(2.7)
2018	121,448	(0.6)
2019	120,552	(0.8)

(1) "Revenue Passengers" are defined as all passengers for whom revenue is received, either through direct fare payment (cash, MetroCards) or fare reimbursements (senior citizens, school children and the physically disabled). "Revenue Passengers" statistics count passengers that use a free intermodal or bus-to-bus transfer as an additional passenger though they are not paying an additional fare.

⁽²⁾ 2011 ridership number has been revised with transfer counts.

Fares. MTA Bus offers the same discount and bonus programs as MTA New York City Transit and adheres to the same fare structure, including pricing for passes, as MTA New York City Transit. See "RIDERSHIP AND FACILITIES USE — Transit System (MTA New York City Transit and MaBSTOA) — *Fares*" above.

Performance and Level of Service. Buses ran an average of 7,117 miles between mechanical breakdowns during 2019, a 5.2% decrease over a 7,506 average MDBF for 2018.

The following table shows MTA Bus MDBF for the past ten years.

Bus MDBF

		Increase/
Year	(in miles)	(Decrease)
2010	3,438	2.0%
2011	3,430	(0.3)
2012	5,300	54.5
2013	5,548	4.7
2014	5,366	(3.3)
2015	5,741	7.0
2016	7,271	26.7
2017	7,479	2.9
2018	7,506	0.4
2019	7,117	(5.2)

The following table shows total actual vehicle miles traveled by MTA Bus for the past ten years.

		Increase/
Year	VMT	(Decrease)
2010	35.2	(4.9)%
2011	35.2	0.2
2012	35.4	0.7
2013	36.4	2.8
2014	36.4	0.0
2015	36.8	1.1
2016	37.1	0.8
2017	36.9	(0.5)
2018	36.9	0.0
2019	37.0	0.3
	** * * *	

Total Actual Vehicle Miles Traveled by MTA Bus (in millions)

MTA Bridges and Tunnels - Total Revenue Vehicles

The following table shows the total number of revenue vehicles at the MTA Bridges and Tunnels Facilities for the past ten years.

MTA Bridges and Tunnels Facilities Total Revenue Vehicles

	Revenue			Revenue	
	Vehicles	Increase/		Vehicles	Increase/
Year	<u>000's</u>	(Decrease)	Year	<u>000's</u>	(Decrease)
2010 ⁽¹⁾	291,714	0.1%	2015(3)	297,980	4.0
2011	283,575	(2.8)	2016	307,417	3.2
2012	282,753	(0.3)	2017(4)	310,038	0.9
2013(2)	284,528	0.6	2018	322,290	4.0
2014	286,417	0.7	2019(5)	329,397	2.2

⁽¹⁾ Toll increase became effective December 30, 2010.

⁽²⁾ Toll increase became effective March 3, 2013.

⁽³⁾ Toll increase became effective March 22, 2015.

⁽⁴⁾ Toll increase became effective March 19, 2017.

⁽⁵⁾ Toll increase became effective March 31, 2019.

MTA Bridges and Tunnels' independent engineers, Stantec Consulting Services, Inc. ("Stantec"), have prepared a report (the "Stantec Report") to develop projections of traffic, revenues and expenses for the MTA Bridges and Tunnels Facilities entitled "History and Projection of Traffic, Toll Revenues and Expenses and Review of Physical Conditions of the Facilities of Triborough Bridge and Tunnel Authority," dated April 17, 2020. The report also contains certain historical revenue, traffic and more detailed toll rate information not included herein. A copy of the Stantec Report is attached to the Continued Disclosure Filings and, for convenience, has also been posted on the MTA website under "About the MTA – Financial Information – Investor Information" at www.mta.info. The Stantec Report is included by specific cross-reference herein.

Toll Rates

General Power to Establish Tolls.

 MTA Bridges and Tunnels' power to establish toll rates is not subject to the approval of any governmental entity. However, prior to implementing proposed changes in its toll rates, MTA Bridges and Tunnels is required to comply with the State Environmental Quality Review Act, which generally requires an assessment of environmental impacts of the proposed action, if any. • Tolls on the VNB and the Throgs Neck Bridge, which were constructed pursuant to the General Bridge Act of 1946, 33 U.S.C. 525 et seq., may be subject to the standard imposed by Section 135 of the Federal-Aid Highway Act of 1987, Pub.L. 100-17, that tolls on bridges constructed under the authority of certain Federal legislation, including the General Bridge Act of 1946, be "just and reasonable." MTA Bridges and Tunnels believes that the tolls on all of its vehicular toll facilities are just and reasonable.

Resident E-Token, Discount and Rebate Programs.

- The MTA Bridges and Tunnels Act was amended in 1981 to require that residents of Broad Channel and the Rockaway Peninsula be afforded the right to purchase tokens for the Cross Bay Veterans Memorial Bridge at a cost of 66-2/3% of the regular crossing fare.
- The MTA Bridges and Tunnels Act was further amended in 1983 to:
 - eliminate the residency requirement for the purchase of reduced rate tokens for the Cross Bay Veterans Memorial Bridge,
 - require the offering of tokens for the Marine Parkway-Gil Hodges Memorial Bridge at a cost of 66-2/3% of the regular crossing fare, and
 - require the offering of tokens to residents of Richmond County (Staten Island) for the VNB at a cost of 80% of the regular crossing fare.
- The MTA Bridges and Tunnels Act was amended in 1993 to provide that surcharges, in addition to the regular toll, imposed by MTA Bridges and Tunnels on the Verrazzano-Narrows, Marine Parkway-Gil Hodges Memorial and Cross Bay Veterans Memorial Bridges shall not be treated as part of the regular crossing fare for the purpose of computing the reduced token cost discussed in this paragraph. The 1993 amendment also provided that residents of Staten Island, Broad Channel and the Rockaway Peninsula are entitled to a permanent exemption from any applicable surcharge imposed in 1993 on such bridges.
- MTA has a program to rebate the tolls for E-ZPass customers who are residents of Broad Channel and the Rockaway Peninsula using the Cross Bay Veterans Memorial Bridge. Between July 23, 2010 and March 31, 2012, the E-ZPass resident discount applied to the first two trips across the Cross Bay Veterans Memorial Bridge, and all subsequent trips during a calendar day using the same E-ZPass tag were eligible for a toll rebate funded by MTA. Since April 1, 2012, all trips are rebated and funded by MTA. See "Additional Outer Borough Transportation Account Funded Toll Rebate Programs" below for a discussion of a toll rebate for Queens residents for use of the Cross Bay Veterans Memorial Bridge.

Since 2014, MTA has had two toll rebate programs at the VNB: the Staten Island Resident ("SIR") Rebate Program, available for residents of Staten Island participating in the SIR E-ZPass toll discount plan, and the Verrazzano-Narrows Bridge Commercial Rebate Program ("VNB Commercial Rebate Program"), available for commercial vehicles making more than ten trips per month using the same New York Customer Service Center ("NYCSC") E-ZPass account. Since they are partially funded by the State, the VNB Rebate Programs follow the State Fiscal Year.

As discussed below, in December 2019, the federal Further Consolidated Appropriations Act 2020 was enacted, which eliminated the one-way tolling requirement at the VNB and restored split tolling so that tolls will be collected in the Staten Island-bound and Brooklyn-bound directions (split tolling), which is expected by the end of 2020. Changes are being made to the VNB Rebate Programs to accommodate implementation of split tolling at the VNB, to wit: the SIR Rebate Program is being changed so that the effective, post-rebate toll for Staten Island residents is \$2.75 in each direction (from \$5.50 in the Staten Island-bound direction) and the VNB Commercial Rebate Program's eligibility threshold is being changed to more than 20 trips per month in either direction for trucks and other commercial vehicles using the same New York Customer Service Center E-ZPass account (from ten trips a month, collected Staten-Island bound).

The projected annualized cost of the 2020-2021 VNB Rebate Program is approximately \$26.8 million with \$14 million for the 2020-2021 VNB Commercial Rebate Program and for the 2020-2021 SIR Rebate Program, funded equally by the State and MTA, with the State's contribution provided by appropriations to MTA. An additional \$12.8 million will be required to keep the effective post-rebate SIR E-ZPass toll at the following effective tolls:

- \$5.50 while tolls are collected only in the Staten Island-bound direction by providing a \$1.38 rebate for Staten Island Residents with three or more trips per month;
- \$5.50 while tolls are collected only in the Staten Island-bound direction by providing a \$1.76 rebate for Staten Island Residents with less than three trips per month;
- \$2.75 when split tolling is implemented by providing a \$0.69 rebate for Staten Island Residents with three or more trips per month; and
- \$2.75 when split tolling is implemented by providing a \$0.88 rebate for Staten Island Residents with less than three trips per month in either direction.

The additional \$12.8 million needed to maintain these effective tolls is expected to come from the following sources:

- \$6.8 million in State appropriations to MTA; and
- \$6.0 million from the Outer Borough Transportation Account established under Section 1270-i(3) of the Public Authorities Law, allocated to MTA pursuant to an agreement between the Governor and State Legislative leaders.

The money to fund a year's estimated costs for the VNB Rebate Programs is transferred by MTA to MTA Bridges and Tunnels during the State fiscal year. The 2020-2021 VNB Rebate Programs will be implemented as specified herein only for such periods during which both (a) MTA's total financial responsibility, net of State actions or available offsets, does not exceed \$7 million for the 2020-2021 SIR Rebate and VNB Commercial Rebate Programs and (b) the State provides (i) at least \$7 million for the 2020-2021 SIR Rebate Program and VNB Commercial Rebate Program and (ii) the State and Outer Borough Transportation Account provide such additional funds as are necessary (currently estimated to be \$12.8 million) to keep the effective post-rebate SIR E-ZPass toll at \$5.50 while tolls are collected only in the Staten Island-bound direction by setting the rebate at \$1.38 for Staten Island Residents with three or more trips per month and at \$1.76 for Staten Island Residents with less than three trips per month, or to keep the effective toll at \$2.75 when split tolling is implemented by setting the rebate at \$0.69 for Staten Island Residents with three or more trips per month and at \$0.88 for Staten Island Residents with less than three trips per month under the 2020-2021 SIR Rebate Program. MTA shall apply the \$12.8 million of additional funds provided by the State as necessary to provide a \$1.38 rebate for Staten Island Residents with three or more trips per month while tolls are collected only in the Staten Island-bound direction and a \$0.69 rebate when split tolling is implemented, and a \$1.76 rebate for Staten Island Residents with less than three trips per month while tolls are collected only in the Staten Island-bound direction and a \$0.88 rebate when split tolling is implemented. If, as a result of unexpected toll transaction activity, MTA Bridges and Tunnels estimates that such MTA and State funds allocated to MTA for the 2020-2021 VNB Rebate Programs, net of offsets, will be insufficient to fund the 2020-2021 VNB Commercial Rebate Program for the full program year, MTA Bridges and Tunnels may reduce the rebate amount under such program to a percentage that is forecast to be payable in full for the remainder of the program year with the available funds. However, in the event that such MTA, State and Outer Borough Transportation Account funds allocated to MTA for the 2020-2021 VNB Rebate Programs are fully depleted at any time during the 2020-2021 VNB Rebate Programs annual period, the 2020-2021 VNB Rebate Programs will cease and Staten Island residents will be charged the applicable resident discount toll and trucks and other commercial vehicles will be charged the applicable NYCSC E-ZPass toll for the VNB.

The VNB Rebate Programs will continue into future years provided that (a) MTA's annual period contribution does not exceed \$7 million, (b) the MTA Board approves a budget that includes MTA's contribution to such program, and (c) the State and Outer Borough Transportation Account provide to MTA funds sufficient for at least half the expenses of each continuing annual period.

Under the 2019-2020 SIR Rebate Program, MTA rebated \$1.38 of the \$6.88 SIR E-ZPass toll paid by Staten Island residents with three or more trips per month across the VNB, and \$1.76 of the \$7.26 SIR E-ZPass toll paid by Staten Island residents with one or two trips across the bridge. As a result of these MTA toll rebates, Staten Island residents paid an effective toll of \$5.50 per trip. The 2019-2020 SIR Rebate Program was retroactive to April 1, 2019 and continued through March 31, 2020.

Under the 2020-2021 SIR Rebate Program, for Staten Island Residents making three or more trips per month across the VNB, MTA will rebate \$1.38 of the \$6.88 SIR E-ZPass toll paid while tolls are collected only in the Staten Island-bound direction, and \$0.69 of the \$3.44 SIR E-ZPass toll paid when split tolling is implemented. For Staten Island Residents

making less than three trips per month across the VNB, MTA will rebate \$1.76 of the \$7.26 SIR E-ZPass toll paid while tolls are collected only in the Staten Island-bound direction, and \$0.88 of the \$3.63 SIR E-ZPass toll paid when split tolling is implemented. As a result of these MTA toll rebates, Staten Island residents will pay an effective post-rebate toll of \$5.50 per trip under the current SIR toll rates collected in the Staten Island-bound direction and \$2.75 per trip in either direction when split tolling is implemented. The 2020-2021 SIR Rebate Program is retroactive to April 1, 2020 and will continue through March 31, 2021.

Under the 2019-2020 VNB Commercial Rebate Program, the rebate was 16.25% of the E ZPass toll for trucks and other commercial vehicles with more than ten trips per month across the VNB, using the same NYCSC E-ZPass Account and the \$7 million allocation was sufficient in covering the cost of the rebate. The 2019-2020 VNB Commercial Program was retroactive to April 1, 2019 and continued through March 31, 2020.

Under the 2020-2021 VNB Commercial Rebate Program, the initial rebate is 16.25% of the E ZPass toll for trucks and other commercial vehicles with more than ten trips per month across the VNB, using the same NYCSC E-ZPass Account while tolls are collected only in the Staten Island-bound direction and more than 20 such trips a month in each direction when split tolling is implemented. Implementing a 16.25% rebate of the E-ZPass toll for trucks and other eligible commercial vehicles is expected to ensure that the \$7 million allocated for the 2020-2021 VNB Commercial Rebate Program is sufficient to provide funding from April 1, 2020 through March 31, 2021. The 2020-2021 VNB Commercial Program is retroactive to April 1, 2019 and will continue through March 31, 2020.

Additional Outer Borough Transportation Account Funded Toll Rebate Programs. As noted above under "PART 2. FINANCIAL INFORMATION – REVENUES OF THE RELATED ENTITIES – Congestion Zone Surcharges," moneys in the Outer Borough Transportation Account may be applied to fund a toll reduction program for any crossing under the jurisdiction of MTA or MTA Bridges and Tunnels. Two new MTA toll rebate programs relating to MTA Bridges and Tunnels' crossings are being established, as agreed by the Legislature and the Governor in April 2019 and approved by the MTA Board in December 2019⁴. They are (i) a Queens resident rebate for passenger vehicles with E-ZPass tags using the Cross Bay Veterans Memorial Bridge, and (ii) a Bronx resident rebate for passenger vehicles with E-ZPass tags using the Henry Hudson Bridge. In each case, the E-ZPass toll will be charged to the customer's NYCSC resident E-ZPass account, and then an immediate credit will be issued by MTA for the amount of the toll using funds in the Outer Borough Transportation Account to provide the rebate.⁵ MTA Bridges and Tunnels will collect the full amount of the toll. It is expected that the two rebate programs will begin in June 2020. There is not expected to be any reduction of MTA Bridges and Tunnels' toll revenue receipts caused by these toll rebate programs.

Split Tolling at the Verrazzano-Narrows Bridge. On March 20, 1986, in accordance with federal law, MTA Bridges and Tunnels instituted one-way toll collection on the VNB for all vehicles. In December 2019, the Further Consolidated Appropriations Act 2020 was enacted to eliminate the one-way tolling requirement at the VNB and restore split tolling so that tolls will be collected in both the Staten Island-bound and Brooklyn-bound directions. In March 2020, the MTA Board approved changing the method of toll collection at the VNB to split tolling and authorized MTA Bridges and Tunnels to make the required revisions to the toll schedule regulation under the State Administrative Procedure Act.

Current Toll Rates. Tolls were last increased effective March 31, 2019. For the VNB, the two-axle passenger vehicle crossing charge (one-way collection) for Tolls by Mail customers increased from \$17 to \$19, with a \$6.76 reduction for E-ZPass customers with accounts at the New York Customer Service Center; the E-ZPass reductions do not apply to E-ZPass customers who do not have accounts at the New York Customer Service Center. Following the implementation of split tolling at the VNB by the end of 2020, the two-axle passenger vehicle crossing charge for Tolls by Mail customers will

⁴ The MTA Board authorized the Chairman, or his designee, to take such actions necessary or appropriate in connection with the two rebate programs, including conducting environmental review of the two programs as may be required by the State Environmental Quality Review Act (SEQRA), prior to making a determination to implement such programs. Environmental Assessments were performed in March 2020 for each rebate program which concluded that implementing the Bronx resident rebate program at the Henry Hudson Bridge and the Queens resident rebate program at the Cross Bay Veterans Memorial Bridge would have no significant adverse effects on the environment and the corresponding Negative Declarations were executed by the Chairman's designee, Lawrence Lennon, on 2020.

⁵ The two rebate programs will be implemented only for such periods of operation in which funds from the Outer Borough Transportation Account have been or will be provided to MTA sufficient for the expense of these rebate programs. In the event that such Outer Borough Transportation Account funds allocated to MTA for this purpose are not sufficient or guaranteed, the two rebate programs will cease and Bronx residents and Queens residents will be charged the applicable toll without such further rebate on the Henry Hudson Bridge and Cross Bay Veterans Memorial Bridge, respectively, until the next such allocation of funds from the Outer Borough Transportation Account is dedicated to MTA for this purpose.

be \$9.50 in each direction, with a \$3.38 reduction for NYCSC E-ZPass customers. For the Bronx-Whitestone Bridge, Hugh L. Carey Tunnel, Queens Midtown Tunnel, Robert F. Kennedy Bridge and Throgs Neck Bridge, the two-axle passenger vehicle crossing charge for Tolls by Mail customers increased from \$8.50 to \$9.50, with a \$3.38 reduction for E-ZPass users. For the Henry Hudson Bridge, the two-axle passenger vehicle crossing charge for Tolls by Mail customers increased from \$6.00 to \$7.00, with a \$4.20 reduction for E-ZPass users. For the Marine Parkway-Gil Hodges Memorial Bridge and the Cross Bay Veterans Memorial Bridge, the two-axle passenger vehicle crossing charge for Tolls by Mail customers increased from \$4.25 to \$4.75, with a \$2.46 reduction for E-ZPass users. Additional charges apply for additional axles and/or weight. Certain resident discounts apply to the VNB, the Marine Parkway-Gil Hodges Memorial Bridge and the Cross Bay Veterans

A more complete description of the current toll structure is set forth in the Stantec Report under the caption "TOLL COLLECTION ON THE TBTA FACILITIES."

Minimum Toll Covenants in MTA Bridges and Tunnels Bond Resolutions. The MTA Bridges and Tunnels Senior Resolution and MTA Bridges and Tunnels Subordinate Resolution provide that:

- the minimum undiscounted toll rate for automobiles carrying not more than two persons is at least \$3.00 for each crossing over or through the Robert F. Kennedy Bridge, the Bronx-Whitestone Bridge, the Throgs Neck Bridge, the Hugh L. Carey Tunnel or the Queens Midtown Tunnel, \$2.50 for each crossing over the VNB, at least \$1.50 for each crossing over the Henry Hudson Bridge, and at least \$1.25 for each crossing over the Marine Parkway-Gil Hodges Memorial Bridge or the Cross Bay Veterans Memorial Bridge;
- in the event MTA Bridges and Tunnels shall impose a surcharge in addition to the regular toll rate, such surcharge shall not constitute part of the toll rate for purposes of computing the maximum discount described in the first bullet point above and MTA Bridges and Tunnels may provide exemptions from such surcharges without regard to the limits on maximum discounts;
- in the event MTA Bridges and Tunnels imposes different undiscounted toll rates for vehicles utilizing an electronic toll collection system and based upon time of day, day of week or period of the year mode of pricing, the limits on the maximum discounts shall be measured against the undiscounted toll rate applicable to the particular crossing; and
- the minimum crossing charge, however denominated, and after giving effect to any exemption, exclusion or discount, for automobiles carrying not more than two persons shall be at least \$3.20 for each westbound crossing over the VNB, at least \$1.60 for each crossing over the Robert F. Kennedy Bridge, the Bronx-Whitestone Bridge or the Throgs Neck Bridge or through the Hugh L. Carey Tunnel or the Queens Midtown Tunnel and at least 66.7 cents for each crossing over the Henry Hudson Bridge, the Marine Parkway-Gil Hodges Memorial Bridge or the Cross Bay Veterans Memorial Bridge.

Board Policy Regarding Senior Lien Coverage. In addition to the requirements of the minimum rate covenant and the requirements for the issuance of additional bonds, the MTA Bridges and Tunnels Board has established a policy that it will "endeavor to maintain a ratio" of Net Revenues to Senior Lien Debt Service (each as defined in the MTA Bridges and Tunnels Senior Resolution) of at least 1.75x. MTA Bridges and Tunnels has been in compliance with this policy since its adoption in March 2002.

The policy does not constitute a covenant or agreement by MTA Bridges and Tunnels enforceable under the MTA Bridges and Tunnels Senior Resolution. While this policy has been in effect without change since 2002, the MTA Bridges and Tunnels Board retains the right to amend, modify or repeal such policy and may do so at any time in its sole discretion without the consent or approval of the trustee or any bondholder under the MTA Bridges and Tunnels Senior Resolution.

Limitations on Free Crossings. The MTA Bridges and Tunnels Senior Resolution and MTA Bridges and Tunnels Subordinate Resolution limit toll free crossings with respect to the MTA Bridges and Tunnels Facilities to (1) the vehicles of present and former MTA Bridges and Tunnels members, officers and employees, (2) military, police, fire, ambulance and other emergency, service and maintenance vehicles, (3) vehicles of persons employed on Wards Island or Randall's Island traveling to and from such Islands over the Robert F. Kennedy Bridge and (4) other vehicles by passes or permits, provided that there shall not be more than 500 passes or permits outstanding at any one time.

Legislative Proposals. From time to time bills have been introduced by various State legislators seeking, among other things, to restrict the level of tolls on certain MTA Bridges and Tunnels Facilities, to require approval of future toll increases by the Governor, to eliminate minimum tolls or to require discounts or free passage to be accorded to certain users of MTA Bridges and Tunnels Facilities. Under the MTA Bridges and Tunnels Act, however, the State has covenanted to holders of MTA Bridges and Tunnels' bonds that it will not limit or alter the rights vested in MTA Bridges and Tunnels to establish and collect such charges and tolls as may be convenient or necessary to produce sufficient revenue to fulfill the terms of any agreements made with the holders of such bonds or in any way to impair their rights and remedies.

Legislation enacted in connection with the State's Fiscal Year 2006-2007 budget prohibits all public authorities, including MTA Bridges and Tunnels, from imposing, on and after June 1, 2006, a periodic administrative or other charge on electronic payment accounts, such as the E-ZPass toll collection system described below, for the privilege of using such electronic method of payment. The legislation does not prevent the authorities from making any charge for extra services requested by a holder of such electronic method of payment, any charge for lost or damaged equipment, or for defaults, such as charges for dishonored checks.

Competing Facilities and Other Matters

In addition to the Robert F. Kennedy, Bronx-Whitestone and Throgs Neck Bridges and Hugh L. Carey and Queens Midtown Tunnels, there are four vehicular bridges operated by the City crossing the East River which are toll-free at the present time, namely: the Ed Koch Queensboro, Williamsburg, Manhattan and Brooklyn Bridges. In addition to the Robert F. Kennedy and Henry Hudson Bridges, there are nine vehicular bridges crossing the Harlem River, which are toll-free at the present time. The City and the State have explored, from time to time, the possibility of tolling some or all of these bridges to raise revenue for the City and/or MTA; however, MTA Bridges and Tunnels cannot predict the effect that the tolling of such bridges will have on its revenues if it occurs.

The State agrees in the MTA Bridges and Tunnels Act that while any bonds of MTA Bridges and Tunnels are outstanding, there will not be constructed any vehicular connection competitive with the MTA Bridges and Tunnels Facilities and crossing (a) the East River north of 73rd Street or south of 59th Street in Manhattan, (b) New York Bay, or (c) Jamaica Bay or Rockaway Inlet to Rockaway Peninsula within a specified distance (approximately 2½ miles) east of the Cross Bay Veterans Memorial Bridge. There is no provision in the MTA Bridges and Tunnels Act regarding competitive vehicular crossings over the Harlem River.

Under the MTA Bridges and Tunnels Senior Resolution and MTA Bridges and Tunnels Subordinate Resolution, the owners of MTA Bridges and Tunnels bonds waive the foregoing agreement of the State with respect to the construction of any East River vehicular toll crossing to be operated by MTA Bridges and Tunnels.

A significant reduction in the availability of fuel to motorists would, or significant increases in the cost thereof could, have an adverse effect on the revenues derived from the MTA Bridges and Tunnels Facilities. The use of automobiles in the New York City metropolitan area is subject to increased governmental concern and promulgation of governmental regulations relating to environmental and other concerns restricting the use of vehicles, which could also adversely affect revenues from the MTA Bridges and Tunnels Facilities. The Clean Air Act Amendments of 1990 (the "Clean Air Amendments") require the State to adopt transportation control strategies and measures to control emissions, and establish among other matters, specific measures the State may adopt to reduce air pollution. The impact on MTA Bridges and Tunnels and revenues from the MTA Bridges and Tunnels Facilities of the Clean Air Amendments and the State implementation plan that must be developed thereunder cannot be assessed at this time.

Revenues derived from the MTA Bridges and Tunnels Facilities could also be adversely affected by the condition of arteries feeding and approach and access roads leading to and from such facilities which are not owned by MTA Bridges and Tunnels. A number of those arteries and approach and access roads are in need of significant repairs. MTA Bridges and Tunnels is currently partnering with the NYSDOT and the NYCDOT at the VNB and Robert F. Kennedy Bridge, to address some of these conditions in a joint agency approach to improving these connecting corridors. Revenues have been and may hereafter be affected by access to, and conditions and restrictions on use of, the toll-free facilities over which MTA Bridges and Tunnels has no control and which compete with MTA Bridges and Tunnels' facilities. The Stantec Report referenced in this ADS under the caption "MTA Bridges and Tunnels – Total Revenue Vehicles" above also lists current and proposed construction projects that could adversely affect bridge and tunnel use.

Central Business District Tolling Program

In April 2019 New York State enacted the MTA Reform and Traffic Mobility Act, which establishes the CBD Tolling Program, the goals of which are to reduce traffic congestion in the Manhattan central business district, improve air quality, and provide a stable and reliable funding source for the repair and revitalization of MTA's public transportation systems. MTA Bridges and Tunnels is directed to establish the CBD Tolling Program. The program will operate in the Central Business District or "CBD," defined as Manhattan south of and inclusive of 60th Street, not including the FDR Drive or the West Side Highway (which includes the Battery Park underpass and any surface roadway portion of the Hugh L. Carey Tunnel that connects to West Street). MTA Bridges and Tunnels has entered into an MOU with NYCDOT to coordinate the planning, design, installation, construction and maintenance of the CBD Tolling Program infrastructure.

MTA Bridges and Tunnels is empowered (i) to establish and charge variable tolls, fees and other charges for vehicles entering or remaining in the CBD and (ii) to make rules and regulations for the establishment and collection of CBD tolls, fees, and other charges. Subject to agreements with bondholders and applicable federal law, all tolls, fees and other revenues derived from the CBD Tolling Program will be applied to the payment of operating, administration, and other necessary expenses of MTA Bridges and Tunnels properly allocable to the program, including the capital costs of the program, and to the payment of interest or principal of bonds, notes or other obligations of MTA Bridges and Tunnels or MTA issued for transit and commuter projects as provided pursuant to existing law, and shall not be subject to distribution of MTA Bridges and Tunnels' surplus under existing law. Any such tolls, and other charges may be established and changed only if approved by resolution of the Board of MTA Bridges and Tunnels after a public hearing.

The Board of MTA Bridges and Tunnels is directed to ensure at a minimum annual net revenue and fees less costs of operation, sufficient to fund \$15 billion (through the issuance of bonds secured by such revenues and fees) for MTA capital projects in the 2020-2024 Capital Program or any successor capital program. See "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS – Capital Programs–Background and Development".

The MTA Traffic Mobility Act requires the Board of MTA Bridges and Tunnels to establish a traffic mobility review board (the "TMRB") composed of a chair and five members with specific requirements for regional representation and professional expertise.

The TMRB will make recommendations regarding the CBD toll amounts to be established, which shall include a variable-pricing structure, no sooner than November 15, 2020 and no later than December 31, 2020, or no later than thirty days before a CBD Tolling Program is initiated, whichever is later. Such recommendation shall be submitted by the TMRB to the Board of MTA Bridges and Tunnels for consideration before the Board of MTA Bridges and Tunnels may approve the CBD toll amounts.

For purposes of recommending a CBD toll structure, in addition to the goal of reducing traffic within the CBD, the TMRB shall, at minimum, ensure that annual revenues and fees collected under the CBD Tolling Program, less costs of the program, provide revenues to be deposited into the CBD Tolling Capital Lockbox Fund sufficient to fund \$15 billion for MTA capital projects for the 2020-2024 Capital Program. Any additional revenues above that amount are to be made available for any successor Capital Program. The TMRB will consider for purposes of its recommendations, factors including but not limited to, traffic patterns, traffic mitigation measures, operating costs, public impact, public safety, hardships, vehicle type, discounts for motorcycles, peak and off-peak rates and environmental impacts, including but not limited to air quality and emissions trends. The TMRB will recommend a plan for credits, discounts, and/or exemptions for tolls paid on bridges and crossings, which plan shall be informed by a traffic study associated with the impact of any such credits, discounts and/or exemptions on the recommended toll. The TMRB will recommend a plan for credits, discounts, and/or exemptions for for-hire vehicles subject to the For-Hire Transportation Surcharge described under "PART 2 FINANCIAL INFORMATION REVENUES OF THE RELATED ENTITIES - Congestion Zone Surcharges," based on factors, including, but not limited to, initial market entry costs associated with licensing and regulation, comparative contribution to congestion in the CBD, and general industry impact. The TMRB will produce a detailed report that provides information regarding the TMRB's review and analysis for purposes of establishing its recommendations. The TMRB will not recommend a toll that provides for charging passenger vehicles more than once per day.

In addition, the MTA Capital Program will be reviewed by the TMRB.

Status of CBD Tolling Program. All capital and operating costs for the CBD Tolling Program are expected to be funded by revenues generated from the program, though MTA Bridges and Tunnels may use revenues from the MTA Bridges and Tunnel Facilities to also fund such capital and operating costs. The construction and implementation costs for the CBDTP are initially being funded through a variety of distinct financing sources all of which will eventually be reimbursed through net operating revenues generated through the program when it goes live.

In October 2019, MTA Bridges and Tunnels awarded to TransCore LLP a contract to design, build, operate and maintain the toll system equipment and infrastructure required to implement the CBD Tolling Program in NYC ("DBOM Contract").

Authorization is required from the Federal Highway Administration ("FHWA") under its Value Pricing Pilot Program ("VPPP") to implement the CBD Tolling Program on federal-aid roadways within the CBD Tolling Program. FHWA approval to participate in the VPPP makes this project subject to National Environmental Policy Act review. Because FHWA regulations provide that final design and construction cannot proceed before FHWA issues an environmental finding, the project will proceed in two phases, subject to receipt of FHWA approval. There is no assurance that FHWA approval will be secured in time to meet MTA Bridges and Tunnels' current schedule for the CBD Tolling Program implementation.

After the early design phase is complete and the environmental finding is issued, TransCore will complete final design and begin building the infrastructure and installing the toll system equipment. Once operational, TransCore will continue to be responsible for operating and maintaining the infrastructure and toll system for an additional six years under the DBOM Contract awarded in 2019. The total cost of this DBOM Contract is \$507 million, which includes incentive payments to encourage on-time delivery.

Since details relating to the tolling structure, tolling rates and possible credits, as well as date of implementation, of the CBD Tolling Program have not been established, it is unclear how the CBD Tolling Program will affect both transactions and revenues for MTA Bridges and Tunnels.

E-ZPass

MTA Bridges and Tunnels employs an electronic toll collection system, E-ZPass, at all of its bridges and tunnels. MTA Bridges and Tunnels' E-ZPass program generally requires prepayment on behalf of the customers. Substantially all of the E-ZPass users prepay with credit cards or checks.

MTA Bridges and Tunnels is a founding member of the E-ZPass IAG, which has grown to include toll authorities in Delaware, Pennsylvania, New Jersey, New York, Maryland, Massachusetts, Virginia, West Virginia, New Hampshire, Illinois, Indiana, Maine, Kentucky, Rhode Island, Ohio, North Carolina, Florida and the Peace Bridge between Buffalo, New York and Fort Erie, Ontario. Payments are settled among all such entities after use of the facilities. MTA Bridges and Tunnels transfers significantly more cash to IAG members than it receives from them, which at times could adversely affect MTA Bridges and Tunnels' cash position.

The following chart shows the amount of annual transfers to and from other IAG members by MTA Bridges and Tunnels during the last ten years.

	Transfers to IAG Members	Transfers from IAG Members
Year	(in millions)	(in millions)
2011	\$547.6	\$350.9
2012	679.6	356.1
2013	740.9	408.2
2014	797.1	417.1
2015	891.2	455.6
2016	973.1	475.1
2017	1,015.7	514.8
2018	1,042.8	565.2
2019	1,077.8	625.1

MTA Bridges and Tunnels participates in E-ZPass Plus agreements that have been negotiated by IAG members with commercial entities (such as parking facility operators) whereby the electronic media can be used to purchase goods and services. E-ZPass Plus is currently available to customers for use at Albany International Airport, Syracuse Hancock International Airport, John F. Kennedy International Airport, LaGuardia Airport and Newark International Airport and Atlantic City International Airport. MTA Bridges and Tunnels may expand the use of agreements with commercial entities.

For 2019 E-ZPass market share on MTA Bridges and Tunnels Facilities averaged:

- overall: 95.1%;
- weekday: 95.7%; and
- weekend: 93.79%.

Cashless Open Road Tolling ("Cashless Tolling")

In October 2016, Governor Cuomo announced the New York Crossings Project. This project included an aggressive one-year schedule for all MTA Bridges and Tunnels crossings to migrate from cash and gated E-ZPass toll plazas to Cashless Tolling. MTA Bridges and Tunnels completed full implementation of Cashless Tolling on September 30, 2017. Cashless Tolling eliminates traditional toll plazas by allowing tolls to be collected in a free-flow environment through E-ZPass sensors and license-plate cameras mounted on overhead gantries. Drivers without E-ZPass receive a "Tolls by Mail" invoice mailed to the vehicle's registered owner.

In Spring 2016, MTA Bridges and Tunnels began asking the DMV to suspend the vehicle registrations of violators who fail to pay their tolls and violation fees or have them dismissed or transferred in response to violation notices for five toll violations within 18 months, in accordance with the new DMV regulation for persistent or habitual toll violators. In January 2017, the DMV changed its regulation for persistent or habitual violators so that vehicle registrations can be suspended for three toll violations within five years and commercial vehicle registrations can be suspended for \$200.00 or more in unpaid tolls within five years.

MTA Bridges and Tunnels employs and develops measures to enhance collection and enforcement of tolls under the Cashless Tolling system. License plate recognition technology on gantries and in patrol vehicles is being used for the detection of persistent toll violators and toll violation enforcement. Additionally, MTA Bridges and Tunnels continues to issue exclusion orders barring the vehicles of out-of-state toll violation scofflaws from MTA Bridges and Tunnels facilities and for those persistent violators, engages in summonsing vehicle operators and towing those vehicles from MTA Bridges and Tunnels facilities.

In April 2017 the New York State DMV received legislative authorization to enter into reciprocal compacts with other states to suspend the vehicle registrations of persistent or habitual toll violators, which will allow MTA Bridges and Tunnels to have the home states of out-of-state violators suspend or place holds on vehicle registrations for toll violations committed on MTA Bridges and Tunnels' facilities. MTA Bridges and Tunnels has entered into such an agreement with Massachusetts and began submitting registration hold packages to the Massachusetts Registry of Motor Vehicles in February 2020 so that holds could be placed on the registrations of toll-evading Massachusetts owners. In time MTA Bridges and Tunnels will be able to discontinue issuing exclusion orders to out-of-state toll violators barring their vehicles from MTA Bridges and Tunnels facilities.

PART 6. REGULATORY, EMPLOYMENT, INSURANCE AND LITIGATION MATTERS

FEDERAL AND STATE LAWS

General

Federal and State laws concerning, among other things, protection of the environment and access to transportation and non-transportation facilities by the physically disabled will require future operating and capital expenditures by the Related Entities. Those expenditures are material. Many of the projects undertaken in connection with such legal requirements are being funded through MTA Capital Programs.

Future federal and State laws and regulations concerning matters such as the environment and access by the physically disabled could subject the Related Entities to additional operating and capital costs, which costs may be material.

Transit System

Environmental. MTA New York City Transit is currently the subject of an environmental consent order with the New York State Department of Environmental Conservation ("NYSDEC") pursuant to which underground storage tanks have been replaced or upgraded. Capital expenditures will continue for site remediations in accordance with the order.

Access for Persons with Disabilities. It is MTA New York City Transit's position that it is in substantial compliance with the statutory requirements of the ADA related to buses with the exception of meeting certain stop announcement criteria. At year-end 2019, 58% of bus stop announcements were in compliance. MTA New York City Transit is currently rolling out an automated audio-visual announcements system on-board buses. After a successful pilot, MTA New York City Transit is including these systems on new buses and retrofitting buses in the current fleet. As of the end of 2019, more than 2,300 buses have the system - 1,386 retrofits and 921 newly delivered buses. The system has led to better compliance of stop announcements across routes.

MTA New York City Transit continues to implement a program in accordance with State and federal law to install and make 100 stations fully accessible to people with disabilities (the "Key Station Plan") by the year 2020. As of January 2020, MTA New York City Transit had completed 87 of these Key Stations. MTA New York City Transit also has made vertically accessible an additional 37 stations that are not part of the Key Station Plan (nine of which are accessible in a single direction). Investments in accessibility are continuing, with accessibility projects underway at 28 stations that are under construction and/or funded through the 2015-2019 Capital Program (including the remaining 13 Key Stations and 15 additional stations). In November 2015, the FTA released Circular 4710.1 setting forth guidance that, without regard to cost, would expand the circumstances under which vertical access for people with disabilities would be required when work that affects station stairs and escalators is performed in subway stations. The FTA has applied such guidance as part of its review of ADA accessibility in connection with certain federally funded station projects. MTA cannot predict the full impact of Circular 4710.1 at this time. If MTA New York City Transit were to be required to install elevators in connection with every capital repair or replacement of existing stairs or escalators undertaken without regard to the cost or technical infeasibility of such installation, the result would materially increase the expense of performing necessary component work.

Commuter System

Environmental. MTA Long Island Rail Road and MTA Metro-North Railroad are required to file annual reports with the NYSDEC identifying areas of environmental concern. MTA Long Island Rail Road and MTA Metro-North Railroad have each incurred and will continue to incur costs of asbestos abatement and lead paint removal on their respective properties. The Commuter Capital Programs allocate funds for, among other matters, asbestos abatement, costs of fuel handling and storage, and wastewater treatment and environmental remediation. MTA Long Island Rail Road and MTA Metro-North Railroad each are required to clean up various conditions on properties they own or operate, and each has established reserves for the clean-up costs.

MTA Long Island Rail Road has completed interim remediation on substations for mercury contamination due to the utilization of mercury rectifiers that were removed during the 1970s. Eighteen substations have been fully remediated as per NYSDEC regulations, with six having received official NYSDEC closure letters. Remediation on the two remaining substations under NYSDEC process oversight is planned for this year. Work continues to progress on all MTA Long Island Rail Road substation remediation projects. State environmental agencies are monitoring the remediation of pollutants at certain MTA Long Island Rail Road and MTA Metro-North Railroad facilities. The extent of pollution, the cost of clean-up

and MTA Long Island Rail Road's and MTA Metro-North Railroad's liability, if any, which may be material, cannot be determined at this time.

Access for Persons with Disabilities. MTA Long Island Rail Road and MTA Metro-North Railroad are in substantial compliance with ADA requirements.

MTA Bridges and Tunnels

General. MTA Bridges and Tunnels regularly reviews its facility maintenance programs, both remedial and preventive, and believes the same to be of high quality. MTA Bridges and Tunnels intends to continue its comprehensive inspection and maintenance programs for the MTA Bridges and Tunnels Facilities and to continue to engage independent engineering firms to provide virtually all biennial inspections of its bridge and tunnel facilities. Stantec has reviewed the inspection reports of the bridges and tunnels undertaken by MTA Bridges and Tunnels' engineering consultants.

Environmental. MTA Bridges and Tunnels' Capital Programs incorporate the removal and clean-up of lead paint on its bridges and tunnels in compliance with federal, State and local laws, codes and regulations.

Bridge and Tunnel Inspections. NYSDOT maintains a program of comprehensive bridge and tunnel management, maintenance and inspection applicable to MTA Bridges and Tunnels' bridges and tunnels. That program includes the uniform code for bridge inspection and tunnel inspection, which:

- meets or exceeds applicable federal law;
- requires that bridges and tunnels be inspected at least every two years in accordance with the provisions of that code;
- prescribes qualifications for licensed professional engineers who inspect bridges and tunnels; and
- requires that all bridge and tunnel inspections be performed or supervised by such persons.

Bridge and tunnel inspection reports must be filed with NYSDOT and NYSDOT may close bridges or tunnels found unsafe for public use. MTA Bridges and Tunnels is in compliance with the NYSDOT program.

EMPLOYEES, LABOR RELATIONS AND PENSION AND OTHER POST-EMPLOYMENT OBLIGATIONS

General

The transportation services provided by the Related Entities, as well as related maintenance and support services, are labor intensive. Consequently, the major portion of the Related Entities' expenses consists of the costs of salaries, wages and fringe benefits for employees and retirees.

The employees of MTA and its affiliates and subsidiaries, other than MTA Long Island Rail Road and MTA Metro-North Railroad, are prohibited by the State's Taylor Law from striking. Nevertheless, represented employees of MTA New York City Transit and MaBSTOA engaged in an illegal three-day strike in December 2005. There have been no labor stoppages at MTA Bridges and Tunnels since 1976. The Taylor Law also requires that the TWU Local 100 (and permits other unions) and MTA New York City Transit and MaBSTOA submit a dispute preventing the voluntary resolution of contract negotiations to binding arbitration before a three-member public arbitration panel upon the occurrence of certain events. The three-member panel would be chosen as follows: one member appointed by MTA, one member appointed by the affected union, and one member appointed jointly by the parties. Almost all of the unions covered by the Taylor Law have elected to be bound by the Taylor Law's binding arbitration provisions.

The employees of MTA Long Island Rail Road and MTA Metro-North Railroad are not subject to the same State prohibition, but are governed by federal railroad employment statutes.

MTA Headquarters

The February Plan assumes 3,351 full time employees for MTA Headquarters as of year-end 2020. As of December 31, 2019, MTA Headquarters had 2,663 full time employees.

- *Police*: MTA Headquarters staff include 756 police officers represented by the Police Benevolent Association ("PBA"), 24 commanding officers, represented by the Commanding Officers Association ("COA"), and 50 clerical/administrative employees represented by the International Brotherhood of Teamsters ("IBT"). Collective bargaining agreements for both unions expired October 14, 2018 and negotiations for successor agreements are ongoing.
- *Clerical/Administrative*: On March 27, 2019, the tentative labor contract previously reached with IBT 808 was approved by the MTA Board. The agreement. covering 50 MTA Police Department and 29 other MTA Headquarters clerical and administrative employees is effective from September 1, 2016 through September 30, 2021 and is consistent with the MTA Financial Plan.
- Business Service Center: The BSC has 281 employees, approximately 221 of whom are represented by several clerical/administrative unions. The largest such union, representing 192 employees, is the Transportation Communications Union ("TCU"), Local 643 whose contract covers the period from April 1, 2015 through March 31, 2020. By collective bargaining agreement, newly hired TCU-represented employees do not participate in a defined benefit pension plan, but instead are eligible to participate in a 401(k) plan with employer contributions.
- Information Technology (IT): The Information Technology Department consolidated all agency IT functions and positions under MTA Headquarters as of January 1, 2015. There are 930 employees in the IT department, 593 of whom are represented. The two predominant unions are the TCU, Local 982 with 378 members, and TWU Local 100 with 174 members. MTA's agreement with the TCU expired December 31, 2019 and, in many respects, is similar to the BSC agreement, including 401(k) plan participation rather than a defined benefit pension plan for new hires. Bargaining over a new agreement has begun, however, in light of recent changes in IT leadership, as well as structural changes under consideration as the result of AlixPartners' MTA reorganization recommendations, bargaining with TCU has not yet proceeded beyond an introductory session. The agreement reached with TWU Local 100 expired July 13, 2019 and has not proceeded due to MTA New York City Transit's pattern-setting contract with TWU Local 100 being unsettled until the end of the year.

Most MTA Headquarters employees, other than MTA police officers and the aforementioned BSC and IT represented employees, are members of the New York State and Local Employees' Retirement System ("NYSLERS"). MTA police officers are members of the MTA Defined Benefit Pension Plan, which has a substantial Net Pension Liability. MTA's policy is to contribute at least the actuarially determined contributions ("ADC") on an annual basis to the plan. ADC contributions for the fiscal year ending December 31, 2019 are set forth in the table below. See also Footnote 4 to the audited Combined Financial Statements of MTA for more information relating to the MTA Defined Benefit Pension Plan, as well as the Required Supplementary Information attached.

Plan	ADC Contribution for the Fiscal Year Ending December 31, 2019
MTA Long Island Rail Road Additional Plan	\$ 62,773,550
MTA Defined Benefit Pension Plan:	
MTA Long Island Rail Road	\$ 121,739,928
MTA Metro-North Railroad	\$ 122,824,705
MTA Police Department	\$ 38,352,101
MTA Staten Island Railway	\$ 7,243,508
MTA Bus	\$ 59,767,691
Manhattan and Bronx Surface Transit	
Operating Authority (MaBSTOA) Pension	
Plan	\$ 209.313.834
	+

The February Plan assumes 96 full time employees for the MTA Inspector General as of year-end 2020. As of December 31, 2019, the MTA Inspector General's office had 79 employees, none of whom are union represented.

MTA Construction and Development

The February Plan assumes approximately 162 full and part-time employees for MTA Construction and Development as of year-end 2020. As of December 31, 2019, MTA Construction and Development had 116 employees, none of whom are union-represented. All such employees are employees of MTA or other Related Entities.

MTA New York City Transit and MaBSTOA

The February Plan assumes approximately 49,319 full and part-time employees for MTA New York City Transit including MaBSTOA, as of year-end 2020. MTA New York City Transit is comprised of the New York City Transit Authority and its subsidiary, MaBSTOA. As of December 31, 2019, New York City Transit Authority including MaBSTOA had 51,061 employees (full and part-time), 48,034 of whom are represented. The 40,371 New York City Transit Authority employees and 7,663 MaBSTOA employees are represented by 13 unions in 24 bargaining units.

The pattern-setting collective bargaining agreement between MTA New York City Transit, MaBSTOA, MTA Bus and TWU Local 100 which expired May 15, 2019, was tentatively settled as of the closing date of this ADS. The 48-month agreement which expires May 15, 2023 covers approximately 37,295 employees, 34,982 of whom at MTA New York City Transit or MaBSTOA and 2,313 of whom work at MTA Bus. See "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS – Subsequent Developments."

The Subway Surface Supervisors Association ("SSSA") represents 3,991 employees whose contract expired on March 31, 2018. A 28-month successor contract following the prior round TWU pattern was settled and approved by the MTA Board on May 22, 2019. The Transit Supervisors Organization ("TSO") TWU Local 106 Operating, Queens, and Coin Retriever Divisions, represent 658 employees whose contracts expired on August 31, 2018 and remain in negotiations. The TSO Maintenance Supervisors II division represents 358 employees whose contract expired on January 7, 2018. A new 30-month agreement for the period from January 8, 2018 through July 31, 2020 was reached and approved by the MTA Board on March 27, 2019.

MTA New York City Transit, under specified terms of certain expired contracts whose terms and conditions, by law, remain in effect, has budgeted for wage increases to its clerical employees in line with the City-wide bargaining pattern for clerical employees up through May 25, 2021. See "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS—Subsequent Developments" for more information.

Certification petitions filed by various unions in recent years seeking to represent certain MTA New York City Transit and MaBSTOA employees have been overwhelmingly granted by the Public Employment Relations Board ("PERB"). Specifically:

- In November 2017, United Transit Leadership Organization ("UTLO") was certified by PERB as the exclusive collective bargaining representative for MTA New York City Transit and MaBSTOA employees in the titles of Assistant General Superintendent and Superintendent in the Department of Buses. An initial collective bargaining agreement was reached. That agreement expired June 30, 2019. Negotiations for a successor agreement are ongoing.
- The parties have resolved the UTLO's pending petition to represent the Deputy Superintendent, Superintendents and General Superintendents in the Department of Subways and the supporting departments. In December 2018, to facilitate the Stations reorganization, the Parties agreed to the inclusion of employees in the new Group Station Superintendent title (approximately 47 as of the date of settlement) and the exclusion of employees in the new Group Station Manager title. The parties have settled the remainder of the petitions that include the Deputy Superintendents and the majority of the Superintendents and all Assistant General Superintendent positions (approximately 134). In total, UTLO has 873 members.
- TWU Local 100 represents approximately 500 MaBSTOA employees working in a number of titles in the Staff Analyst title series. Their collective bargaining agreement expired July 13, 2019. Negotiations for a successor agreement began in October and are ongoing.

- TWU Local 100 petitioned MaBSTOA to represent approximately 65 employees in the titles of Transportation Planner, Principal Transportation Planner, Assistant Transportation Planner and Senior Transportation Planner title series. On November 7, 2018, MaBSTOA and TWU Local 100 reached an agreement to place these titles into the existing TWU Local 100 Staff Analyst Unit. TWU Local 100 petitioned MaBSTOA to represent approximately 82 employees in the titles of Associate Transit Customer Service Specialist 2 and Scheduler title series. On April 25, 2018 TWU Local 100 was certified by PERB as the collective bargaining representative for employees of MaBSTOA in the titles of Associate Transit Customer Service Specialist 1 and Associate Transit Customer Service Specialist 2, thereby resolving this petition. By Agreement dated May 30, 2018, between MaBSTOA and TWU Local 100 these titles were placed into the existing TWU Local 100 Staff Analyst Unit.
- TWU Local 100 petitioned MaBSTOA to represent approximately 14 employees in the titles of Senior Training Development Specialist Levels I, II and II, Press Operator Levels I, II and III, Bookbinder and Supervising Bookbinder. On October 24, 2018 TWU Local 100 was certified by PERB as the collective bargaining representative for employees of MaBSTOA in these titles. The parties are in discussions regarding unit placement.
- Most employees of MTA New York City Transit are members of the New York City Employees' Retirement System ("NYCERS"). Most employees of MaBSTOA participate in an MTA separately funded pension plan that offers benefits similar to NYCERS. As of January 1, 2019, 8,835 active employees and 5,779 retirees participated in the MaBSTOA Pension Plan. As of January 1, 2019 the plan's Net Pension Liability was \$966.7 million and the funding ratio was 74.6%. MTA New York City Transit and MaBSTOA's policy is to contribute at least the ADC on an annual basis to the plan. See Footnote 6 to the Consolidated Financial Statements of MTA New York City Transit for more information. See also the Required Supplementary Information attached to the audited Combined Financial Statements.

MTA Bus

The February Plan assumes approximately 3,917 full and part-time employees for MTA Bus, as of year-end 2020. As of December 31, 2019, MTA Bus had 4,096 employees, 3,860 of whom are represented by three unions in five bargaining units. MTA Bus has a new tentative contract with TWU Local 100 covering 2,313 of its represented employees.

Negotiations over the expired MTA Bus contract with ATU Local 1179 reached an impasse and proceeded to arbitration. On May 31, 2018, an Impasse Arbitration Award was issued covering the period from May 13, 2012 to October 31, 2019. On July 15, 2018, MTA ratified an agreement with ATU Local 1181 which also expires on October 31, 2019 and mirrors that award. Both are in line with the TWU pattern. Combined, these locals represent approximately 1,105 employees. Similarly, negotiations over the expired TWU Local 106 contract affecting 325 employees proceeded to impasse arbitration and an award covering the period up through August 31, 2018 was issued, also consistent with the TWU pattern.

On November 6, 2017 UTLO was certified as the exclusive bargaining representative by PERB for approximately 94 MTA Bus employees in the titles of Assistant General Superintendent and Superintendent assigned to the Department of Buses. An initial collective bargaining agreement was reached which expires June 30, 2019. The employees of the companies that formerly operated the City Bus Routes participated in a number of different pension plans. MTA, on behalf of MTA Bus, has amended the MTA Defined Benefit Pension Plan to include retirement programs which replicate the benefits provided by the prior plans. MTA Bus's policy is to contribute at least the ADC on an annual basis to the plan. See Footnote 4 to the audited Combined Financial Statements of MTA for more information relating to the MTA Defined Benefit Pension Plan, as well as the Required Supplementary Information attached. An arbitration decision dated November 17, 2016 awarded increases in the pension/credit multiplier for TWU represented employees from \$105 paid per month per year of creditable service, with subsequent increases tied to wage increases. The cost of that portion of the pension increase in excess of the TWU pattern (\$15 per month) must be funded as part of a consolidated MTA New York City Transit/MaBSTOA/MTA Bus labor contract with the TWU.

On June 21, 2017 the MTA Board voted to amend the MTA Defined Benefit Pension Plan to provide most MTA Bus non-represented employees with a pension consisting of a flat rate of \$115 per month per year of service up to January 1, 2017, plus a final average salary component with a formula based on job title and date of hire, for years of service commencing January 2, 2017. The final average salary component is similar to that provided to similarly situated MaBSTOA

employees. Employees represented by the UTLO and a small group of employees represented by the TWU who were formerly not represented are covered by the program.

MTA Staten Island Railway

The February Plan assumes 383 full and part-time employees for MTA Staten Island Railway as of year-end 2020. As of December 31, 2019, MTA Staten Island Railway had 357 employees, 328 of whom are represented by four different unions in five bargaining units. MTA Staten Island Railway has contracts with the Sheet Metal, Air, Rail and Transportation Workers International Association, Local 1440 (formerly the United Transportation Union) covering 265 of its represented employees that expired on April 16, 2019; the American Train Dispatchers Association covering 13 represented employees whose contract expired on December 16, 2016; the TCU covering 25 represented operating supervisors whose contract expired on April 16, 2019; the SSSA covering 17 represented employees whose contract expired on February 15, 2017, and separate group of seven Analysts recognized by PERB as represented by the SSSA effective March 6, 2019. Negotiations for successor agreements, where applicable, are ongoing.

Employees of MTA Staten Island Railway are members of the MTA Defined Benefit Pension Plan, with benefits similar to that which NYSLERS offers to Tier 4 members. MTA Staten Island Railway's policy is to contribute at least the ADC on an annual basis to the plan. See Footnote 4 to the audited Combined Financial Statements of MTA for more information relating to the MTA Defined Benefit Pension Plan, as well as the Required Supplementary Information attached.

Commuter System

MTA Long Island Rail Road.

The February Plan assumes approximately 7,865 full-time employees for MTA Long Island Rail Road as of yearend 2020. As of December 31, 2019, MTA Long Island Rail Road had approximately 7,541 employees. Approximately 6,543 of the MTA Long Island Rail Road employees are represented by 12 different unions in 19 bargaining units. MTA Long Island Rail Road has reached agreement with all of its unions, those agreements became amendable effective April 16, 2019. Both union and management have submitted their bargaining proposals, however, negotiations have not proceeded due to MTA New York City Transit's pattern-setting contract with TWU Local 100 having remained unsettled until the end of 2020 as well as anticipated needs due to the Transformation Plan.

MTA Metro-North Railroad.

The February Plan assumes 7,064 full and part-time employees for MTA Metro-North Railroad as of year- end 2020. As of December 31, 2019, MTA Metro-North Railroad had 6,671 employees, 5,603 of whom were represented by 10 different unions in 25 bargaining units. MTA Metro-North Railroad has reached agreement with about most of the represented workforce during the 2017-2019 bargaining round. The next round of collective bargaining has commenced and, with the exception of one additional group of approximately 284 employees in the ACRE 166 Union covering MTA Metro-North Railroad's signalmen with an outstanding contract in the 2017-2019 bargaining round, in which negotiations are ongoing.

Both Union and Management have submitted their bargaining proposals, however, negotiations have not proceeded due to MTA New York City Transit's pattern-setting contract with TWU Local 100 having remained unsettled until the end of the year as well as anticipated needs due to the Transformation Plan.

Both MTA Long Island Rail Road and MTA Metro-North Railroad supplement benefits provided under the Federal Railroad Retirement Act through other pension plans. The post-1987 employees of MTA Long Island Rail Road and almost all of the employees of MTA Metro-North Railroad participate in the MTA Defined Benefit Pension Plan.

As of January 1, 2018, pre-1988 MTA Long Island Rail Road retired employees numbering 5,755 and current employees numbering 84 participated in The Long Island Rail Road Company Pension Plan and The Long Island Rail Road Company Pension Plan was merged into the MTA Defined Benefit Pension Plan in 2006 and consequently the Unfunded Actuarial Accrued Liability for that Plan is now reported under the MTA Defined Benefit Pension Plan. In the case of the Long Island Rail Road Plan for Additional Pensions, significant portions of the estimated obligations are currently unfunded. As of January 1, 2019, the total Net

Pension Liability was \$591.8 million and the funded ratio was 58.1%. Starting in 2004, MTA Long Island Rail Road has been amortizing these costs over 29 years.

As of January 1, 2019 the Net Pension Liability for the MTA Defined Benefit Plan was \$1,464.0 million with a funded ratio of 73.3%. The cost of this Net Pension Liability is allocated to all participating Related Entities, including MTA Long Island Rail Road and MTA Metro-North Railroad.

See Footnote 4 to the audited Combined Financial Statements of MTA for more information on the pension plans, as well as the Required Supplementary Information attached.

MTA Bridges and Tunnels

The February Plan assumes approximately 1,478 full and part-time employees for MTA Bridges and Tunnels as of year-end 2020. As of December 31, 2019 MTA Bridges and Tunnels had 1,296 employees, 894 of whom were represented by three different unions in four bargaining units.

MTA Bridges and Tunnels settled a new 30-month contract with DC 37 Local 1931, representing 339 maintenance employees covering the period from January 15, 2018 to July 14, 2020. The agreement was approved by the MTA Board on May 22, 2019.

The effective term of the Interest Arbitration Award issued July 17, 2014 for the Bridge and Tunnel Officers Benevolent Association ("BTOBA") representing 397 officers expired on May 17, 2012. Since then, management and the union have been engaged in diligent and deliberate negotiations, compounded by, among other things, the advent of Open Road Tolling, which essentially eliminated many of the duties and responsibilities of Bridge and Tunnel Officers – most notably, duties related to fare collection and protection, leaving law enforcement duties as their primary remaining function.

Hopes of reaching a negotiated settlement appeared slim until April 2019, when the State enacted legislation that opened a potential way forward. Section 553 of the Public Authority Law was amended to give Bridge and Tunnel Officers "the power to issue notices of violation for transit infractions committed in and about any or all of the facilities, equipment or real property owned, occupied or operated by MTA or its subsidiaries and the New York City Transit Authority and its subsidiaries," thereby expanding the jurisdiction of Bridge and Tunnel Officers and allowing deployment on buses and in the subway system as part of an effort to combat the dramatic increase in fare evasion that has occurred since 2015. With more uniformed officers present, their deployment is expected to bolster overall system safety and recapture lost revenues.

As a result of these new developments, a Cooperation Agreement was reached on June 10, 2019 securing cooperation between MTA Bridges and Tunnels and the BTOBA in "the establishment and orderly operation of" a Fare Evasion Task Force. The Cooperation Agreement also resolves many of the issues over which a bargaining impasse had been reached by requiring that the parties reach the Memorandum of Understanding.

The Memorandum of Understanding provides TWU pattern wage increases retroactive to 2012, as well as a separate and discrete wage adjustment, a portion of which recognizes the increase in law enforcement responsibilities for Bridge and Tunnel Officers, all of whom have been trained to participate in the Task Force. The remainder of the wage adjustment will be the subject of impasse arbitration and require an offset by significant work rule changes that comport with the evolution of officers' duties since Open Road Tolling.

The term of the agreement with the Superior Officers Benevolent Association ("SOBA") representing 149 supervisory officers expired March 14, 2012. The parties are currently in mediation, however SOBA is ineligible to seek binding interest arbitration.

A tentative agreement was reached with DC 37 Local 1655, which represents approximately 24 clerical employees. The term of the agreement is from July 3, 2017 through May 25, 2021 and is consistent with the pattern set by the DC 37 Citywide Economic Agreement.

Substantially all of MTA Bridges and Tunnels' employees are eligible to be members of NYCERS and MTA Bridges and Tunnels is required to make significant annual contributions on a current basis. See Footnote 7 to MTA Bridges and Tunnels' financial statements for more information.

Transformation

MTA has met the legislative mandate for a reorganization plan. AlixPartners, a financial advisory firm recommended a more streamlined and effective organizational structure for the MTA on June 30, 2019 and on July 24, 2019, the MTA Board approved this Transformation Plan. MTA is in process of implementing the changes needed to effectuate the Transformation Plan. In December 2019, MTA hired Anthony McCord as its Chief Transformation Officer and Mario Péloquin as the MTA's Chief Operating Officer in January 2020 to help lead this effort.

MTA is reviewing transformation along three lines:

- People (getting the right people in the right roles)
- Processes (changing the way we work)
- Systems (getting the right tools and technologies in place, to support the processes and people).

Interrelationship of Various Pension Plans

The Related Entities sponsor and participate in a number of pension plans for their employees. The pension plans have separately issued financial statements that are publicly available and contain descriptions and supplemental information regarding their respective employee benefit plan. These statements may be obtained by contacting the administrative office listed for such pension plan in MTA's audited financial statements annexed hereto.

The following is a brief summary of the pension plans. More detailed information is set forth in Footnote 4 of, and the required supplementary information – schedules of pension funding progress attached to, MTA's audited financial statements annexed hereto:

- Single-Employer Pension Plans
 - MTA Long Island Rail Road Plan for Additional Pensions provides retirement, disability and death benefits to plan members and beneficiaries for employees hired prior to January 1, 1988. No new participants can be covered by this plan. As of January 1, 2019, this plan was 58.1% funded.
 - o The Metro-North Commuter Railroad Company Cash Balance Plan covers non-collectively bargained employees, formerly employed by Conrail, who joined MTA Metro-North Railroad as management employees between January 1 and June 30, 1983, and were still employed as of December 31, 1988. Effective January 1, 1989, these management employees were covered under the Metro-North Commuter Railroad Defined Contribution Plan for Management Employees and the Cash Balance Plan was closed to new participants. As of January 1, 2019, this plan was 98.3% funded.
 - Manhattan and Bronx Surface Transit Operating Authority Plan provides retirement, disability, costof-living adjustments and death benefits to plan members and beneficiaries that are similar to those benefits provided by NYCERS to similarly situated MTA New York City Transit employees. As of January 1, 2019, this plan was 74.6% funded.
- Cost-Sharing Multiple-Employer Plans
 - MTA Defined Benefit Pension Plan includes certain MTA Long Island Rail Road non-represented employees hired after December 31, 1987, MTA Metro-North Railroad non-represented employees, certain employees of the former MTA Long Island Bus hired prior to January 23, 1983, MTA Police, MTA Long-Island Rail Road represented employee's hired after December 1, 1987, certain MTA Metro-North Railroad represented employees, MTA Staten Island Railway represented and nonrepresented employees and certain employees of MTA Bus Company. As of January 1, 2019, this plan was 73.3% funded.
 - NYCERS MTA New York City Transit and MTA Bridges and Tunnels contribute to NYCERS, a cost-sharing multiple-employer retirement system for employees of the City and certain other governmental units which provides pension, disability and death benefits to eligible members based on

title, salary and length of service. MTA New York City Transit and MTA Bridges and Tunnels are current in their actuarially determined contributions.

- NYSLERS a cost-sharing multiple-employer plan for employees of New York State and certain other governmental units that has as members certain employees of MTA Headquarters who were hired after January 23, 1983 and certain employees of MTA Construction and Development. MTA and MTA Construction and Development are current in their actuarially determined contributions.
- New York State Voluntary Defined Contribution Program Certain employees may choose to participate in this multi-employer plan sponsored by the State University of New York instead of participating in NYCERS or NYSLERS. As of December 31, 2019, 150 employees opted to participate. Participating employers make annual contributions of 8% of eligible compensation and the employee is vested after one year of service.
- Deferred Compensation Plans the Related Entities offer employees the ability to contribute to one or both of two defined contribution plans (an Internal Revenue Code Section 457 Plan and an Internal Revenue Code Section 401(k) Plan) that provide benefits based on the amount contributed to each participant's account, plus or minus any income, expenses and investment gains/losses. MTA Metro-North Railroad, on behalf of certain MTA Metro-North Railroad employees who opted-out of participation in the MTA Defined Benefit Pension Plan and MTA, on behalf of certain represented MTA BSC and IT employees and on behalf of certain MTA Police Officers and MTA Commanding Officers, make contributions to the 401(k) Plan. The rate for the employer contribution varies.
 - MTA Metro-North Railroad Employees represented by certain unions who elected to optout of participation in the MTA Defined Benefit Pension Plan receive an annual employer contribution equal to 4% of such employee's compensation. Effective on the first full pay period following the nineteenth anniversary date of an eligible MTA Metro-North Railroad member's continuous employment, MTA Metro-North Railroad contributes an amount equal to 7% of such member's compensation. MTA Metro-North Railroad members vested in these employer contributions upon the completion of five years of service.
 - MTA Headquarters Police For each plan year, MTA makes contributions to the account of each eligible MTA Police Benevolent Association and Commanding Officers Association member in the amounts required by the relevant collective bargaining agreement and subject to the contribution limits set forth in such agreement. These monthly contributions shall be considered MTA Police Department contributions. Members are immediately 100% vested in these employer contributions.
 - MTA Headquarters Business Services and IT Department Effective January 1, 2011, all newly hired MTA Business Services Center employees represented by the TCU are eligible to receive a matching contribution, up to a maximum of 3% of the participant's compensation through March 30, 2017. Effective March 31, 2017, employees represented by the TCU are eligible to receive a matching contribution, up to a maximum of 4% of the participant's compensation. Effective March 31, 2018, employees represented by the TCU are eligible to receive a matching contribution, up to a maximum of 5% of the participant's compensation A participant's right to the balance of his or her matching contributions will vest upon the first of the following to occur: (1) completing five years of service, (2) attaining the retirement age of 62 while in continuous employment, or (3) death while in continuous employment.

OPEB

In addition to pensions, the MTA Retiree Welfare Benefits Plan (the "OPEB Plan") and the related Trust Fund were established effective January 1, 2009 for the exclusive benefit of the retirees of the Related Entities and certain retirees of the former Metropolitan Suburban Bus Authority ("MTA LI Bus") to fund some of the OPEB benefits provided in accordance with MTA's various collective bargaining agreements and MTA policies. The OPEB Plan adopted GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans* ("GASB 74"). GASB 74 establishes financial reporting standards of State and Local governmental OPEB plans. This statement replaces GASB Statement No. 43, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*. MTA's audited financial statements are in compliance with GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than*

Pensions, which replaced GASB Statement No. 45, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. GASB 75 applies to state and local government employers that sponsor OPEB. Information relating to OPEB disclosure is set forth in Footnote 5 to the audited Combined Financial Statement of MTA.

As of December 31, 2018, the OPEB trust held \$351.4 million in net assets.

INSURANCE

General

MTA's Department of Risk and Insurance Management ("MTA RIM") is responsible for administering the insurance programs for the Related Entities, including obtaining insurance. Marsh, USA serves as MTA's master insurance broker and Marsh Management Services, Inc. acts as the captive manager for FMTAC.

The insurance needs of the Related Entities vary. One of the biggest differences relates to how employees are covered for injuries on the job. The recovery by employees of the Related Entities other than the commuter railroads and the MTA Police Department who get injured on the job is limited by the State workers' compensation law. Recoveries by employees of the commuter railroads and the MTA Police Department are governed by federal law, and are not limited by State law, and, consequently, they can sue for damages under the Federal Employers Liability Act if they are injured on the job.

The Related Entities maintain insurance coverage through MTA's captive insurance company subsidiary, FMTAC, and through the commercial marketplace. MTA RIM, which also serves as the staff of FMTAC, sets the insurance premiums for the Related Entities at levels that are expected to be sufficient to purchase the commercial insurance or reinsurance, or permit FMTAC to pay the claims and costs for claims administration. Since its creation, FMTAC, with funding from the Related Entities, has assumed greater responsibility for the direct insurance and reinsurance risk of the Related Entities.

FMTAC is licensed in the State as both a direct insurer and as a reinsurer. When FMTAC is a direct insurer, it may reinsure all or a portion of its potential liabilities with commercial reinsurers. FMTAC retains independent entities to handle the claims administration process. FMTAC may deposit certain of its assets in trust with third parties in order to secure its insurance or reinsurance obligations under some of the insurance policies.

New York State Department of Financial Services ("NYSDFS") regulations require that every captive insurance company licensed in the State be audited by State regulators every three to five years for compliance with State regulations and generally accepted accounting standards. FMTAC's third audit covering the period from January 1, 2011 to December 31, 2015 was completed during 2017 and a favorable sign-off from the NYSDFS was received on January 29, 2019.

The major insurance policies are maintained for the benefit of the Related Entities, and the expiration dates of such policies are set forth in the following chart:

Insurance Program	Expiration Date
Property Insurance	May 1, 2021
Commuter Stations and Force Liability	December 15, 2020
FMTAC Excess Loss Fund	October 31, 2020
Commercial Excess Liability Policy	October 31, 2020
All Agency Protective Liability	June 1, 2020
Paratransit and Non-Revenue Vehicle Policies	March 1, 2021
Premises Liability	December 7, 2020
Builder's Risk	Various
Owner Controlled Insurance Programs	Various

Property Insurance Program

Property Insurance. Effective May 1, 2020, FMTAC renewed the all-agency property insurance program. For the annual period commencing May 1, 2020, FMTAC directly insures property damage claims of the Related Entities in excess

of a \$25 million per occurrence deductible, subject to an annual \$75 million aggregate deductible. The total All Risk program annual limit is \$500 million per occurrence and in the annual aggregate for Flood and Earthquake covering property of the Related Entities collectively. FMTAC is reinsured in the domestic, Asian, London, European and Bermuda reinsurance markets for this coverage.

Losses occurring after exhaustion of the deductible aggregate are subject to a deductible of \$7.5 million per occurrence. In addition to the noted \$25 million per occurrence deductible, MTA is self-insured above that deductible for \$44.464 million within the overall \$500 million per occurrence property program, as follows: \$.685 million (or 1.37%) of the \$50 million excess \$50 million layer, plus \$13.4 million (or 26.8%) of the \$50 million excess \$150 million layer, plus \$6.85 million (or 13.7%) of the \$50 million excess \$200 million layer, plus \$17.35 million (or 34.71%) of the \$50 million excess \$250 million layer and \$6.18 million (or 12.36%) of the \$50 million excess \$300 million layer.

The property insurance policy provides replacement cost coverage for all risks (including Earthquake, Flood and Wind) of direct physical loss or damage to all real and personal property, with minor exceptions. The policy also provides extra expense and business interruption coverage.

Supplementing the \$500 million per occurrence noted above, FMTAC's property insurance program has been expanded to include a further layer of \$100 million of fully collateralized earthquake coverage for an event of a certain index value and for storm surge coverage for losses from storm surges that surpass specified trigger levels in the New York Harbor or Long Island Sound and are associated with named storms that occur at any point in the three-year period from May 12, 2020 to April 30, 2023. The expanded protection is reinsured by MetroCat Re Ltd. 2020-1, a Bermuda special purpose insurer independent from MTA and formed to provide FMTAC with capital markets based property reinsurance. The MetroCat Re Ltd. 2020-1 reinsurance policy is fully collateralized by a Regulation 114 trust invested in U.S. Treasury Money Market Funds. The additional coverage provided is parametric and available for storm surge losses resulting from a storm that causes water levels that reach the specified index values, and also for an earthquake event of a certain index value.

With respect to acts of terrorism, FMTAC provides direct coverage that is reinsured by the United States Government for 80% of "certified" losses, as covered by the Terrorism Risk Insurance Program Reauthorization Act ("TRIPRA") of 2019. The remaining 20% of the Related Entities' losses arising from an act of terrorism would be covered under the additional terrorism policy described below. No federal compensation will be paid unless the aggregate industry insured losses exceed a trigger of \$200 million. The United States government's reinsurance is in place through December 31, 2027.

To supplement the reinsurance to FMTAC through the TRIPRA, MTA obtained an additional commercial reinsurance policy with various reinsurance carriers in the domestic, London and European marketplaces. That policy provides coverage for (1) 20% of any "certified" act of terrorism up to a maximum recovery of \$215 million for any one occurrence and in the annual aggregate , (2) the TRIPRA FMTAC captive deductible (per occurrence and on an aggregated basis) that applies when recovering under the "certified" acts of terrorism insurance or (3) 100% of any "certified" terrorism loss which exceeds \$5 million and less than the \$200 million TRIPRA trigger up to a maximum recovery of \$200 million for any occurrence and in the annual aggregate.

Additionally, MTA purchases coverage for acts of terrorism which are not certified under TRIPRA to a maximum of \$215 million. Recovery under the terrorism policy is subject to a deductible of \$25 million per occurrence and \$75 million in the annual aggregate in the event of multiple losses during the policy year. Should the Related Entities' deductible in any one year exceed \$75 million future losses in that policy year are subject to a deductible of \$7.5 million. The terrorism coverages expire on May 1, 2021.

Commuter Stations and Force Liability

 Commuter Station Liability Insurance. FMTAC directly insures MTA Long Island Rail Road and MTA Metro-North Railroad under the stations policy, which covers third party liability, bodily injury and property damage and personal injury at commuter rail passenger stations, including moving train hazards while confined to the station area, and includes elevators, escalators, platforms, appurtenances, land, approaches and parking lots, if they are owned by the Related Entities. These policies insure up to the Self-Insured Retention set forth in the table included under the caption "FMTAC Excess Loss Fund" below per occurrence with no aggregate stop loss protection.

- Commuter Force Account Insurance. FMTAC directly insures MTA Long Island Rail Road and MTA Metro-North Railroad under the force account policy, which covers third party liability, physical damage and medical payments on commuter rail force account work (i.e., employees of the commuter railroads in the course of doing work for the benefit of the Related Entities) reimbursed by others. These policies insure up to the Self-Insured Retention set forth in the table included under the caption "FMTAC Excess Loss Fund" below per occurrence with no aggregate stop loss protection.
- The cost of the stations insurance is factored into the level of station maintenance payments required to be paid by the City and the counties in the MTA Commuter Transportation District. See "PART 2 FINANCIAL – INFORMATION REVENUES OF THE RELATED ENTITIES – Financial Assistance and Service Reimbursements from Local Municipalities – *Commuter System Station Maintenance Payments*."

On December 15, 2015, FMTAC increased the primary coverage on the Station Liability and Force Account liability policies from \$10 million to \$11 million for MTA Metro-North Railroad and MTA Long Island Rail Road.

FMTAC Excess Loss Fund

FMTAC operates an Excess Liability Fund ("ELF") insurance program that insures certain claims in excess of the self-insured retention limits of the agencies on both a retrospective (claims arising from incidents that occurred before October 31, 2003) and prospective (claims arising from incidents that occurred on or after October 31, 2003) basis. The self-insured retention limits, by agency, are set forth in the table below. The maximum amount of claims arising out of any one occurrence is the total assets of the ELF program available for claims, but in no event greater than \$50 million. The retrospective portion contains the same insurance agreements, participant retentions, and limits as existed under the ELF for occurrences happening on or before October 30, 2003. On a prospective basis, FMTAC issues insurance policies indemnifying MTA and the other Related Entities above their specifically assigned self-insured retention with a limit of \$50 million per occurrence and a \$50 million annual aggregate. FMTAC charges appropriate annual premiums based on loss experience and exposure analysis to maintain the fiscal viability of the program. Based on actuarial review and analysis of agencies' underlying losses, the Excess Loss premium for the policy period October 31, 2019 – October 31, 2020 was \$14 million. For the next renewal period, a similar analysis will be conducted and appropriate premium charges will be determined. On December 31, 2019, the balance of the assets in this program was \$164.1 million.

	Self-Insured Retention (in millions of dollars)			
Related Entity	10/31/06 - 10/31/09	10/31/09 - 10/31/12	10/31/12 - 10/31/15	10/31/15 to Present
MTA New York City Transit MaBSTOA MTA Long Island Rail Road MTA Metro-North Railroad MTA Bus	\$8	\$9	\$10	\$11
MTA Staten Island Railway MTA Metropolitan Suburban Bus Authority*	\$2.3	\$2.6	\$3	\$3.2
MTA Bridges and Tunnels MTA Headquarters	\$1.6	\$1.9	\$2.6	\$3.2

MTA also maintains an All-Agency Excess Liability Insurance Policy that affords MTA and the other Related Entities additional coverage limits of \$350 million, for a total limit of \$400 million (\$350 million in excess of \$50 million). In certain circumstances, when the assets in the ELF program are exhausted due to payment of claims, the All-Agency Excess Liability Insurance Policy will assume the coverage position of \$50 million.

^{*} The MTA subsidiary Metropolitan Suburban Bus Authority discontinued its provision of transportation services at the end of 2011. Its activities are limited to the winding up of its affairs. FMTAC excess loss coverage remains in place only with respect to claims arising out of MTA LI Bus incidents which occurred on or before December 31, 2011.

During 2019 and to date, the ELF program has paid approximately \$10 million, as the ELF's share of settlements exceeded MTA Long Island Rail Road and MTA Bus self-insured retention for two losses, one for MTA Long Island Rail Road on October 8, 2016, and the other for MTA Bus on November 15, 2016.

The following are pending cases and claims that could result in payments under this liability policy in excess of agency retentions, as well as certain noted claims that closed in the past year without payment from the excess loss fund:

- MTA Metro-North Railroad Valhalla. An incident occurring on February 3, 2015, when a MTA Metro-North Railroad Harlem Line train struck an automobile in a highway-rail grade crossing between the Valhalla and Hawthorne stations, resulted in assertion of personal injury claims against the railroad. The driver of the automobile and five passengers on the train were killed. A number of passengers, and the train engineer, were injured. The National Transportation Safety Board ("NTSB") adopted its report on the causes of the accident on July 25, 2017, finding the probable cause of the accident was that the driver of the automobile, for undetermined reasons, moved the vehicle on to the tracks while the Commerce Street highway-railroad grade crossing warning system was activated, into the path of an MTA Metro-North Railroad train. Contributing to the accident was the automobile driver: (1) stopping beyond the stop line, within the boundary of the highwayrailroad grade crossing, despite warning signs indicating the approach to the grade crossing and (2) reducing the available time to clear the grade crossing by exiting the vehicle after the grade crossing warning system activated because the driver's attention was diverted by the grade crossing warning system crossing gate arm striking her vehicle. Contributing to the severity of the accident was the third rail penetrating the passenger compartment of the lead passenger railcar and the post-accident fire. While there is no indication from the NTSB's findings that MTA Metro-North Railroad was at fault in connection with this incident, 37 lawsuits have been filed to date against MTA Metro-North Railroad, many of which name other defendants as well. Notwithstanding MTA Metro-North Railroad's position that it has no responsibility for this incident, if plaintiffs are successful in their claims against MTA Metro-North Railroad, damages could exceed the selfinsured retention and impact the FMTAC and excess layers of insurance.
- MTA Long Island Rail Road Atlantic Terminal Bumper Block Strike. An incident occurred on January 4, 2017 when an MTA Long Island Rail Road Far Rockaway Line train struck a bumper block in the Atlantic Terminal-Brooklyn Station. This incident resulted in 173 injury claims to date, which include 11 employee FELA claims. To date, 122 claims have been put into suit. At this time, there does not appear to be any catastrophic injuries stemming from this incident, with the worst injuries seen so far are bone fractures and various trauma to the head/neck. The NTSB conducted an investigation and issued a Special Investigation Report at the NTSB Public Meeting of February 6, 2018. A recent defense counsel review of the open lawsuits relating to the matter revealed eight losses with a settlement value of approximately \$1.75 million each. MTA Long Island Rail Road has paid \$1.4 million in expenses and settlement payments to date, with \$20 million in open reserves. Per MTA Long Island Rail Road's Safety Department, MTA Long Island Rail Road sustained damages of approximately \$6 million. The ELF program is responsible for an amount in excess of the \$11 million up to the remaining limits available for the 2017-2018 policy term.
- MTA Long Island Rail Road—New Hyde Park Collision. On October 8, 2016 while the MTA Long Island Rail Road was conducting track work east of the New Hyde Park Station on track placed out of service, a piece of track equipment derailed fouling live track and was struck by a train carrying passengers, causing the passenger train to derail. Numerous passengers and several employees were injured due to this accident. The FRA, along with MTA/MTA Long Island Rail Road, conducted investigations into this matter. There are a total of 72 claims to date related to this accident, 57 are passenger injuries, eight are employee injuries and the remaining are property damage claims. At this time only 32 lawsuits have been filed against MTA/ MTA Long Island Rail Road has paid the entire \$11 million FMTAC Force Account limit. The current outstanding reserve is \$2.3 million and there are 21 open lawsuits. FMTAC has paid \$6.1 million in settlements including damage to MTA Long Island Rail Road property. The derailment caused damage to three passenger cars, the track area and the track equipment involved. The ELF program is responsible for any amount in excess of the \$11 million up to the remaining limits available for the 2015-2016 policy term.
- Thomas Choi a/k/a Kowk Kowngt Choi et al. v. Triborough Bridge and Tunnel Authority. MTA Bridges and Tunnels was served with a Notice of Claim on behalf of Bridge and Tunnel Officer Thomas Choi and his wife regarding an incident on October 23, 2013, when Officer Choi was struck by a motorist who failed to heed the

"closed" sign for the eastbound lower level of the VNB as he was removing orange traffic barrels in the course of his employment. Officer Choi died from his injuries on December 29, 2014. The matter was placed in suit in Supreme Court, Richmond County as a direct action on behalf of Officer Choi against MTA Bridges and Tunnels and MTA. MTA Bridges and Tunnels interposed an answer with appropriate affirmative defenses. Plaintiff's subsequent motion to serve an Amended Complaint alleging wrongful death was granted. The Amended Complaint was served on June 6, 2016, and MTA Bridges and Tunnels interposed an answer to the Amended Complaint with appropriate affirmative defenses and cross-claims. The Amended Complaint alleges wrongful death and invokes General Municipal Law §205-e, which permits actions against property owners by officers injured or killed in the line of duty. After pretrial discovery was completed, MTA Bridges and Tunnels moved for summary judgment based upon the inapplicability of General Municipal Law §205-e to Officer Choi, who was a peace officer, as well as governmental immunity and lack of respondeat superior as concerns MTA. Oral argument on the motions made by MTA Bridges and Tunnels and the City was held on November 29, 2018 before Justice Marin. Plaintiff did not oppose dismissal of the direct action against MTA Bridges and Tunnels but simply attempted to assert that co-defendant Sanandres has a viable cross claim which has been converted to a third-party claim. Judge Marin rejected that argument and sua sponte converted the cross-claim to a third-party action and amended the caption, converting the action to: Choi v. Sanandres; Sanandres as Third-Party Plaintiff v. TBTA, Third-Party Defendant. Counsel advises that MTA Bridges and Tunnels' ultimate exposure would be capped at the \$50,000 limit payable by co-defendant Sanandres under her policy, which was tendered since case law is clear that where the initial action by plaintiff against his employer was barred as a matter of law, plaintiff may not seek Dole v. Dow contribution from the employer through a thirdparty plaintiff. Additionally, the motion submitted by the City of New York has been granted and the City was dismissed from the action. The court appeared to understand the limitation of potential exposure against MTA Bridges and Tunnels. The settlement conference scheduled for February 1, 2019 has been adjourned without date pending reassignment of the case to another judge. The court may pressure MTA Bridges and Tunnels to waive its Workers' Compensation lien, which is roughly a net recoverable of \$30,000.

On the date of the accident, MTA Bridges and Tunnels' self-insured retention was \$2.6 million. This case has been reported to ELF, which would be responsible for any amount in excess of the self-insured retention up to the \$50 million limit. Ms. Sanandres' policy limit is \$50,000. On September 9, 2019, the plaintiff notified the court that the matter had been settled with respect to the general liability personal injury action. The plaintiff accepted the \$50,000 offer from defendant Sanandres and has agreed to discontinue the State court action. The plaintiff has agreed to discontinue and or case prosecution of any claim against MTA Bridges and Tunnels for Workers' Compensation benefits in exchange for a waiver of the Workers' Compensation lien, which is in excess of \$500,000. The Workers' Compensation Board has approved the settlement and the parties are presently waiting for the Stipulation of Discontinuance to be filed by counsel for the co-defendant Sanandres. This matter will no longer be reported.

• DiRusso v Triborough Bridge and Tunnel Authority, et al. Plaintiff, an employee of Tully Construction subcontractor Welsbach Electric Co., commenced this action in Supreme Court, Kings County, regarding an incident on May 16, 2017. The plaintiff was performing electrical work on a man lift in the Hugh Carey Tunnel when an MTA Bridges and Tunnels vehicle operated by MTA Bridges and Tunnels employee Sean Mullin struck the man lift causing the plaintiff to fall approximately 15' to 20' feet and sustain personal injuries. It is claimed that MTA Bridges and Tunnels was in violation of Labor Law §§200, 240 and 241(6) as well as relevant sections of the New York State Industrial Code and OSHA regulations. MTA Bridges and Tunnels answered the complaint and raised affirmative defenses relative to a Labor Law action and cross claims against Tully Construction and Welsbach Electric Co. The City submitted a motion for summary judgment and it was dismissed from the action via an order of Justice Levine dated August 10, 2018.

This matter is in the discovery stage. Medical records were received that indicated that plaintiff, who has been out of work since the accident, is framing his damages claim to not only include significant cervical spinal injuries (cervical decompression and cervical fusion with fixative hardware including a spine cage at C5/C6), but a traumatic brain injury, as well, which has affected his cognitive abilities and memory. While the plaintiff has undergone significant cervical and lumbar surgeries, there is no indication that he sustained a traumatic brain injury. His longtime physician, Dr. Roth, who treats him for chronic migraines, indicated that deviations in an MRI of the plaintiff's brain were indicative of a vascular disease which is common in individuals with migraine headaches and not traumatically induced. The plaintiff testified at his deposition that the surgeries have reduced the severity of his pain by half. In addition, records received also indicate that the plaintiff has a lengthy employment history as an electrician with a number of fairly well-known local electrical subcontractors

which, in turn, would lead to a significant economic loss claim which will be supported with an economist's expert at the appropriate time. MTA Bridges and Tunnels' tender requests to Arch Insurance Company, the carrier for Tully Construction, and to CNA, the carrier for Welsbach Electric, have been denied.

MTA Bridges and Tunnels will most likely be found liable by operation of Labor Law §§240 & 241(6). There will also be significant questions as to whether MTA Bridges and Tunnels was the sole proximate cause of the occurrence by and through the operation of its vehicle which struck the man lift that the plaintiff was working on which, in turn, may adversely affect the prosecution of MTA Bridges and Tunnels' cross-claims against Tully Construction and Welsbach Electric Co. There will also be questions as to the responsibilities of Tully Construction and Welsbach Electric Co., given that an Investigative Report from Tully Construction indicates that Welsbach Electric Co., failed to set up the work zone in a proper fashion thereby being "a cause" of the occurrence.

On the date of the incident, MTA Bridges and Tunnels' self-insured retention was \$3.2 million. The case has been reported to the ELF, which would be responsible for any amount in excess of the self-insured retention up to the remaining limits available for 2017-2018 policy term.

- *Tate-Mitros v MTA New York City Transit Authority*. In January 2008 plaintiff was injured when his right foot made contact with the tire of a MTA New York City Transit bus. Plaintiff sustained serious injuries. A jury found MTA New York City Transit 100% liable for the accident and awarded plaintiff \$14 million. The verdict was reduced to \$4,500,000 and is on appeal. MTA New York City Transit lost the appeal and is seeking leave to appeal to the Court of Appeals.
- *Diaz v. MTA New York City Transit Authority.* On the afternoon of January 15, 2015, Antonio Diaz-Cortez, then 32 years old, was crossing Kings Highway within the crosswalk when he was struck by the right front portion of a bus making a right-hand turn from East 18th Street onto Kings Highway in Kings County. The plaintiff suffered fractures of his right clavicle, right scapular body pelvix, right hip, right ribs, a right hip dislocation and a traumatic partial amputation of his right foot. From the day of the accident, the plaintiff remained hospitalized until about 3 months later, during which time he underwent several surgeries, including right below the knee trans-fibia amputation and several open reduction and internal fixation surgeries with respect to his shoulder and pelvic fractures. The plaintiff subsequently underwent two spinal surgeries, including lumbar fusion. The plaintiff ambulates using a prosthesis and a straight cane or crutches and now also suffers from left ankle pain. He has never returned to work. A Note of Issue was filed at the end of December 2019. Should the Note of Issue not be struck, trial is expected in Spring 2021. The case has been reported to ELF which would be responsible for up to \$50 million excess of \$10 million self-insured retention.
- Robert Liciaga v. MTA New York City Transit Authority. On April 10, 2016, Robert Liciaga, then 23 years old, rode his bike through a cordoned off construction site beneath the elevated subway line on Broadway in Bushwick, Brooklyn. MTA New York City Transit was removing rotted cross ties and lowering them into a designated "drop zone." Plaintiff was hit by a discarded tie that was dropped from the elevated subway line to the ground per MTA New York City Transit work protocol. He sustained severe and permanent injuries including paraplegia and is now confined to a long-term care facility.

A Kings County jury found the MTA New York City Transit 100% at fault, and returned with a damage award of \$110,174,972.

The trial judge granted in part MTA New York City Transit's post-trial motion and granted a new trial on past and future pain and suffering damages unless the plaintiff stipulated to accept a reduced combined award of \$16 million (\$4 million and \$12 million for past and future pain and suffering, respectively).

The plaintiff stipulated to the reduced award and filed judgment in the total sum of \$69,707,337.07. MTA New York City Transit appealed from the judgment and has a number of credible legal challenges to both liability and damages verdict. Settlement discussions are ongoing. If the case is not settled, litigation is likely to continue for at least the next three years.

The case has been reported to the ELF which would be responsible for any amount in excess of the \$11 million self-insured retention up to the remaining limits available for the 2016-2017 policy term.

• Beauchamp v. MTA New York City Transit Authority. On the evening of March 6, 2017, Aurora Beauchamp, then 62 years old, was lawfully crossing southbound in the crosswalk on Houston Street when she was struck by

an M14D bus making a left turn onto Houston Street from Avenue D. The plaintiff was pinned under the bus and had to be extracted by the FDNY. The plaintiff sustained bilateral hip and pelvic fractures, pneumonothorax, pelvic, hematoma, gluteal artery laceration, bilateral rib fracture, non-displaced vertebral fracture, left foot drop, bilateral thigh degloving, with multiple debridement to the right thigh and wound vac placement to the right thigh. On March 8, 2018, the plaintiff had open reduction internal fixation to repair the left acetabular fracture. Plaintiff had a second surgery to repair a ruptured bladder on March 17, 2018. The plaintiff will need future care including spinal surgery, joint replacements of the left hip and knee and potentially a spinal cord stimulator implantation. The plaintiff is currently using a wheelchair; she is unable to ambulate independently.

The case is not currently on the trial calendar. The current demand is \$15 million and MTA New York City Transit's SIR is \$11 million. The matter has been reported to ELF, which would be responsible for settlement payments up to \$35 million.

- *Fayaz Khan, as Administrator for Rukhasana Khan v MTA Bus.* On September 21, 2015, a female pedestrian was struck by an MTA Bus, causing her to be fatally injured. Suit was commenced in Supreme Court, New York County in December 2016. Discovery is proceeding. MTA Bus intends to vigorously defend this action and cannot predict the outcome of the litigation at this time. On the date of the accident, MTA Bus's self-insured retention was \$11 million. The case settled for \$8.5 million, which is within the agency self-insured retention limit. The matter will no longer be reported.
- *Kang Ying Lin v MTA Bus.* Plaintiff, a pedestrian, claims that she sustained injuries when she was struck by MTA Bus on November 15, 2016. Suit commenced in Supreme Court, Queens County in July 2017. Discovery is proceeding. MTA Bus intends to vigorously defend this action and cannot predict the outcome of the litigation at this time. On the date of the accident, MTA Bus's self-insured retention was \$11 million. This case has been reported to the ELF. The case settled for \$14.5 million. The settlement is due the end of March. ELF will pay \$3,582,239.69, which payment includes litigation expenses. The matter will no longer be reported.

All Agency Protective Liability

- *FMTAC All-Agency Protective Liability Program.* Under the All-Agency Protective Liability Program ("AAPL"), FMTAC directly insures the Related Entities against claims arising out of work performed by independent contractors on capital projects. The policy provides coverage of \$2 million per occurrence.
- *FMTAC All-Agency Protective Excess Liability Program.* FMTAC directly insures the Related Entities to provide excess coverage on top of the AAPL. The policy provides coverage of \$9 million in excess of \$2 million per occurrence, with an \$18 million annual aggregate. Any excess is covered by the ELF program.

Paratransit and Non-Revenue Vehicle Policies

- *MTA New York City Transit Paratransit Program.* FMTAC maintains a commercial policy that provides automobile liability coverage for all vendors hired to perform services on behalf of MTA New York City Transit's Access-A-Ride program with policy limits of liability of \$1 million per occurrence, excess of a \$2 million self-insured retention. On March 1, 2020, the "Access-A-Ride" automobile liability policy program was renewed.
- *MTA Non-Revenue Auto Liability.* This program covers non-revenue vehicles (i.e., administrative and other vehicles not used for the generation of passenger revenues) of MTA Long Island Rail Road, MTA Metro-North Railroad, MTA Staten Island Railway, MTA Police Department, the MTA Inspector General, and MTA Headquarters. FMTAC obtained a commercial policy that provides coverage to the above entities with an \$11 million per occurrence combined single limit and a \$1,000,000 deductible for each accident. On March 1, 2020, the non-revenue fleet automobile liability policy program was renewed with an \$11 million per occurrence combined single limit. FMTAC also renewed its \$1,000,000 deductible buy back policy, where it assumes the liability of the agencies for their deductible.
- The paratransit program and non-revenue auto liability policies are currently issued by the same commercial vendor.

• Claims and claims administration are funded out of the General Operating Account.

Premises Liability

Premises Liability insurance covers liability arising out of the ownership, maintenance and use of various MTA locations, including 341/345/347 Madison Avenue, 2 Broadway, and the MTA Inspector General's lease of 1 Penn Plaza. The program provides the Related Entities with coverage of up to \$1 million per occurrence with a \$2 million aggregate.

Owner Controlled Insurance Program

In an owner controlled insurance program ("OCIP"), MTA RIM arranges for the insurance coverage for all of the construction activity covered by the OCIP, rather than reimbursing the individual contractors and subcontractors for obtaining their own insurance. OCIPs have historically been regarded as more economical than requiring the contractors and subcontractors to obtain the insurance directly. Economies arise from, among other things, the risk pooling nature of the program (i.e., the risks relating to insuring each individual project separately is generally considered greater than the risks associated with collectively insuring many projects) and that MTA, due to its financial strength and successful operation of safety management programs at the job sites, is generally better able to procure insurance at favorable rates than individual smaller contractors and subcontractors. In addition, an OCIP provides the same level of insurance coverage at each project, which was not always possible when the individual contractors and subcontractors were required to obtain the insurance.

Generally, commercial insurance policies are obtained for the OCIP, but FMTAC will typically retain a significant portion of each insured loss which ranges from the first \$250,000 to \$10,000,000 of each insured workers' compensation or general liability loss and up to the first \$50 million of a builders risk loss on a network expansion project. FMTAC holds deposit moneys and/or collateral in trust with a commercial bank as security for its reimbursement obligation to the commercial insurance carrier for any losses. Unexpended funds are retained by FMTAC and used to discount future OCIP programs. The following are active MTA OCIPs:

- MTA New York City Transit Line Structures, Shops, Yards and Depots (2000-2004 MTA Capital Program)
- MTA Long Island Rail Road East Side Access
- MTA Long Island Rail Road and MTA Metro-North Railroad 2000-2004 MTA Capital Programs
- MTA New York City Transit 2005-2009 MTA Capital Program
- MTA New York City Transit Second Avenue Subway
- MTA Long Island Rail Road and MTA Metro-North Railroad 2005-2009 MTA Capital Programs
- MTA New York City Transit, MTA Long Island Rail Road, MTA Metro-North Railroad, SBMP 2010-2014 Capital Programs.
- MTA New York City Transit, MTA Long Island Rail Road, MTA Metro-North Railroad, SBDP 2015-2019 Capital Programs.
- MTA Long Island Rail Road Expansion Project from Floral Park to Hicksville.

Builder's Risk

- Builder's Risk insurance is a type of property insurance that provides coverage for physical damage to the insured structure during the course of construction. Builder's Risk insurance is not liability insurance.
- Builder's Risk for the Capital Program OCIPs covers a project for the full project value up to a limit of \$50 million. The East Side Access Project has a limit of \$300 million and Second Avenue Subway has a limit of \$500 million.
- Claims and claims administration are funded out of the FMTAC General Operating Account.

LITIGATION

General

The Related Entities maintain extensive property, liability, station liability, force account, construction, and other insurance as generally described above in this Part 6 under "INSURANCE." Claims for money damages described below may be fully or substantially covered by insurance, subject to the individual agency retention set forth under "INSURANCE – FMTAC Excess Loss Fund," where applicable. Each of the Related Entities additionally annually budgets an amount that it projects will be sufficient to pay for judgments and claims during that year.

The Related Entities also provide accruals in their financial statements for their estimated liability for claims by third parties for personal injury arising from, among other things, bodily injury (including death), false arrest, malicious prosecution, and libel and slander, for property damage for which they may be liable as a result of their operations, and advertising offense, including defamation, invasion of right of privacy, piracy, unfair competition, and idea misappropriation. The estimated liabilities are based upon independent actuarial advice obtained by the Related Entities. However, except in special circumstances and except for the annual judgments and claims budgeted amounts, additional cash reserves are not generally established in an amount equal to the full amount of the accrual.

For the Related Entities on a consolidated basis, a summary of activity in estimated liability as computed by actuaries arising from injuries to persons, including employees, and damage to third-party property, for the year ended December 31, 2019, is contained in Footnote 10 ("Estimated Liability Arising from Injuries to Persons") of the MTA Consolidated Financial Statements for the years ended December 31, 2019 and 2018.

MTA

Lockheed Martin Transportation Security Solutions v. MTA Capital Construction and MTA. MTA is a defendant, along with MTA Construction and Development (formerly known as MTA Capital Construction), in an action brought in April 2009 by Lockheed Martin Transportation Security Solutions ("Lockheed") in the U.S. District Court for the Southern District of New York. Lockheed initially sought a judgment declaring that MTA and MTA Construction and Development were in breach of its contract for furnishing and installing an integrated electronic security program and an order terminating Lockheed's obligations. Following MTA's termination of its contract, Lockheed amended its complaint to seek damages for delay and disputed work items (\$80 million, later revised to \$93 million) or, alternatively, for the alleged "reasonable value of work performed" by Lockheed (\$137 million, later revised to \$149 million), exclusive of pre-judgment interest, based on its claim that MTA wrongfully terminated the contract. MTA and MTA Construction and Development are vigorously contesting Lockheed's claims for money damages and counterclaimed, alleging that Lockheed materially breached the contract and seeking damages which are estimated to be \$205,909,468, exclusive of pre-judgment interest. Following the completion of discovery, in July 2013, both MTA and Lockheed moved for partial summary judgment in connection with various claims.

By decision dated September 16, 2014, the court granted in part and otherwise denied each party's motion. With respect to MTA's motion, the court dismissed Lockheed's *quantum meruit* claim, thereby reducing MTA's exposure by roughly \$50 million, to approximately \$94 million (exclusive of pre-judgment interest). The trial commenced on October 6, 2014 and concluded on November 14, 2014. Based on the trial record, MTA reduced its damages claim to \$189 million, exclusive of pre-judgment interest. Lockheed's claim for damages remained the same. Post-trial papers were submitted on November 24, 2014 and the final reply papers were submitted on December 5, 2014. The parties now await the decision of the court. MTA cannot determine the final outcome of the litigation at this time.

In July 2009, Lockheed's performance bond sureties on the contract commenced a related action in the U.S. District Court for the Southern District of New York against Lockheed and the MTA defendants, alleging that they are unable to conclude that the conditions to their obligations under the bond have been satisfied. They seek a declaration of the rights and obligations of the parties under the bond. (*Travelers Casualty and Surety Company, et al. v. MTA, MTA Capital Construction, MTA New York City Transit, et al.*) MTA and MTA Construction and Development answered and counterclaimed against the sureties, seeking damages in connection with the sureties' violation of their bond obligations in an amount to be determined at trial. The matter was consolidated with the *Lockheed* action. In October 2013, the sureties moved for partial summary judgment on their exposure, seeking a reduction of their potential obligation by \$5.4 million to account for a progress payment issued by MTA to Lockheed post-default. By decision dated September 15, 2014, the Court

denied that motion. The final outcome of this action must await the outcome of the underlying action (Lockheed v. MTA, discussed above), and cannot be determined at this time.

Actions for Personal Injuries/Property Damage/Workers' Compensation. As of December 31, 2019, there were approximately 59 actions and tort claims pending against MTA. These include claims for damages for personal injuries sustained while on duty, including actions under the FELA, no-fault cases, and other torts. Additionally, as of that date, there were approximately 425 pending Workers' Compensation cases.

Transit System

Actions for Personal Injuries/Property Damage. As of December 31, 2019, MTA New York City Transit and MaBSTOA had an active inventory of 8,850 personal injury claims and lawsuits (excluding workers' compensation and no-fault cases) and 1,585 property damage matters arising out of the operation and administration of the Transit System. In addition, with respect to the Access-A-Ride (Paratransit) program, as of December 31, 2019, there was an active inventory of approximately 1,057 personal injury cases and approximately 232 property damage cases arising out of the operation of vehicles leased to outside vendors that provide Access-A-Ride service. Such Access-A-Ride claims are covered by a commercial automobile policy which, in 2019, had policy limits of \$3 million per occurrence, subject to a \$1 million deductible. As of December 31, 2019, MTA Staten Island Railway had a pending inventory of 19 claims and lawsuits relating to personal injury and property damage arising from the operations of MTA Staten Island Railway.

Workers' Compensation and No-Fault. As of December 31, 2018, MTA New York City Transit and MaBSTOA had an active inventory of approximately 14,010 Workers' Compensation cases and approximately 2,142 no-fault cases. As of December 31, 2019, there were 26 Workers' Compensation cases for MTA Staten Island Railway, 16 of which involved employees who had been classified as permanently disabled, entitling the claimants to continuing monthly benefits and payment of future related medical expenses, as well as two death cases.

Other Litigation. As of December 31, 2019, the MTA's General Law and Contracts Division had an inventory of approximately 493 cases, consisting of federal and state court plenary litigation actions and special proceedings as well as administrative matters pending before various state, federal and local administrative agencies.

In May 2017, an environmental lawsuit (*Dudley Stewart, et al. v. MTA, et al.*) was commenced in the U.S. District Court for the Eastern District of New York against MTA and MTA New York City Transit by plaintiffs seeking injunctive relief and attorney's fees based upon claims that defendants have failed to inspect and adequately maintain the elevated structures of the Flushing Line in Queens, allegedly resulting in a public health hazard caused by lead paint, other toxins, and noise being released from or caused by the elevated structures. MTA and MTA New York City Transit are vigorously defending the lawsuit. The MTA New York City Transit elevated structures in question were repainted during 2002-2012, and re-painting of the outstanding sections is included in the 2015-2019 Capital Program. In January 2018, the court heard oral argument on defendants' motion to dismiss the case, and thereafter issued a decision granting the motion with respect to plaintiffs' equal protection, inverse condemnation, Clean Air Act, and FELA claims. The Court denied the motion to dismiss with respect to plaintiffs' substantive due process and tort claims. MTA and MTA New York City Transit filed their answer on February 4, 2019. On February 12, 2019, the parties appeared before the magistrate judge for an initial discovery conference. He issued a Case Management Order under which fact discovery was to close in mid-November 2019. That deadline has been extended to July 23, 2020. The outcome of this matter cannot be determined at this time.

In September 2017, a putative class action complaint (*DeJesus v. MTA, et. al.*) was filed in the U.S. District Court for the Southern District of New York against MTA New York City Transit and MTA on behalf of deaf and hearing-impaired subway customers, alleging that providing on-board notification of unplanned subway service changes only through audio announcements violates Title II of the Americans with Disabilities Act, the Rehabilitation Act, the New York State Human Rights Law and the New York City Human Rights Law. The complaint sought declaratory relief, damages, and an injunction requiring the installation of thousands of subway car screens to provide visual messaging corresponding to audio service change announcements. Plaintiff, Ms. DeJesus, seeking to represent a class of deaf and hearing-impaired subway customers, pleaded that more than \$5 million in damages was at issue and invoked federal jurisdiction over the state and city law claims under the Class Action Fairness Act. The court, on March 6, 2019, granted MTA New York City Transit's and MTA's motion to dismiss the complaint, reasoning that the subway system is in full compliance with federal regulations concerning service announcements for passengers with disabilities and that there was no jurisdiction over the State and City law claims. To date, neither MTA New York City Transit nor MTA have received notice of any State court actions on those claims has not been received. The matter will no longer be reported.

Actions Relating to the Transit Capital Program. MTA New York City Transit has received claims from various contractors engaged in work on various Transit Capital Program projects. In addition, claims which concern Transit Capital Program projects on occasion may be commenced against MTA New York City Transit by non-contractors. The aggregate amount demanded by all such claimants (or the expense associated with remedies related to such claims), if incurred in full, could result in an increase in the cost of the capital projects that are the subject of such disputes. The Transit Capital Program contemplates the payments associated with such contractor and non-contractor claims from project-specific and general program contingency funds, as well as other available monies pledged for capital purposes. The following matters commenced by non-contractors relating to the Transit Capital Program are noted below.

In 2016, a lawsuit was filed in the U.S. District Court for the Southern District of New York (Bronx Independent Living Services, et al. v. MTA, et al.) challenging the lack of elevator accessibility at Middletown Road subway station located in the Bronx. MTA and MTA New York City Transit were sued by two disabled rights advocacy organizations and two individuals who allege violations of the ADA and other legislation, for proceeding with certain construction work at the station without including, in the scope of such work, the installation of elevators or ramps. The complaint seeks declaratory and injunctive relief; no claim for monetary relief is asserted. MTA and MTA New York City Transit answered the complaint in September 2016 and denied any asserted violation of applicable law. In March 2018, the federal government was granted leave to join the action and filed an intervenor-complaint, which defendants answered in April 2018. Fact discovery has been conducted and plaintiffs' motion for partial summary judgment was granted by the court in March 2019. The court held that the alterations made at the Middletown Road station affected the "usability" of the station, thereby triggering the application of the U.S. Department of Transportation regulation set forth in 49 C.F.R. Section 37.43(a)(1). Expert discovery relating to the defendants' principal defense has been completed-that installing an elevator or ramp at the Middletown Road Station as part of a larger renewal project was "technically infeasible" within the meaning of the federal DOT regulations and hence not legally required. The court has set a schedule for the parties' summary judgment motions; they are expected to be fully submitted by July 24, 2020. The outcome of the litigation cannot be determined at this time. Were plaintiffs to prevail in obtaining an injunction requiring installation of an elevator or ramp at the Middletown Road station, the costs associated with such an injunction would fall within the coverage of the MTA New York City Transit capital program, which, as noted above, contemplates the utilization of project and program contingency funds, as well as other available monies pledged exclusively for capital purposes under bond resolutions, as the means of addressing such claims and related expenses.

In late April 2017, two purported class actions relating to subway system accessibility were filed against MTA New York City Transit and MTA by individuals and advocacy organizations on behalf of persons with disabilities that prevent them from using the stairs in the subway system. The plaintiffs in both cases seek declaratory and injunctive relief, not money damages. The City was also named as a defendant in both cases but was voluntarily dismissed, with a tolling agreement, from the federal class action. In Center for Independence of the Disabled, New York (Southern District of New York), plaintiffs allege, among other things, that defendants inadequately maintain the existing elevators in the subway system, provide insufficient notice to elevator users about outages, and provide insufficient alternative transportation during elevator outages. These deficiencies allegedly are discrimination in violation of Title II of the ADA, Section 504 of the Rehabilitation Act, and the New York City Human Rights Law. Fact discovery is completed and cross-motions for summary judgment were submitted in October 2019. On March 30, 2020, the Court granted MTA New York City Transit's and MTA's motion for summary judgment dismissing all of plaintiffs' claims. In CIDNY v. MTA (Supreme Court, New York County), the same plaintiffs have asserted that defendants, by not having installed elevators in all subway stations in the system, have discriminated against plaintiffs on the basis of their disabilities in violation of the New York City Human Rights Law. Plaintiffs seek injunctive relief that would require implementation of a program to make all subway stations accessible to people who cannot use the stairs due to a disability. Defendants have moved to dismiss the State court case on the grounds that plaintiffs' claims are preempted by New York Public Authorities Law §1266(8) and Transportation Law § 15-B, nonjusticiable and time-barred, and that motion to dismiss was denied in June 2019. Defendants filed an appeal, which was argued in March 2020, but have agreed to proceed with discovery in accordance with a stipulated discovery order signed in August 2019. The outcome of these two matters cannot be determined at this time.

In May 2019 another purported class action lawsuit (*Forsee v. MTA*) was filed in federal court (Southern District of New York) challenging the lack of elevators at all New York City subway stations. MTA and MTA New York City Transit are being sued by three individuals and several advocacy organizations on behalf of those whose mobility disabilities make the use of stairs "difficult, dangerous or impossible." The complaint alleges violations of the ADA and other federal, state, and local laws, for proceeding over the years with certain construction work at subway stations undergoing renovation without including in the scope of such work the installation of elevators or ramps. The plaintiffs seek declaratory and injunctive relief. The City was also named as a defendant and has moved to dismiss for lack of jurisdiction. Plaintiffs filed an

amended complaint in August 2019 to attempt to more sufficiently plead claims against the City. MTA and MTA New York City Transit have answered that amended complaint and a discovery scheduling order was entered in December 2019, which sets a March 2021 deadline to complete discovery. In addition, MTA and MTA New York City Transit have moved for judgment on the pleadings with respect to plaintiffs' ADA claims related to construction work at subway stations that was done outside the applicable three-year limitations period. That motion was fully submitted in early January 2020. The outcome of this matter cannot be determined at this time. We note, however, that like the Middletown Road litigation described above, were plaintiffs to prevail and obtained an injunction requiring the installation of elevators or ramps at every renovated subway station, the costs associated with complying with such an injunction would have to be covered by MTA New York City Transit capital programs.

Commuter System

Actions for Personal Injuries/Property Damage. As of December 31, 2019, MTA Metro-North Railroad had an active inventory of approximately 427 personal injury claims and lawsuits arising out of the operation and administration of the MTA Metro-North Railroad, of which 237 were the result of claims filed by employees pursuant to the FELA, and approximately 190 were claims filed by third parties. Also, as of that date, there were five pending property damage cases. With respect to claims for personal injury arising from the December 1, 2013 derailment of a southbound MTA Metro-North Railroad train north of the Spuyten Duyvil station in the Bronx, MTA Metro-North Railroad has exhausted its self-insured retention of \$10 million and FMTAC has reimbursed MTA Metro-North Railroad \$50 million, reflecting the exhaustion of the per occurrence all-agency ELF Program limit with respect to this incident. Additionally, MTA maintains \$350 million in liability coverage through the commercial insurance markets that is in excess of the \$50 million coverage layer provided by FMTAC, and settlements and expenses above the ELF Program limit will be paid out of the excess coverage layers.

On February 3, 2015, a MTA Metro-North Railroad Harlem Line train struck an automobile in a highway-rail grade crossing between the Valhalla and Hawthorne stations. That incident has resulted in the assertion of personal injury claims against the railroad. The driver of the automobile and five passengers on the train were killed. A number of passengers and the train engineer were injured. The NTSB adopted its report on the causes of the accident on July 25, 2017, finding the probable cause of the accident was that the driver, for undetermined reasons, moved the vehicle on to the tracks while the Commerce Street highway-railroad grade crossing warning system was activated, into the path of an MTA Metro-North Railroad train. Contributing to the accident was the driver: (1) stopping beyond the stop line, within the boundary of the highway-railroad grade crossing, despite warning signs indicating the approach to the grade crossing, and (2) reducing the available time to clear the grade crossing by exiting the automobile after the grade crossing warning system activated because the driver's attention was diverted by the grade crossing warning system crossing gate arm striking her automobile. Contributing to the severity of the accident was the third rail penetrating the passenger compartment of the lead passenger railcar and the post-accident fire. While there is no indication from the NTSB's findings that the MTA Metro-North Railroad was at fault in connection with this incident, 37 lawsuits have been filed to date against MTA Metro-North Railroad, many of which name other defendants as well. Notwithstanding MTA Metro-North Railroad's position that it has no responsibility for this incident, if plaintiffs are successful in their claims against MTA Metro-North Railroad, damages could exceed the selfinsured retention and impact the FMTAC and excess layers of insurance.

As of December 31, 2018, MTA Long Island Rail Road had an active inventory of approximately 1,760 personal injury claims and lawsuits arising out of the operation and administration of the MTA Long Island Rail Road, of which 1,303 were the result of claims filed by employees pursuant to the FELA, and approximately 457 were claims filed by third parties. Also, there were approximately 43 pending property damage matters.

MTA Long Island Rail Road - Atlantic Terminal Bumper Block Strike. On January 4, 2017 an MTA Long Island Rail Road Far Rockaway Line train struck a bumper block in the Atlantic Terminal-Brooklyn Station. This incident resulted in 173 injury claims to date, which include 11 employee FELA claims. To date, 122 claims have been put into suit. The NTSB conducted an investigation and issued a Special Investigation Report at a February 2018 public meeting. A recent defense counsel review of the open lawsuits relating to this matter revealed eight matters with a settlement value of approximately \$1.75 million each. To date, MTA Long Island Rail Road has paid out \$4.3 million in expenses and settlements. Current outstanding reserves are \$20 million. If plaintiffs are successful in their claims against MTA Long Island Rail Road, damages likely will impact FMTAC excess layers of insurance.

MTA Long Island Rail Road - New Hyde Park Collision. On October 8, 2016, while MTA Long Island Rail Road was conducting track work east of the New Hyde Park Station on track placed out of service, a piece of track equipment derailed, fouling live track and was struck by a train carrying passengers causing the passenger train to derail. Numerous

passengers and several employees were injured due to this accident. The FRA, along with MTA/MTA Long Island Rail Road, conducted investigations into this matter. There are a total of 72 claims to date related to this accident: 57 are passenger injuries, 8 are employee injuries and the remaining are property damage claims. At this time 33 lawsuits have been filed against the MTA/MTA Long Island Rail Road. To date, MTA Long Island Rail Road has paid out the entire \$11 million FMTAC Force Account retention limit in expenses and settlements, and \$6.1 million has impacted the excess layers of insurance. Currently there are 21 open lawsuits and \$2.3 million in outstanding expense and settlement reserves. The derailment damaged three passenger cars, the track area and the track equipment. The FRA has concluded an investigation, and a report has been issued.

Actions Relating to the Commuter Capital Program. From time to time, MTA Long Island Rail Road and MTA Metro-North Railroad receive claims relating to various Commuter Capital Program projects. In general, the aggregate amount demanded by all such claimants, if recovered in full, could result in a material increase in the cost of the capital projects that are the subject of such disputes. The capital program contemplates the payment of such claims from project-specific and general program contingency funds, as well as other available moneys pledged for capital purposes.

In May 2019 a lawsuit (*Self Initiated Living Options, Inc.v. MTA*) was filed in federal court (Southern District of New York) challenging the lack of elevators and restroom accessibility at three MTA Long Island Rail Road stations— Amityville, Copiague, and Lindenhurst. MTA, MTA Long Island Rail Road, Patrick Foye, and Phillip Eng were sued by a disability rights organization and several individuals who alleged that the defendants violated the ADA and other statutes when MTA Long Island Rail Road replaced escalators at each station but did not install elevators or make the station restrooms ADA accessible. The class action seeks declaratory and injunctive relief; no claim for monetary relief (other than attorneys' fees and costs) is asserted. The defendants answered and denied all the claims. MTA Long Island Rail Road recently advised plaintiffs' counsel that it expected, as part of MTA's 2020-2024 Capital Program, to receive funding sufficient to make the three stations ADA accessible. The parties have entered into settlement discussions, which include details of the accessibility plan. If the matter cannot be settled, however, the outcome of the litigation cannot be determined at this time. Any expense associated with this matter would largely be an expense included within an MTA capital program.

MTA Bridges and Tunnels

Farina, et al. v. MTA, TBTA, et al. – A putative class action lawsuit (Farina v. MTA, TBTA, Transworld Systems, Inc., and Conduent, Inc.) was filed in the U.S. District Court for the Southern District of New York on February 16, 2018 and assigned to U.S. District Judge Naomi Reice Buchwald. MTA Bridges and Tunnels and MTA were served on February 21, 2018. The representative plaintiff in the Farina case alleged that the \$100 violation fee allegedly imposed for each toll violation at MTA Bridges and Tunnels is excessive and that the fee policies, practices, and collection methods are illegal and unconstitutional. Putative class action lawsuits were also filed by the same plaintiffs' counsel in the same court on February 20, 2018 (Gardner v. MTA, TBTA, The Port Authority of New York and New Jersey, AllianceOne Receivables Management, Inc. and Conduent) and on March 5, 2018 (Troiano v. MTA, TBTA, The Port Authority of New York and New Jersey, New York State Thruway Authority, Transworld Systems, Inc., AllianceOne Receivables Management, Inc. and Conduent). MTA Bridges and Tunnels and MTA were served in Gardner on March 6, 2018 and in Troiano on April 6, 2018. The allegations regarding MTA Bridges and Tunnels and MTA were substantially the same in all three actions, except that Gardner and Troiano also alleged that \$50 violation fees are excessive and improper. On April 16, 2018, the court consolidated the three cases and on April 30, 2018 plaintiffs filed a consolidated complaint (Farina, Gardner, Troiano, Ritchie, and Rojas v. MTA, TBTA, The Port Authority of New York and New Jersey, New York State Thruway Authority, Transworld Systems, Inc., AllianceOne Receivables Management, Inc., Linebarger Goggan Blair & Sampson, LLP and Conduent, Inc.). The consolidated complaint included plaintiffs Farina, Gardner, and Troiano as well as two additional plaintiffs, whose claims also arise from the assessment of \$50 and \$100 violation fees.

On July 26, 2018, Judge Buchwald granted the defendants' request seeking leave to move to dismiss plaintiffs' consolidated amended class action complaint. On September 13, 2018, the court approved a stipulation between plaintiffs and Conduent, Inc. substituting Conduent, Inc. for the correct party, Conduent State & Local Solutions, Inc. On August 30, 2018, plaintiffs dismissed their claims against Transworld Systems, Inc., AllianceOne Receivables Management, Inc., and Linebarger Goggan Blair & Sampson, LLP, as well as certain causes of action against the remaining defendants. On September 14, 2018, MTA Bridges and Tunnels and MTA filed their motion to dismiss; in their October 22, 2018 opposition, plaintiffs voluntarily dismissed all claims against MTA. The remaining defendants also filed motions to dismiss and briefing on the motions was completed on November 16, 2018.

In early January 2019, the case was reassigned from Judge Buchwald to Judge P. Kevin Castel. Judge Castel issued an Opinion and Order in August 2019. In the Order, Judge Castel dismissed all claims against each defendant except for plaintiff Troiano's Eighth Amendment excessive fines claim and her unjust enrichment claim against MTA Bridges and Tunnels, noting that her allegations sufficed at the pleading stage to survive a motion to dismiss.

The Court held an initial pretrial conference in mid-September 2019, during which the Court bifurcated discovery (initially limited to merits issues relating to Troiano); the initial discovery period was to run through February 3, 2020, and a case management conference was scheduled for February 21, 2020. Following the initial pretrial conference, plaintiffs' counsel filed a motion for leave to file an amended complaint. The proposed amended complaint reintroduces Mirian Rojas and adds two new potential plaintiffs, Brian Owens and Korizan Reese. Each alleges Eighth Amendment and unjust enrichment claims against MTA Bridges and Tunnels. Rojas and Reese also allege Eighth Amendment claims against the PANYNJ. Counsel for the parties completed briefing on the motion for leave to file the amended complaint and await a decision.

Meanwhile, the parties have continued with discovery. On February 3, 2020, the Court entered a Stipulated Protective Order and Confidentiality Agreement, and on February 12, 2020 the Court entered a Revised Case Management Plan and Scheduling Order, extending the initial discovery period to March 20, 2020 for fact discovery and depositions; the period for expert discovery was set to run through May 8, 2020; and the Case Management Conference was postponed to April 13, 2020.

On March 9, 2020, the only remaining plaintiff, Troiano, filed a stipulation to dismiss her claims with prejudice. However, Judge Castel issued an Opinion and Order dated April 17, 2020 that granted plaintiff's motion to amend the complaint to reintroduce Rojas and add Owens and Reese as plaintiffs but it also brought The Port Authority of New York and New Jersey back into the case as a defendant. On April 21, 2020, plaintiffs' counsel filed the Amended Complaint. Once the Amended Complaint is served on and answered by TBTA, we expect that discovery will commence.

Vincent Feliciano, et al. v. MTA and TBTA - This putative class action, alleging violations of the Fair Labor Standards Act ("FLSA") was filed in the U.S. District Court for the Southern District of New York by MTA Bridges and Tunnels and MTA, was brought by Bridge and Tunnel Sergeants and Lieutenants Vincent Feliciano, Diana Longa, Greg Devaney, Peter Roness, and Carlo Tagliavia, on behalf of themselves and others similarly situated. They allege that they perform pre-shift and post-shift work without compensation; that there is a time-shaving policy that automatically rounds officers' check-in times up to their scheduled tour; that supplemental pay, including differentials and bonuses, are not included in the regular rate of pay when calculating overtime; and that payment of overtime and other wages is delayed. MTA Bridges and Tunnels has filed an answer with affirmative defenses. On July 3, 2018, MTA Bridges and Tunnels participated in a mandatory settlement conference before Magistrate Judge Barbara Moses. The parties were unable to reach a settlement but agreed to exchange limited information regarding damages calculations for one of the claims and to continue discussions. On July 11, 2018, MTA Bridges and Tunnels sent its understanding of damages calculations to plaintiffs' counsel. On August 17, 2018, Judge Vernon Broderick certified a collective of all current and former MTA Bridges and Tunnels Sergeants and Lieutenants from three years prior, and 169 MTA Bridges and Tunnels Sergeants and Lieutenants have joined the case as opt-in plaintiffs. Fact discovery was completed as of June 28, 2019. The parties then requested a stay of all further deadlines pending mediation. The case was mediated before Martin Scheinman and settled in December 2019 for a total of \$5.4 million subject to Court approval. The parties filed a joint request to approve the FLSA settlement in February 2020, and are awaiting a hearing for settlement approval, with such hearing likely to be postponed due to the COVID-19 pandemic.

Actions for Personal Injuries/Property Damage. As of December 31, 2019, MTA Bridges and Tunnels had an active inventory of approximately 115 personal injury claims and lawsuits (including intentional torts such as false arrest) and approximately 26 property damage matters arising out of the operation and administration of the MTA Bridges and Tunnels facilities (including construction).

Workers' Compensation and No-Fault. As of December 31, 2019, MTA Bridges and Tunnels had an active inventory of approximately 509 Workers' Compensation cases and no no-fault cases.

Actions Relating to MTA Bridges and Tunnels' Capital Program. From time to time, MTA Bridges and Tunnels receives claims relating to various MTA Bridges and Tunnels' Capital Program projects. In general, the aggregate amount demanded by all such claimants, if recovered in full, could result in a material increase in the cost of the capital projects that

are the subject of such disputes. The capital program contemplates the payment of such claims from project-specific and general program contingency funds, as well as other available moneys pledged for capital purposes.

MTA Bus

As of December 31, 2019, MTA Bus had an active inventory of approximately 985 personal injury claims and lawsuits, approximately 992 property damage matters, approximately 463 no-fault cases arising out of the operation and administration of the MTA Bus System, and approximately 1,022 Workers' Compensation cases.

Metropolitan Suburban Bus Company*

Matter of Adams v. MTA et al. Two hundred former MTA LI Bus employees who were members of TWU Local 252 filed an Article 75 petition to compel arbitration pursuant to various "Section 13(c) agreements" attached to grants that were used for MTA LI Bus. The petition, which was filed in June 2013, names MTA, MTA LI Bus, Nassau County, and Veolia Transportation, which is now running bus service for Nassau County, as respondents and claims that the petitioners were either dismissed on the termination of the Lease and Operating Agreement between MTA LI Bus and Nassau County or hired by Veolia at lower pay and therefore are entitled to arbitrate their claims and to Section 13(c) displacement benefits, which extend for six years from the time of displacement. MTA and MTA LI Bus answered the petition, asserting various defenses. By decision filed October 27, 2014, the court granted petitioners' motion to compel final and binding arbitration before the American Arbitration Association and Martin F. Scheinman was selected to serve as arbitrator. This matter is now before the arbitrator. MTA cannot determine the final outcome of the matter at this time.

Actions for Personal Injuries/Property Damage. As of December 31, 2019, MTA LI Bus had an active inventory of 15 personal injury claims and lawsuits and no property damage matters arising out of the operation and administration of MTA LI Bus.

Workers' Compensation and No-Fault. As of December 31, 2019, MTA LI Bus had approximately 34 Workers' Compensation cases and one open no-fault claim.

^{*} The MTA subsidiary, Metropolitan Suburban Bus Authority, discontinued its provision of transportation services at the end of 2011. Its activities are limited to the winding up of its affairs.

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