NEW ISSUE **BOOK ENTRY - ONLY**

In the opinion of Harris Beach PLLC, as Bond Counsel to the Authority, under existing statutes, regulations, administrative rulings and court decisions, and assuming compliance with the tax covenants described herein, interest on the Series N Bonds is excluded from gross income for federal income tax purposes pursuant to Section 103 of the Internal Revenue Code of 1986, as amended, and is not an item of tax preference for purposes of calculating the federal alternative minimum tax imposed on individuals. Bond Counsel is also of the opinion that under existing statutes, including the New York State Thruway Authority Act, interest on the Series N Bonds is exempt from personal income taxes imposed by the State of New York or any political subdivision thereof. See "TAX MATTERS" for further information.

$450,000,000
NEW YORK STATE THRUWAY AUTHORITY
General Revenue Bonds
Series N

Dated: Date of Delivery **Due: January 1, as shown on the inside cover hereof**

Interest is payable each January 1 and July 1, commencing July 1, 2020. The New York State Thruway Authority General Revenue Bonds, Series N (the "Series N Bonds") are issuable only as fully registered bonds without coupons, in the principal amount of $5,000 or any integral multiple of $5,000 in excess thereof. The Series N Bonds will be issued initially under a book-entry only system and will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("DTC"), which will act as securities depository for the Series N Bonds. See **Appendix D** — "Book-Entry Only System" herein. Principal of and premium, if any, and interest on the Series N Bonds will be payable to Bondholders through The Bank of New York Mellon, New York, New York, as Trustee.

The Series N Bonds are subject to redemption prior to maturity as described herein.

The Series N Bonds of the New York State Thruway Authority (the "Authority") will be issued pursuant to the Authority's General Revenue Bond Resolution adopted on August 3, 1992, as supplemented (such General Revenue Bond Resolution as from time to time amended or supplemented being herein called the "Bond Resolution"), including as supplemented by the Nineteenth Supplemental Revenue Bond Resolution Authorizing General Revenue Bonds, Series N, adopted by the Authority on January 27, 2020 (the "Series Resolution"), and are secured as to the payment of principal, premium, if any, and interest thereon by a pledge of the Revenues and certain funds and accounts established under the Bond Resolution, subject to the application thereof for the purposes and on the terms and conditions provided in the Bond Resolution. **The Series N Bonds are not a debt of the State of New York (the "State") nor shall the State be liable thereon.**

The Series N Bonds are being issued to (i) fund a portion of the Authority's Multi-Year Capital Program, (ii) make a deposit to the Senior Debt Service Reserve Fund, (iii) fund capitalized interest on the Series N Bonds, and (iv) pay the Costs of Issuance of the Series N Bonds.

MATURITY SCHEDULE — See Inside Cover

The cover page and inside cover page contain certain information for general reference only. They are not intended to be a summary of the security or terms of this issue. Investors are advised to read the entire Official Statement to obtain information essential to the making of an informed decision.

The Series N Bonds are offered, when, as and if issued by the Authority and are subject to the approval of legality by Harris Beach PLLC, Bond Counsel to the Authority. Certain legal matters will be passed on by Bryant Rabbino LLP, Disclosure Counsel to the Authority. Certain legal matters are subject to the approval of Joseph P. Igoe, Esq., Deputy General Counsel to the Authority. Public Resources Advisory Group and Acacia Financial Group, Inc. are acting as Co-Financial Advisors to the Authority. It is expected that the Series N Bonds will be available for delivery to The Depository Trust Company, New York, New York, on or about March 5, 2020.

February 20, 2020

$450,000,000
New York State Thruway Authority
General Revenue Bonds
Series N

Maturities, Principal Amounts, Interest Rates, Yields and CUSIP Numbers

Due January 1	Principal Amount	Interest Rate	Yield*	CUSIP** Number (Base# 650009)
2033	$16,525,000	5.00%	1.46%	S95
2034	17,355,000	5.00	1.51	T29
2035	18,220,000	5.00	1.56	T37
2036	19,130,000	5.00	1.60	T45
2037	20,090,000	5.00	1.64	T52
2038	21,095,000	5.00	1.71	T60
2039	22,150,000	5.00	1.75	T78
2040	23,255,000	5.00	1.78	T86
2041	24,420,000	4.00	1.95	T94
2042	25,395,000	4.00	1.98	U27
2043	26,410,000	4.00	2.01	U35
2044	27,465,000	4.00	2.04	U43
2045	28,565,000	4.00	2.06	U50
2046	29,710,000	4.00	2.07	U68
2047	30,895,000	4.00	2.08	U76
2048	32,135,000	3.00	2.40	U84
2049	33,095,000	3.00	2.41	U92
2050	34,090,000	3.00	2.42	V26

* Priced at the stated yield to the January 1, 2030 optional redemption date at a redemption price of 100%.
** CUSIP® is a registered trademark of the American Bankers Association. CUSIP numbers have been assigned by CUSIP Global Services, which is managed on behalf of the American Bankers Association by S&P Global Market Intelligence. CUSIP numbers have been assigned by an independent company not affiliated with the Authority and are included solely for the convenience of the registered owners of the Series N Bonds. Neither the Authority nor the Initial Purchasers are responsible for the selection or uses of these CUSIP numbers, and no representation is made as to their correctness on the applicable Series N Bonds or as included herein. CUSIP numbers are subject to being changed after the issuance of the Series N Bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part or as a result of procurement of secondary market portfolio insurance or other similar enhancement by investors that is applicable to all or a portion of the Series N Bonds.

IN CONNECTION WITH THE OFFERING OF THE SERIES N BONDS, THE INITIAL PURCHASERS MAY OVERALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF SUCH BONDS AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZATION, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

No dealer, broker, salesperson or other person has been authorized to give any information or to make any representations, other than those contained in this Official Statement (the term "Official Statement" when used herein shall for all purposes include reference to the Appendices hereto), and, if given or made, such other information or representations must not be relied upon as having been authorized. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the Series N Bonds by any person in any jurisdiction in which it is unlawful for the person to make such offer, solicitation or sale.

The information set forth herein has been provided by the Authority and other sources which are believed to be reliable by the Authority, but is not guaranteed as to its accuracy or completeness.

The information herein is subject to change without notice and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the Authority since the date hereof. This Official Statement is submitted in connection with the sale of the securities referred to herein and may not be reproduced or used, in whole or in part, for any other purpose.

CAUTIONARY STATEMENTS REGARDING FORWARD-LOOKING STATEMENTS IN THIS OFFICIAL STATEMENT

This Official Statement and particularly the information contained under the captions "SUMMARY STATEMENT," "SOURCES OF PAYMENT AND SECURITY FOR THE BONDS", "BUDGET AND CAPITAL PROGRAM – TRAFFIC ENGINEER'S REPORT", "INVESTMENT CONSIDERATIONS", "**Appendix A-1** – December 2019 Financial Requirements Report of Traffic Engineer" and "**Appendix A-**2 – Bring-Down Letter of Traffic Engineer" contain statements relating to future results and economic performance that are "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995. When used in this Official Statement, the words "anticipate", "believe", "may", "will", "should", "seek", "expect", "assume", "estimate", "projection", "plan", "budget", "forecast", "intend", "goal", and similar expressions identify forward-looking statements. The words or phrases "to date", "now", "currently", and the like are intended to mean as of the date of this Official Statement. Examples of forward-looking statements contained in this Official Statement are statements that concern the Authority's future revenues, costs, additional revenue needs, traffic projections and liquidity. The forward-looking statements contained herein are based on the Authority'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 or imprecise or not reflective of actual results. The Authority does not undertake to update or revise any of the forward-looking statements contained herein, even if it becomes clear that they will not be realized.

Such statements are subject to risks and uncertainties that could cause actual results to differ materially from those contemplated in such forward-looking statements. Inevitably, some assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances may occur. Therefore, there are likely to be differences between forecasts and actual results, and those differences may be material. For a discussion of certain of such risks and possible variations in results, see the information under "INVESTMENT CONSIDERATIONS." The Authority does not plan to issue any updates or revisions to those forward-looking statements if or when its expectations, or events, conditions or circumstances on which such statements are based occur.

THE SERIES N BONDS HAVE NOT BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION. THE REGISTRATION, QUALIFICATION, OR EXEMPTION OF THE SERIES N BONDS IN ACCORDANCE WITH THE APPLICABLE SECURITIES LAW PROVISIONS OF THE JURISDICTIONS IN WHICH THESE SECURITIES HAVE BEEN REGISTERED, QUALIFIED, OR EXEMPTED SHOULD NOT BE REGARDED AS A RECOMMENDATION THEREOF. NEITHER THESE JURISDICTIONS NOR ANY OF THEIR AGENCIES HAVE GUARANTEED OR PASSED UPON THE SAFETY OF THE SERIES N BONDS AS AN INVESTMENT, UPON THE PROBABILITY OF ANY EARNINGS THEREON OR UPON THE ACCURACY OR ADEQUACY OF THIS OFFICIAL STATEMENT.

The order and placement of information in this Official Statement, including appendices, are not an indication of relevance, materiality or relative importance, and this Official Statement, including the appendices, must be read in its entirety. The captions and headings in this Official Statement are for convenience purposes only and in no way define, limit or describe the scope or intent, or affect the meaning or construction, of any provision or section of this Official Statement.

This Official Statement contains summaries of and references to documents that the Authority believes to be accurate; however, reference is made to the actual documents for complete information. All such summaries and references are qualified in their entirety by such reference.

TABLE OF CONTENTS

	Page
SUMMARY STATEMENT	i
INTRODUCTION	1
THE AUTHORITY	1
History	1
Powers	1
Outstanding Indebtedness	2
Members and Officers	2
PLAN OF FINANCE	3
SOURCES AND USES OF FUNDS	3
AGGREGATE ANNUAL DEBT SERVICE REQUIREMENTS	4
DESCRIPTION OF THE SERIES N BONDS	5
General	5
Book-Entry Only System	5
Redemption Provisions	5
SOURCES OF PAYMENT AND SECURITY FOR THE BONDS	6
Authorized Projects	6
Revenues	6
Pledge under the Bond Resolution	7
General Revenue Bond Resolution Flow of Funds	7
Senior Debt Service Reserve Fund	9
Additional Bonds, Refunding Bonds and Other Indebtedness	9
Facilities	11
Reserve Maintenance Fund	12
Tolls, Fees and Charges	12
Agreement of the State	13
AUTHORITY GOVERNANCE, FACILITIES AND OPERATIONS	13
Thruway Facilities and Operations	13
Board Members	15
Senior Staff	16
Organization	17
RESULTS OF OPERATIONS	18
Financial Results of Operations	18
RESULTS OF OPERATIONS FOR THE CALENDAR YEARS 2014-2018	19
MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS	20
Discussion of Results of Operations: 2014 through 2018	20
Traffic and Revenue	21
NEW YORK STATE INFRASTRUCTURE GRANT AND TOLL RELATED INITIATIVES	22
BUDGET AND CAPITAL PROGRAM; TRAFFIC ENGINEER'S REPORT	23
2020 Budget	23
2020 Budget Compared to 2019 Revised Budget	24
2019 Preliminary Financial Results through November 30, 2019	25
2020-2024 Capital Program	25
Funding of the 2020-2024 Capital Program	27
The New NY Bridge Project	27
AETC Implementation	29
Bridge Inspection Program and Condition Ratings	30
Federal Funding	31
Report of Independent Traffic Engineer	31
Projected Results	32
ADDITIONAL AUTHORITY INFORMATION	34
Employee Relations	34
Retirement Plans and Other Post-Employment Benefits	34
Investments	35
Insurance	35
Other Bond Programs	36
INVESTMENT CONSIDERATIONS	36
Traffic Engineer's Report	36
Toll-Backed Components of the 2020-2024 Capital Program	37
Risks Relating to Natural and Catastrophic Events	37
Risks Relating to the Design-Build Contract for the New NY Bridge Project	38
Risks Relating to the Implementation of All Electronic Toll Collection	38
Ratings of the Bonds Could be Lowered or Withdrawn	38
Certain Matters Relating to Enforceability of Obligations	39
Legislative Action	39
LITIGATION	39
TAX MATTERS	40
Federal Income Taxes	40
State and Local Income Tax	42
Other Considerations	42
RATINGS	42
SALE BY COMPETITIVE BIDDING	43
LEGALITY OF INVESTMENT	43
LEGAL MATTERS	43
CONSULTANT'S AND ACCOUNTANT'S REPORTS	43
CO-FINANCIAL ADVISORS	44
CONTINUING DISCLOSURE UNDER SEC RULE 15c2-12	44
MISCELLANEOUS	45

APPENDIX A-1 -	December 2019 Financial Requirements Report of Traffic Engineer	A-1-1
APPENDIX A-2 -	Bring-Down Letter of Traffic Engineer	A-2-1
APPENDIX B -	Audited Financial Statements of the Authority for the Years ended December 31, 2018 and 2017	B-1
APPENDIX C -	Summary of Certain Provisions of the Bond Resolution	C-1
APPENDIX D -	Book-Entry Only System	D-1
APPENDIX E -	Form of Opinion of Bond Counsel	E-1

SUMMARY STATEMENT

This summary statement is qualified in its entirety by reference to the information appearing elsewhere in this Official Statement. Terms used in this summary statement and not defined herein shall have the meanings set forth in the body of this Official Statement.

The Authority

The New York State Thruway Authority (the "Authority"), a body corporate and politic constituting a public corporation of the State of New York (the "State"), created in 1950 by the New York State Thruway Authority Act, as amended, Title 9 of Article 2 of the Public Authorities Law, Chapter 43-A of the Consolidated Laws of the State of New York (the "Act"), is empowered, among other things, to construct, operate and maintain as a toll facility, and to improve and reconstruct the Governor Thomas E. Dewey Thruway (the "Thruway System"), subject to certain statutory limitations on the Authority's right to impose tolls on certain parts of the Thruway System, including the Cross-Westchester Expressway. The Act also authorizes the Authority to issue, from time to time, negotiable bonds and notes for any corporate purpose secured by tolls, revenues, rates, fees, charges, rents and other earned income of the Authority. See "THE AUTHORITY".

The Thruway System is a 570-mile superhighway system crossing the State and is one of the largest toll superhighway systems in the United States. In addition to being the principal artery of travel and commerce within New York connecting the State's principal cities, the Thruway System is a vital link to long distance interstate travel. In addition, the Thruway System provides the major route of access for visitors to the State's tourist destinations including Niagara Falls, the Finger Lakes, the Adirondacks, the Catskills and New York City. The new twin-span Governor Mario M. Cuomo Bridge (also referred to herein as the "New NY Bridge Project"), which has replaced the Tappan Zee Bridge, is a major component of the Thruway System spanning the Hudson River north of New York City. See "AUTHORITY GOVERNANCE, FACILITIES AND OPERATIONS — Thruway Facilities and Operations" and **Appendix A-1 —** "December 2019 Financial Requirements Report of Traffic Engineer" and **Appendix A-2** – "Bring-Down Letter of Traffic Engineer".

Purpose of Issue

The Series N Bonds are being issued to (i) fund a portion of the Authority's Multi-Year Capital Program, (ii) make a deposit to the Senior Debt Service Reserve Fund, (iii) pay capitalized interest on the Series N Bonds, and (iv) pay the Costs of Issuance of the Series N Bonds. See "PLAN OF FINANCE".

Security

The Series N Bonds are direct and general obligations of the Authority. Bonds issued under the Bond Resolution, including the Series N Bonds, are secured as to the payment of principal, premium, if any, and interest thereon by a pledge of the Revenues and certain funds and accounts established under the Bond Resolution, subject to the application thereof for the purposes and on the terms and conditions provided in the Bond Resolution. **The Series N Bonds are not a debt of the State nor shall the State be liable thereon.** The Authority has no taxing power. The Series N Bonds are secured by the Senior Debt Service Reserve Fund in an amount equal to the maximum amount of Aggregate Debt Service for any 12-month period on all Outstanding Bonds secured by the Senior Debt Service Reserve Fund, a substantial portion of which is currently funded by Reserve Credit Facilities as permitted by the Bond Resolution. The Bond Resolution also provides that Operating Expenses of Facilities will be funded from Revenues prior to the provision for accrued Debt Service on the Bonds. See "SOURCES OF PAYMENT AND SECURITY FOR THE BONDS" and "AGGREGATE ANNUAL DEBT SERVICE REQUIREMENTS".

Toll Covenant

Pursuant to the Bond Resolution, the Authority has covenanted at all times to fix, charge and collect such tolls, fees and charges for the use of the Facilities as are required in order that, in each fiscal year, Net Revenues shall at least equal the Net Revenue Requirement for such year. "Net Revenue Requirement" means, with respect to any period of time, an amount equal to the greater of (i) the sum of amounts required to make payments with respect to Aggregate Debt Service, deposits to the Senior Debt Service Reserve Fund, Reserve Maintenance Payments (minimum, $30 million a year), and the amounts required to be deposited in the Junior Indebtedness Fund pursuant to the Supplemental Resolution or other resolution or agreement authorizing outstanding Junior Indebtedness or (ii) 1.20 times the sum of the Aggregate Debt Service for such period. See "SOURCES OF PAYMENT AND SECURITY FOR THE BONDS — Tolls, Fees and Charges" and **Appendix C —** "Summary of Certain Provisions of the Bond Resolution — Tolls, Fees and Charges".

Additional Indebtedness

Under the Bond Resolution, the Authority may issue Additional Bonds, Refunding Bonds, Junior Indebtedness and Subordinated Indebtedness payable from Revenues. Additional Bonds may be issued, subject to certain limitations, to pay for Project Costs of the Original Project, any Additional Projects and any Other Authority Projects. Refunding Bonds may be issued, subject to certain limitations, to refund Outstanding Bonds, any Junior Indebtedness and any Subordinated Indebtedness. Such limitations include, but are not limited to, satisfaction of a coverage test or not-to-exceed Aggregate Debt Service test. See "SOURCES OF PAYMENT AND SECURITY FOR THE BONDS — Additional Bonds, Refunding Bonds and Other Indebtedness" and "— Reserve Maintenance Fund".

As of February 1, 2020, the Authority had outstanding under the Bond Resolution $2,887,895,000 aggregate principal amount of Bonds.

Junior Indebtedness

On November 7, 2013, the Authority established a subordinate credit structure with the adoption of the "Resolution Authorizing General Revenue Junior Indebtedness Obligations" (the "Junior Indebtedness Resolution"), to finance the costs of a new twin-span New NY Bridge Project (now named The Governor Mario M. Cuomo Bridge) to replace the existing Tappan Zee Bridge. See "The New NY Bridge Project" herein. As of February 1, 2020, the Authority had outstanding under the Junior Indebtedness Resolution $2,543,245,000 of long-term Junior Indebtedness Obligations, consisting of $850,000,000 Series 2016A Junior Indebtedness Obligations and $1,693,245,000 of Series 2019B Junior Indebtedness Obligations.

2020 Budget and 2020-2024 Capital Program

On November 18, 2019, the Authority Board approved the 2020 Budget and 2020-2024 Capital Program. The 2020-2024 Capital Program totals $2.15 billion, including $317.4 million in costs for the New NY Bridge Project. The implementation of enhanced and modernized asset management systems and project selection protocols have allowed the Authority to pursue a more efficient and balanced approach to the 2020-2024 Capital Program project mix, focusing more on high priority and high impact investments to maintain the useful life of Thruway System infrastructure. The 2020-2024 Capital Program expects to complete major, job-sustaining reconstruction projects currently underway and includes new projects that address reconstruction and rehabilitation of roadway, bridges, facilities and support systems of the Thruway System; congestion relief and mobility enhancements; and provision for replacement of equipment and other non-bridge and highway projects of the Authority. See "BUDGET AND CAPITAL PROGRAM; TRAFFIC ENGINEER'S REPORT – 2020-2024 Capital Program" and "– Funding of the 2020-2024 Capital Program" for more information on the 2020-2024 Capital Program and the New NY Bridge Project.

Thruway Stabilization Program

As part of an initiative to materially improve critical transportation infrastructure in the State and to moderate the future need for Thruway toll adjustments, the State appropriated $1.285 billion for general Thruway capital projects in 2015, including $535 million for system-wide projects and $750 million for the New NY Bridge Project.

The State's 2016-2017 enacted budget (the "State's 2016-2017 Enacted Budget") provided for an additional $700 million in grant moneys for investment in Thruway infrastructure. The $700 million in additional grant moneys in 2016 and the $1.285 billion from the 2015 enacted State budget are collectively referred to herein as "NYS Infrastructure Grant Contributions". The 2020 Budget includes the spend down of the remaining balance.

Projected Results

The Authority retained Stantec Consulting Services, Inc., as Traffic Engineer ("Stantec"), to prepare a study (the "October 2019 Traffic Engineer's Report") that produced a traffic and revenue forecast based on the Authority's current toll schedule and reviewed the operations, physical condition of the Thruway System and projected financial results for the period 2019-2024. In December 2019, Stantec prepared a report entitled "New York State Thruway Financial Requirements and Proposed Toll Adjustments" (the "December 2019 Financial Requirements Report") that contained revenue forecasts for the Thruway System and a recommended schedule of toll rates designed to allow the Authority to sustain healthy financial metrics through the end of 2024. In accordance with the recommendations set forth in the December 2019 Financial Requirements Report, on December 19, 2019, the Authority Board approved a proposal to begin the toll adjustment process on The Governor Mario M. Cuomo Bridge and other tolling changes. The approval authorizes the Authority to begin the public process required to implement the toll rate changes. Stantec prepared a letter, dated February 12, 2020 (the "Bring-Down Letter"), which updated and supplemented its findings contained in the December 2019 Financial Requirements Report.

The projections for the years 2019 through 2024 are included in the December 2019 Financial Requirements Report of the Traffic Engineer and in the Bring-Down Letter and are included as **Appendix A-1** and **Appendix A-2** hereto, respectively, which should be read in their entirety. See "BUDGET AND CAPITAL PROGRAM; TRAFFIC ENGINEER'S REPORT." The October 2019 Traffic Engineer's Report is available for review on the Authority's website.

Toll Initiatives

On December 19, 2019, the Authority Board approved a proposal to begin the toll adjustment process on The Governor Mario M. Cuomo Bridge and other tolling changes that support the statewide conversion to cashless tolling, which is scheduled to be completed by the end of 2020. The approval authorizes the Authority to begin the public process required to implement the toll rate changes supporting the fiscal stability of the Authority. The Authority, supported by analysis by its independent Traffic Engineer, has determined that with the proposed toll adjustments, the Authority will generate sufficient revenues needed for the Authority to complete the New NY Bridge Project while fulfilling its system-wide operating, debt service, and capital needs, management's financial policies with respect to debt service coverage (1.55x General Revenue Bonds and 1.35x General Revenue Bonds and Junior Indebtedness Obligations combined) as well as the contractual financial covenants contained in its Bond Resolution and Junior Indebtedness Resolution through the forecast period. Thruway System tolls have not been adjusted since 2010. See "NEW YORK STATE INFRASTRUCTURE GRANT AND TOLL RELATED INITIATIVES".

The New NY Bridge Project

Formal construction of the New NY Bridge Project began in October 2013. The north span of The Governor Mario M. Cuomo Bridge was substantially completed and opened to two-way vehicular traffic on August 25, 2017. The second span of the bridge was substantially completed and opened for vehicular traffic on September 12, 2018, whereupon westbound traffic was redirected solely to the north span and eastbound traffic was redirected solely to the south span.

The New NY Bridge Project is being constructed under fixed-price, date-certain, Design-Build Contract with TZC LLC (the Design-Build Contract"). TZC LLC is a special purpose joint venture of Fluor Enterprises, Inc., American Bridge Company, Granite Construction Northeast, Inc. and Traylor Brothers Inc. The total estimated cost of the New NY Bridge Project is $3.9 billion. As of November 30, 2019, $3.6 billion in total had been spent on the New NY Bridge Project. Of this amount, $158.5 million was spent in 2019. See "BUDGET AND CAPITAL PROGRAM; TRAFFIC ENGINEER'S REPORT – The New NY Bridge Project".

Ratings

Moody's Investors Service, Inc. ("Moody's") and S&P Global Ratings ("S&P") have rated the Series N Bonds "A1" and "A", respectively. See "RATINGS".

OFFICIAL STATEMENT

$450,000,000
New York State Thruway Authority
General Revenue Bonds
Series N

Albany, New York
February 20, 2020

INTRODUCTION

The purpose of this Official Statement, including the cover and inside cover pages, the summary statement and appendices, is to set forth information with respect to the General Revenue Bonds, Series N (the "Series N Bonds"), of the New York State Thruway Authority (the "Authority"). The Series N Bonds are authorized by the New York State Thruway Authority Act, as amended, Title 9 of Article 2 of the Public Authorities Law, Chapter 43-A of the Consolidated Laws of the State of New York (the "Act"). The Series N Bonds are authorized to be issued under and pursuant to the Authority's General Revenue Bond Resolution, adopted on August 3, 1992, as amended on January 5, 2007, as supplemented (such General Revenue Bond Resolution as from time to time amended or supplemented being herein called the "Bond Resolution"), including as supplemented by the Nineteenth Supplemental Revenue Bond Resolution Authorizing General Revenue Bonds, Series N (the "Series Resolution"), adopted by the Authority on January 27, 2020.

THE AUTHORITY

The Authority, a body corporate and politic constituting a public corporation, created in 1950 by the Act, is empowered to finance, construct, operate and maintain as a toll facility, and to improve and reconstruct, the Governor Thomas E. Dewey Thruway (the "Thruway System"). In addition, pursuant to Chapter 766 of the Laws of New York of 1992 and other authorizations, the Authority, among other things, (i) will finance and undertake specified economic development transportation projects in New York State (the "State") and (ii) may undertake certain financings on behalf of the State for transportation purposes.

History

In 1942, the State's leaders recognized that the State's highway system would not be adequate for post-war needs and ordered the planning of a superhighway system through the major travel corridors of the State. In 1944, the State Legislature authorized the State Bureau of Public Works (the predecessor of the New York State Department of Transportation) to proceed with construction of the Thruway System. Governor Thomas E. Dewey broke ground for the Thruway System in 1946. In May 1948, the first section, four miles between Canandaigua and Victor near Rochester, was opened. By 1950, approximately $25 million of State funds had been spent on the Thruway System. A special committee of State officials from whom Governor Dewey sought advice urged that it become a toll highway operated by an independent public authority.

In 1950, the State Legislature created the Authority to build, operate and maintain the highway. It was financed primarily through the issuance of $500,000,000 of State Guaranteed Bonds and $472,000,000 of Prior General Revenue Bonds, all of which have been paid in full and are no longer outstanding. The revenue to retire these bonds was generated primarily from tolls. In June 1954, the first toll section, a 115-mile stretch from Lowell (west of Utica) to Rochester, was opened. The 426-mile mainline was completed in 1956 and in 1964 it was given Governor Dewey's name in recognition of his role in its development.

Powers

The Authority is authorized under the Act to establish and collect such tolls and charges as may be convenient or necessary to produce at all times sufficient revenues to meet its expenses of maintenance and operation, to pay, as the same shall become due, the principal of and interest on the Bonds and Junior

Indebtedness Obligations and to fulfill the terms of any agreement made with the holders of Bonds and Junior Indebtedness Obligations until such Bonds and Junior Indebtedness Obligations and the interest thereon are fully met and discharged. Under the Bond Resolution and the Junior Indebtedness Resolution, tolls shall remain in effect until all of the Bonds and Junior Indebtedness Obligations, as applicable, have been retired.

Under the Act, the powers of the Authority include, among others, the power to maintain, reconstruct and operate the Thruway System so long as its corporate existence shall continue; and, in addition, to construct and maintain facilities for the public not inconsistent with the appropriate use of the Thruway System, to contract for such construction, and to lease the right to construct and use such facilities on such terms and for such considerations as it determines.

Title to the real property utilized by the Authority is vested in the State, but the Authority has the right, so long as its corporate existence shall continue, to possess, use and dispose of all real property and rights therein. The Authority has the power to acquire, hold and dispose of personal property for its corporate purposes. The Authority has no taxing power.

Outstanding Indebtedness

The Authority has been authorized under the Act to issue its bonds and notes to fund a portion of the capital needs of the Authority. As of February 1, 2020, the Authority had outstanding under the Bond Resolution $2,887,895,000 aggregate principal amount of Bonds.

Junior Indebtedness

On November 7, 2013, the Authority established a subordinate credit structure with the adoption of the "Resolution Authorizing General Revenue Junior Indebtedness Obligations" (the "Junior Indebtedness Resolution"). The Authority began issuing Junior Indebtedness Obligations in December 2013 to finance the costs of construction of a new twin-span New NY Bridge Project (now named The Governor Mario M. Cuomo Bridge) to replace the existing Tappan Zee Bridge. As of February 1, 2020, the Authority had outstanding under the Junior Indebtedness Resolution $2,543,245,000 of long-term Junior Indebtedness Obligations, consisting of $850,000,000 Series 2016A Junior Indebtedness Obligations and $1,693,245,000 of Series 2019B Junior Indebtedness Obligations.

Members and Officers

The Act provides that the Authority consists of a Board of seven members appointed by the Governor of the State, with the advice and consent of the State Senate. Board members serve for terms of nine years each. Vacancies in the Authority occurring other than by expiration of term are filled for the remainder of the unexpired term in the manner previously stated. Pursuant to the New York State Public Officers Law, members of the Authority whose terms have expired continue to serve until a successor is appointed and qualified. The members of the Authority receive no salary but are reimbursed for their necessary expenses incurred in connection with their duties. The Chair serves in that capacity for the full term of his/her appointment as a member of the Authority. The members of the Authority may appoint other officers. The present members of the Board and the expiration dates of their terms of office are as follows:

Name	Expiration of Term
Joanne M. Mahoney	January 1, 2020*
José Holguín-Veras	December 12, 2018*
George L. Miranda	June 23, 2026
Robert L. Megna	January 1, 2017*
J. Donald Rice, Jr.	June 13, 2018*
Stephen M. Saland	January 1, 2023
Heather C. Briccetti	September 14, 2026

* Holding over.

The present officers of the Authority are as follows:

Name	Office
Joanne M. Mahoney	Chair
Robert L. Megna	Vice Chair
Matthew J. Driscoll	Executive Director
Matthew A. Howard	Treasurer
William F. McDonough	Assistant Treasurer
Tanya M. Morris	Secretary
Keith Fragomeni	Assistant Secretary
Jerry B. Yomoah	Assistant Secretary

Matthew J. Driscoll is the Executive Director of the Authority. Matthew A. Howard serves as Chief Financial Officer of the Authority. The General Counsel position at the Authority is currently vacant. See "AUTHORITY GOVERNANCE, FACILITIES AND OPERATIONS" for additional detail on the Board membership and senior staff at the Authority.

PLAN OF FINANCE

The Series N Bonds are being issued to (i) fund a portion of the Authority's Multi-Year Capital Program, (ii) make a deposit to the Senior Debt Service Reserve Fund, (iii) fund capitalized interest on the Series N Bonds, and (iv) pay the Costs of Issuance of the Series N Bonds. See the table below under "SOURCES AND USES OF FUNDS".

SOURCES AND USES OF FUNDS

The proceeds received from the sale of the Series N Bonds are expected to be applied in the following approximate amounts:

Sources of Funds

Principal Amount of Series N Bonds	$450,000,000.00
Original Issue Premium	86,718,424.50
Total Sources of Funds	$536,718,424.50

Uses of Funds

Deposit to Construction Fund	$502,822,278.04
Deposit to Senior Debt Service Reserve Fund	17,972,032.66
Capitalized Interest	15,281,000.00
Costs of Issuance	550,000.00
Initial Purchasers' Discount	93,113.80
Total Uses of Funds	$536,718,424.50

AGGREGATE ANNUAL
DEBT SERVICE REQUIREMENTS

The following schedule sets forth, for each 12-month period of the years shown, the amounts required to be paid by the Authority for the Debt Service for the Outstanding General Revenue Bonds, the Outstanding Junior Indebtedness Obligations and the aggregate debt service on General Revenue Bonds and Junior Indebtedness Obligations after issuance of the Series N Bonds.

		Series N Bonds					
Calendar Year(1)	Outstanding General Revenue Bond Debt Service	Principal	Interest(2)	Total	Total General Revenue Bond Debt Service(2)	Outstanding Junior Indebtedness Obligations Debt Service(3)	Aggregate Gen. Rev. Bond and Junior Indebt. Obligations Debt Service(3)
2020	$ 234,279,260	$ -	$ -	$ -	$ 234,279,260	$ 46,732,934	$ 281,012,195
2021	222,940,893	-	18,585,000	18,585,000	241,525,893	46,733,550	288,259,443
2022	245,554,693	-	18,585,000	18,585,000	264,139,693	63,590,499	327,730,191
2023	233,966,593	-	18,585,000	18,585,000	252,551,593	108,723,850	361,275,443
2024	238,739,918	-	18,585,000	18,585,000	257,324,918	110,463,850	367,788,768
2025	247,538,146	-	18,585,000	18,585,000	266,123,146	112,365,850	378,488,996
2026	248,292,351	-	18,585,000	18,585,000	266,877,351	114,164,600	381,041,951
2027	249,895,601	-	18,585,000	18,585,000	268,480,601	115,865,100	384,345,701
2028	216,150,651	-	18,585,000	18,585,000	234,735,651	152,697,100	387,432,751
2029	216,159,764	-	18,585,000	18,585,000	234,744,764	155,198,850	389,943,614
2030	260,574,964	-	18,585,000	18,585,000	279,159,964	116,703,600	395,863,564
2031	262,705,845	-	18,585,000	18,585,000	281,290,845	120,474,100	401,764,945
2032	175,893,333	16,525,000	18,585,000	35,110,000	211,003,333	120,901,850	331,905,183
2033	177,855,828	17,355,000	17,758,750	35,113,750	212,969,578	120,792,600	333,762,178
2034	180,558,803	18,220,000	16,891,000	35,111,000	215,669,803	118,814,600	334,484,403
2035	131,838,688	19,130,000	15,980,000	35,110,000	166,948,688	173,333,850	340,282,538
2036	131,858,994	20,090,000	15,023,500	35,113,500	166,972,494	175,342,600	342,315,094
2037	95,644,006	21,095,000	14,019,000	35,114,000	130,758,006	177,025,400	307,783,406
2038	95,656,206	22,150,000	12,964,250	35,114,250	130,770,456	177,737,600	308,508,056
2039	95,665,569	23,255,000	11,856,750	35,111,750	130,777,319	177,437,150	308,214,469
2040	95,676,950	24,420,000	10,694,000	35,114,000	130,790,950	177,389,800	308,180,750
2041	95,685,094	25,395,000	9,717,200	35,112,200	130,797,294	178,675,600	309,472,894
2042	23,074,994	26,410,000	8,701,400	35,111,400	58,186,394	178,632,550	236,818,944
2043	23,075,044	27,465,000	7,645,000	35,110,000	58,185,044	178,668,000	236,853,044
2044	-	28,565,000	6,546,400	35,111,400	35,111,400	178,675,500	213,786,900
2045	-	29,710,000	5,403,800	35,113,800	35,113,800	178,548,350	213,662,150
2046	-	30,895,000	4,215,400	35,110,400	35,110,400	178,653,200	213,763,600
2047	-	32,135,000	2,979,600	35,114,600	35,114,600	178,356,050	213,470,650
2048	-	33,095,000	2,015,550	35,110,550	35,110,550	178,995,700	214,106,250
2049	-	34,090,000	1,022,700	35,112,700	35,112,700	178,841,100	213,953,800
2050	-	-	-	-	-	175,361,100	175,361,100
2051	-	-	-	-	-	175,149,300	175,149,300
2052	-	-	-	-	-	175,324,725	175,324,725
2053	-	-	-	-	-	62,210,263	62,210,263
2054	-	-	-	-	-	62,213,425	62,213,425
2055	-	-	-	-	-	62,210,613	62,210,613
Total	$4,199,282,184	$450,000,000	$386,454,300	$836,454,300	$5,035,736,484	$5,003,004,808	$10,038,741,292

(1) Includes principal and interest due January 1 of the following calendar year.
(2) Net of capitalized interest applied in 2020.
(3) Net of capitalized interest applied in 2020, 2021, and 2022.
Note: Totals may not add due to rounding.

DESCRIPTION OF THE SERIES N BONDS

General

The Series N Bonds will be dated their date of delivery, will bear interest at the rates per annum and will mature, subject to optional and mandatory redemption as described below, on the dates and in the principal amounts set forth on the inside cover page of this Official Statement. Interest on the Series N Bonds will be payable semiannually on January 1 and July 1 of each year, commencing on July 1, 2020.

Book-Entry Only System

The Series N Bonds will be issued as fully registered bonds and, when issued, will be registered in the name of Cede & Co., as nominee for The Depository Trust Company, New York, New York ("DTC"). The Series N Bonds will be held in book-entry only form. Principal of and premium, if any, and interest on the Series N Bonds will be payable through The Bank of New York Mellon, as paying agent (the "Paying Agent"). The Bank of New York Mellon is also serving as trustee (the "Trustee") under the Bond Resolution. Purchases from DTC of beneficial interests in the Series N Bonds will be made in book-entry only form (without certificates) in the principal amount of $5,000 or any integral multiple of $5,000 in excess thereof. For so long as Cede & Co., as nominee of DTC, is the registered owner of the Series N Bonds, payments of the principal of, premium, if any, and interest on the Series N Bonds will be made directly to DTC. Disbursement of such payment to the DTC Participants is the responsibility of DTC and disbursements of such payments to the Beneficial Owners is the responsibility of the DTC Participants and the Indirect Participants, each such term as hereinafter defined. SO LONG AS CEDE & CO. IS THE REGISTERED OWNER OF THE SERIES N BONDS, AS NOMINEE FOR DTC, REFERENCES HEREIN TO BONDHOLDERS OR OWNERS OF THE SERIES N BONDS (OTHER THAN UNDER THE CAPTION "TAX MATTERS" HEREIN) SHALL MEAN CEDE & CO. AND SHALL NOT MEAN THE BENEFICIAL OWNERS OF THE SERIES N BONDS.

See **Appendix D —** "Book-Entry Only System".

Redemption Provisions

The Series N Bonds are subject to optional redemption as described below. In addition, the State may, upon furnishing sufficient funds therefor, require the Authority to redeem the Bonds as provided in the Act. See **Appendix C —** "Summary of Certain Provisions of the Bond Resolution — Redemption of Bonds".

Optional Redemption. The Series N Bonds are subject to redemption prior to maturity at any time on or after January 1, 2030, at the option of the Authority, as a whole or in part in the principal amounts and from the maturities selected by the Authority, at par, plus accrued interest to the redemption date.

Selection of Bonds to be Redeemed. In the case of redemption of less than all of the Series N Bonds, the Authority will select the maturities of the Series N Bonds to be redeemed. If less than all of the Series N Bonds of a maturity are to be redeemed, the Trustee shall select the Outstanding Bonds of such maturity to be redeemed, using such method of selection as it shall consider proper in its discretion.

Notice of Redemption. The Trustee is to give notice of the redemption of the Series N Bonds in the name of the Authority. Such notice shall be given by first-class mail, postage prepaid, not less than thirty (30) days nor more than forty-five (45) days prior to the redemption date to the registered owners of any Series N Bonds which are to be redeemed, at their last known addresses appearing on the registration books of the Authority. The failure of any owner of a Series N Bond to be redeemed to receive notice of redemption thereof will not affect the validity of the proceedings for the redemption of such Series N Bonds.

In accordance with provisions of the Bond Resolution and the Series Resolution, any notice of optional redemption may state that it is conditioned upon (i) receipt by the Trustee on or prior to the Redemption Date selected by the Authority for the redemption of Series N Bonds of money sufficient to pay the Redemption Price thereof and accrued interest thereon to such Redemption Date, or (ii) the satisfaction of any other specified condition or the occurrence or non-occurrence of any other specified event (the condition or event described in clause (i) or (ii) being referred to herein as a "Redemption Condition or Event"). Any conditional notice so given may be rescinded by the Trustee at the direction of the Authority at any time before payment of the Redemption Price of and accrued interest on the Series N Bonds if the Redemption Condition or Event is not satisfied or occurs or does not occur, as the case may be.

If on the redemption date moneys for the redemption of the Series N Bonds to be redeemed, together with interest thereon to the redemption date, are held by the Trustee so as to be available for payment of the Redemption Price, and if notice of redemption shall have been given, then interest on the Series N Bonds to be redeemed will cease to accrue from and after the Redemption Date and such Series N Bonds will no longer be considered to be Outstanding under the Bond Resolution.

SOURCES OF PAYMENT AND SECURITY FOR THE BONDS

Authorized Projects

In order to finance the projects included within the Authority's responsibilities as broadened by 1992 legislation, the Authority adopted the Bond Resolution which established two project categories: "Facilities" and "Other Authority Projects," as defined below. Only projects which qualify in one of those two categories may be funded from proceeds of Bonds. Any Authority project may be funded from surplus Revenues released from time to time from the General Reserve Fund.

The Bond Resolution uses the two categories to determine which revenues are pledged to the Bonds, the priority of application of Revenues, and the amount of Additional Bonds that may be issued, all as discussed below.

The first category, "Facilities," includes all of the Thruway System as it existed in 1992 when the Bond Resolution was adopted (the "Original Project"), together with "Additional Projects" acquired or constructed thereafter, such as additional interchanges, extensions, toll roads, tunnels or bridges and other transportation or transportation-related projects. To qualify as an "Additional Project," a project must meet certain financial requirements and be under the Authority's jurisdiction, and the Authority must have the exclusive power to set tolls, rates, fees and charges on it. The issuance of Bonds for Facilities is limited by the Additional Bonds test. See "— Additional Bonds, Refunding Bonds and Other Indebtedness — *Additional Bonds for Facilities*".

The second category, "Other Authority Projects," includes six specifically designated projects: the Inner Harbor project and the Intermodal Transportation Center in Syracuse, the Horizons Waterfront project in Buffalo, the Thruway Exit 26 Bridge, Tappan Zee Ferry Service and Stewart International Airport Access projects. Pursuant to a Supplemental Resolution, the Authority may designate a transportation or transportation-related facility or property as an Other Authority Project, if it is within the jurisdiction and control of the Authority. The issuance of Bonds for Other Authority Projects is limited by the Additional Bonds test, and a provision which restricts total debt service in any year on all debt issued for Other Authority Projects to a level equal to no more than 20% of certain historical Net Revenues. See "— Facilities" and "— Additional Bonds, Refunding Bonds and Other Indebtedness — *Additional Bonds for Other Authority Projects*".

Revenues

Under the Bond Resolution, the Authority has pledged "Revenues" to the payment of Bonds, including the Series N Bonds. "Revenues" mean (i) all tolls, revenues, fees, charges, rent and other income and receipts derived from the operation, jurisdiction and control of the Facilities (*i.e.*, the Original Project and Additional Projects), (ii) the proceeds of any use and occupancy insurance relating to the Facilities and of any other insurance which insures against loss of Revenues and (iii) investment income received on any moneys or securities held under the Bond Resolution other than investment income on amounts held in the Rebate Fund or Junior Indebtedness Fund and certain other investment income which is not transferred to the Revenue Fund pursuant to the Bond Resolution. Revenues do not include the (i) proceeds of any gifts, grants or other income to the Authority from the government of the United States or the State, any public instrumentality of the State or any other individual or entity to the extent the Authority is precluded by law, the grant or other operative contract or instrument from applying such amounts to Operating Expenses and Debt Service, or (ii) revenues of Other Authority Projects. Provision for operating expenses or capital needs associated with Other Authority Projects or activities to be financed from amounts released from time to time from the General Reserve Fund may not be made under the Bond Resolution unless provision has first been made for, among other things, Operating Expenses of Facilities, accrual of debt service on the Bonds (including the Series N Bonds), and required Reserve Maintenance Fund deposits for Facilities. See "— General Revenue Bond Resolution Flow of Funds".

Pledge under the Bond Resolution

The Bonds are direct and general obligations of the Authority. Under the Bond Resolution, the payment of principal and redemption price of, interest on, and Sinking Fund Installments for the Bonds is secured by a pledge of the following: (i) the Revenues, (ii) the proceeds of the sale of the Bonds, and (iii) all Funds and accounts established under the Bond Resolution referred to below under "General Revenue Bond Resolution Flow of Funds" and in **Appendix C** — "Summary of Certain Provisions of the Bond Resolution — Funds and Revenues", including the investments thereof, except for the Rebate Fund and the Junior Indebtedness Fund and, with respect to certain series of Additional Bonds and Refunding Bonds, the Senior Debt Service Reserve Fund. See "Senior Debt Service Reserve Fund" below. The pledge created by the Bond Resolution is subject to the provisions of the Bond Resolution permitting the application of the Revenues, the proceeds of the sale of the Bonds and the funds and accounts established under the Bond Resolution for the purposes and upon the terms and conditions set forth in the Bond Resolution. The Bond Resolution also provides that monthly Operating Expenses of Facilities will be funded from Revenues prior to the provision for accrued Debt Service on Bonds. The Bond Resolution also provides that the pledge and lien created by the Bond Resolution shall be superior in all respects to any pledge or lien now or hereafter created for Junior Indebtedness or Subordinated Indebtedness.

The Act provides that notes and bonds of the Authority shall not be a debt of the State nor shall the State be liable thereon, nor shall such notes or bonds be payable out of any funds other than those of the Authority. The Bond Resolution specifically provides that the Bonds shall not be a debt of the State nor shall the State be liable thereon.

General Revenue Bond Resolution Flow of Funds

Pursuant to the Bond Resolution, the Authority is required to pay into the Revenue Fund all Revenues as received. On or before the last Business Day of each month, the Authority is required to pay into the Operating Fund, out of the moneys in the Revenue Fund, all amounts required for reasonable and necessary Operating Expenses and reserves for Operating Expenses and working capital with respect to Facilities. Operating Expenses for Other Authority Projects are not payable out of the Operating Fund but may be paid out of the Other Authority Projects Operating Fund. On or before the last Business Day of each month, the Authority is required to deposit amounts remaining in the Revenue Fund after such deposits to the Operating Fund as of the last day of the preceding month as follows:

(1) To the Trustee for deposit in the Senior Debt Service Fund, the amount required so that the balance in the Senior Debt Service Fund shall be at least equal to the Accrued Debt Service for all Bonds Outstanding as of the last day of the then current calendar month, after taking into account any other amounts available for payment of Debt Service, including any amounts representing investment earnings retained in the Senior Debt Service Fund or transferred from the Senior Debt Service Reserve Fund;

(2) To the Trustee for deposit in the Senior Debt Service Reserve Fund, if and to the extent required so that the balance in said Fund shall equal the Senior Debt Service Reserve Requirement for all Bonds secured by such Fund and Outstanding on said date;

(3) To the Reserve Maintenance Fund, an amount such that (a) on or before the first day of the seventh month of the Authority's fiscal year there shall have been deposited an amount equal to or greater than one-half of the amount, and (b) on or before the last day of the Authority's fiscal year there shall have been deposited an amount equal to or greater than the full amount, provided in the Authority Budget for the

applicable fiscal year for Reserve Maintenance Payments, plus accrued deficits, if any, with respect to the prior required allocations to such Fund;

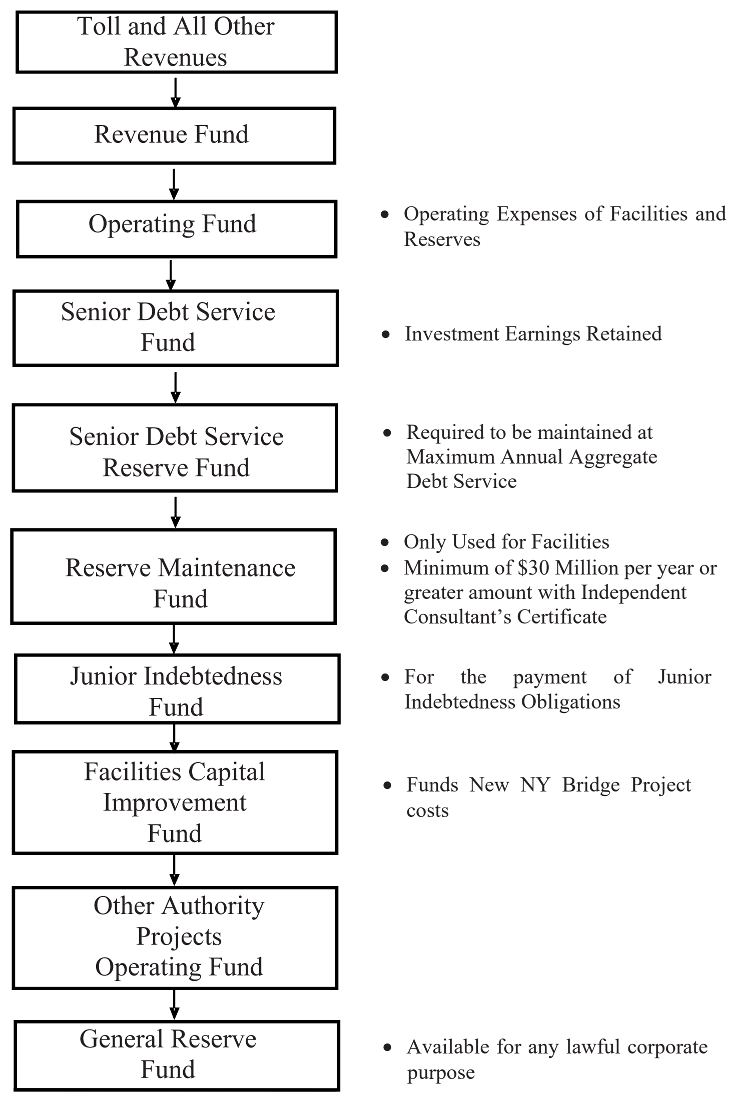
(4) To the Junior Indebtedness Fund, the amount required so that the balance in said Fund shall equal the amounts required to be deposited therein by any instrument authorizing the issuance of Junior Indebtedness outstanding on said date;

(5) To the Facilities Capital Improvement Fund, the amount determined to be necessary or appropriate by the Authority Board to fund Project Costs of Facilities or to set up reserves to fund such costs;

(6) To the Other Authority Projects Operating Fund, the amount determined to be necessary or appropriate by the Authority Board to fund operating expenses relating to Other Authority Projects or to set up reserves to fund such expenses; and

(7) To the General Reserve Fund, any remaining balance of such moneys.

General Revenue Bond Resolution Flow of Funds



Senior Debt Service Reserve Fund

The Senior Debt Service Reserve Fund Requirement is equal to the maximum amount of Aggregate Debt Service for any 12-month period on all Outstanding Bonds secured by the Senior Debt Service Reserve Fund (calculated with respect to Variable Interest Rate Bonds at the Estimated Average Interest Rate until conversion to a fixed rate of interest and subject to certain limitations). On the date of issuance of the Series N Bonds, the amount in the Senior Debt Service Reserve Fund shall be equal to the Senior Debt Service Reserve Fund Requirement. To the extent that amounts in the Senior Debt Service Fund and unencumbered moneys in the General Reserve Fund, the Other Authority Projects Operating Fund, the Facilities Capital Improvement Fund and the Reserve Maintenance Fund are insufficient to pay debt service, when due, on the Bonds, deficiencies will be made up from amounts in the Senior Debt Service Reserve Fund; provided that no payments will be made from moneys in the Senior Debt Service Reserve Fund with respect to Bonds not secured by the Senior Debt Service Reserve Fund. The Bond Resolution provides that the Authority may determine pursuant to any Supplemental Resolution authorizing a series of Bonds that such series of Bonds will not be secured by the Senior Debt Service Reserve Fund. The Series N Bonds are secured by the Senior Debt Service Reserve Fund. The Bond Resolution also provides that a Reserve Credit Facility may be deposited or substituted for deposit in the Senior Debt Service Reserve Fund to satisfy all or any portion of the Senior Debt Service Reserve Fund Requirement. See **Appendix C** — "Summary of Certain Provisions of the Bond Resolution — Senior Debt Service Reserve Fund".

As permitted by the Bond Resolution, the Authority currently has on deposit in the Senior Debt Service Reserve Fund, together with cash and investments to meet the Senior Debt Service Reserve Fund Requirement, Reserve Credit Facilities in the form of a Debt Service Reserve Surety Bond originally issued by MBIA Insurance Corporation ("MBIA") in the maximum amount of $69,895,025 (the "MBIA Reserve Fund Surety") and a Municipal Bond Debt Service Reserve Fund Policy originally issued by Financial Guaranty Insurance Company ("FGIC") in the maximum amount of $13,118,280.99 (the "Financial Guaranty Reserve Fund Policy" and collectively with the MBIA Reserve Fund Surety, the "Reserve Fund Policies"). The MBIA Reserve Fund Surety expires on January 1, 2027 and the Financial Guaranty Reserve Fund Policy expires on January 1, 2024, subject, in each case to early termination. The Reserve Fund Policies permit the Trustee, in the event that scheduled debt service is due on Bonds, including the Series N Bonds, and moneys to the credit of the Senior Debt Service Fund are insufficient, to draw pro rata amounts up to the maximum amounts of such Policies after all the cash (such as will be deposited in connection with the issuance of the Series N Bonds) and investments of that cash to the credit of the Senior Debt Service Reserve Fund have first been withdrawn. The Bond Resolution and the Reserve Fund Policies permit the substitution at any time and from time to time of other Reserve Credit Facilities meeting certain requirements for cash to the credit of the Senior Debt Service Reserve Fund. The Authority understands that MBIA ceded the MBIA Reserve Fund Surety to its subsidiary, MBIA Insurance Corp. of Illinois ("MBIA Illinois"), and that MBIA Illinois has been renamed National Public Finance Guarantee Corporation ("National"). The Authority further understands that pursuant to a reinsurance agreement between FGIC and National, National has reinsured certain obligations of FGIC, including the Financial Guaranty Reserve Fund Policy. As of the date hereof, National is rated "Baa2" by Moody's Investors Service. S&P Global Ratings has withdrawn its rating of National. See "SOURCES AND USES OF FUNDS" and **Appendix C** – "Summary of Certain Provisions of the Bond Resolution – Senior Debt Service Reserve Fund".

Additional Bonds, Refunding Bonds and Other Indebtedness

The Bond Resolution permits the issuance of Bonds, Junior Indebtedness and Subordinated Indebtedness. The Bond Resolution defines the "Bonds" to be bonds or other indebtedness of the Authority payable from amounts in the Senior Debt Service Fund, including but not limited to, any additional payment obligations in connection with a Qualified Swap, a Qualified Reverse Swap, a Parity Reimbursement Obligation or a capital lease undertaken in connection with the issuance of certificates of participation. "Junior Indebtedness" is any evidence of indebtedness of the Authority payable out of the Junior Indebtedness Fund. "Subordinated Indebtedness" is any evidence of indebtedness of the Authority payable out of amounts available in the General Reserve Fund. The Authority has issued Junior Indebtedness Obligations under the Junior Indebtedness Resolution. See "– *Junior Indebtedness Obligations*". See "THE AUTHORITY – Outstanding Indebtedness" above. In addition, the Authority has not and has no current plans to enter into any payment obligations in connection with a Qualified Swap, a Qualified Reverse Swap, a Parity Reimbursement Obligation or a capital lease undertaken in connection with the issuance of certificates of participation under the Bond Resolution.

Bonds consist of the currently Outstanding Bonds and any Additional Bonds and Refunding Bonds that may be issued hereafter. Subject to the limitations described below (i) Additional Bonds may be issued to pay for Project Costs of the Original Project, any Additional Projects and any Other Authority Projects and (ii) Refunding Bonds may be issued to refund any Outstanding Bonds, any Junior Indebtedness or any Subordinated Indebtedness. For a more complete description of the provisions of the Bond Resolution governing the issuance of Additional Bonds and Refunding Bonds than the discussion that follows, see **Appendix C** — "Summary of Certain Provisions of the Bond Resolution — Additional Bonds" and "— Refunding Bonds".

Additional Bonds for Facilities. In the case of Additional Bonds issued to provide for the Project Cost of one or more Facilities, other than as described under "Additional Bonds to Prevent a Loss of Revenues from Facilities" below, the following requirements, among others, must be met:

(1) The Net Revenues (subject to certain adjustments including toll increases, as provided by the Bond Resolution) for any period of 12 consecutive calendar months out of the 18 calendar months next preceding the date of issuance of the proposed Additional Bonds are at least equal to the Net Revenue Requirement. "Net Revenue Requirement" means, with respect to any period of time, an amount equal to the greater of (i) the sum of the amounts required to make payments with respect to Aggregate Debt Service, deposits to the Senior Debt Service Reserve Fund, Reserve Maintenance Payments, and the amounts required to be deposited in the Junior Indebtedness Fund pursuant to the instrument authorizing the issuance of such Junior Indebtedness and (ii) 1.2 times the sum of the Aggregate Debt Service (which under certain circumstances may be reduced by an amount equal to anticipated investment income on the Senior Debt Service Fund and on the Senior Debt Service Reserve Fund) for such period;

(2) For the then current fiscal year and each fiscal year in the Test Period (being the next five Authority fiscal years or the period extending from the next Authority fiscal year through the second Authority fiscal year following the estimated date of completion of any Facility not then completed, whichever period is greater), the Net Revenues (subject to certain adjustments including toll increases, as provided by the Bond Resolution) must, based on estimates by an Independent Consultant, be at least equal to the estimated Net Revenue Requirement (assuming the Maximum Interest Rate on any Variable Interest Rate Bonds); and

(3) The Net Revenues in the last fiscal year of the Test Period must be estimated by an Independent Consultant to be at least equal to Maximum Annual Debt Service on all Bonds Outstanding immediately after the issuance of the proposed Additional Bonds.

Additional Bonds to Prevent a Loss of Revenues from Facilities. The Authority may issue Additional Bonds without satisfying any earnings or coverage test for the purpose of providing for Project Costs of improvement, reconstruction or rehabilitation of one or more Facilities for the purpose of preventing a loss of Net Revenues derived from such Facilities where such loss would otherwise result from an emergency or some unusual or extraordinary occurrence.

Additional Bonds for Other Authority Projects. Additional Bonds may be issued to finance Other Authority Project Costs only if, in addition to satisfying the conditions described under the subheading "Additional Bonds for Facilities" above, the Maximum Annual Debt Service on all Outstanding Bonds (including the proposed Additional Bonds) the proceeds of which are used to finance or refinance Project Costs for Other Authority Projects (excluding Other Authority Projects that have since been designated as Additional Projects in accordance with the Bond Resolution) is less than 20% of the amount of Net Revenues for 12 consecutive months out of the most recent 18 months. Following the transfer of the State Canal System to the Power Authority on January 1, 2017, the Authority was no longer authorized to incur debt for costs related to the State Canal System.

Refunding Bonds to Refund Bonds. Bonds may be issued for the purpose of refunding Bonds if, in addition to meeting certain other requirements, (i) Aggregate Debt Service (assuming with respect to any

Variable Interest Rate Bonds a Maximum Interest Rate), including the Refunding Bonds then proposed to be issued but not including the Bonds to be refunded, for the then current and any future fiscal year is no greater than the Aggregate Debt Service on the Bonds as calculated immediately prior to the refunding (including the refunded Bonds but not including the Refunding Bonds) or (ii) the requirements set forth above under the subheading “Additional Bonds for Facilities” are met.

Refunding Bonds to Refund Junior Indebtedness or Subordinated Indebtedness. Refunding Bonds may be issued for the purpose of refunding Junior Indebtedness or Subordinated Indebtedness that was issued to finance or refinance Project Costs of Facilities or Other Authority Projects if the requirements set forth above under the subheading “Additional Bonds for Facilities” are met and, in addition, if the Junior Indebtedness or Subordinated Indebtedness to be refunded was issued to finance Project Costs for any Other Authority Project that has not been designated as an Additional Project, Refunding Bonds may be issued only if the requirements set forth under the subheading “Additional Bonds for Other Authority Projects” above are met.

Junior Indebtedness Obligations. Under the Junior Indebtedness Resolution, the Authority may issue Additional Junior Indebtedness Obligations and Junior Indebtedness Refunding Obligations payable from Revenues. Subject to the limitations set forth in the Junior Indebtedness Resolution, Additional Junior Indebtedness Obligations may be issued to (i) pay for Project Costs of the Original Project, any Additional Projects and any Other Authority Projects, (ii) refund or refinance any General Revenue Bonds (including any bond anticipation notes related thereto), Junior Indebtedness Obligations or Subordinated Indebtedness of the Authority, (iii) make a deposit to a subaccount of the Junior Indebtedness Debt Service Reserve Account, if required, (iv) pay Costs of Issuance relating to the issuance or incurrence of Junior Indebtedness Obligations and (v) pay or provide for the payment of Project Costs of improvement, reconstruction or rehabilitation of the New NY Bridge Project for the purpose of preventing a loss of Net Revenues derived from the New NY Bridge Project, provided that such loss of Net Revenues would be the result of an emergency declared by the State, the federal government or a federal authority or agency and that proceeds of Additional Junior Indebtedness Obligations would not be used for such purpose to the extent that insurance proceeds relating to such occurrence were then available. *Notwithstanding the foregoing, prior to the completion of the construction and equipping of the New NY Bridge Project, (A) Junior Indebtedness Obligations may be issued to pay for Project Costs solely related to the New NY Bridge Project, and (B) Junior Indebtedness Refunding Obligations may be issued to refund Outstanding Junior Indebtedness Obligations. After the completion of the New NY Bridge Project, and subject to certain limitations, (A) Additional Junior Indebtedness Obligations may be issued, to pay for Project Costs of the Original Project, any Additional Junior Indebtedness Projects and any Other Authority Projects, and (B) Junior Indebtedness Refunding Obligations may be issued to refund Outstanding General Revenue Bonds, Junior Indebtedness Obligations and Subordinated Indebtedness.*

Other Indebtedness. The Bond Resolution permits the issuance of Junior Indebtedness and Subordinated Indebtedness under another resolution. **See Appendix C** – “Summary of Certain Provisions of the Bond Resolution – Junior Indebtedness Fund” and “– General Reserve Fund”. The Authority may covenant with the holders of Junior Indebtedness Obligations or Subordinated Indebtedness to add to the conditions and restrictions under which Additional Bonds may be issued. *The holders of Junior Indebtedness Obligations or Subordinated Indebtedness may not accelerate the principal owed upon a default unless all Outstanding Bonds shall have been declared immediately due and payable in accordance with the Bond Resolution*. The proceeds of Junior Indebtedness Obligations may be used to provide for Facilities or Other Authority Projects. *However, the Authority has covenanted in the Junior Indebtedness Resolution that prior to the completion of the construction and equipping of the New NY Bridge Project it will only issue or incur Junior Indebtedness Obligations to finance or refinance capital costs of the New NY Bridge Project.*

Subordinated Indebtedness may be used to finance any lawful corporate purpose of the Authority.

Facilities

The Facilities consist of the Original Project and any Additional Projects. Additional Projects consist of New Interchanges, New Extensions and Other Authority Projects that have been designated as Additional Projects by the Authority in accordance with the requirements set forth in the Bond Resolution.

Original Project. The Original Project consists of all Thruway sections and connections constituting roads or bridges, authorized by the Act as in effect on, and open to traffic on, the date of adoption of the Bond Resolution on August 3, 1992, together with any Facility Capital Improvements related thereto which include other related structures and facilities.

Additional Projects. Any project may become an Additional Project if so designated by the Authority and if (i) such project has been operated (whether or not by the Authority) so as to produce revenues in excess of operating expenses for a twelve-month period prior to the date such project is designated as an Additional Project by the Authority, (ii) the Authority certifies that the Net Revenues (including the revenues and operating expenses of the proposed Additional Project) at least equaled the Net Revenue Requirement for such twelve-month period, (iii) an Independent Consultant estimates that Net Revenues for all Facilities (including the proposed Additional Project) less the estimated Reserve Maintenance Payments for each of the fiscal years in the Test Period equal or exceed the estimated Net Revenues for all Facilities (excluding the proposed Additional Project) less the estimated Reserve Maintenance Payments for each of the fiscal years in the Test Period, and (iv) counsel opines that the Authority has the legal right and authority to undertake such project and to establish charges in connection therewith which do not require certain additional governmental approvals. See **Appendix C** – "Summary of Certain Provisions of the Bond Resolution – Additional Projects". Operating Expenses with respect to Facilities, including Additional Projects, are payable from the Operating Fund prior to Debt Service on the Bonds, including the Series N Bonds. The Authority has not designated any project as an Additional Project under the Bond Resolution.

Other Authority Projects. Other Authority Projects include facilities and other property which the Authority is now or hereafter authorized to acquire, construct, maintain, operate, finance, improve, reconstruct, rehabilitate or otherwise undertake for transportation or transportation-related purposes. In order for a facility or any other property to qualify as an Other Authority Project, it must be within the jurisdiction and control of the Authority and be designated as an Other Authority Project by the Authority. Other than projects for which the Authority has already reached its maximum funding obligation, the Authority has not designated any other project as an Other Authority Project under the Bond Resolution.

Reserve Maintenance Fund

Pursuant to the Bond Resolution, the Authority is required to deposit in each fiscal year into the Reserve Maintenance Fund an amount which shall be no less than the greater of $30,000,000 or the amount specified in an Independent Consultant's Certificate for such fiscal year (the "Minimum Amount"). The amount deposited into the Reserve Maintenance Fund may not exceed any amount from time to time established by the Authority pursuant to a Supplemental Resolution (the "Maximum Amount") provided that the Maximum Amount may not be less than the Minimum Amount.

Subject to the provisions of the Bond Resolution, money held in the Reserve Maintenance Fund can be disbursed for the purpose of paying (i) costs relating to the Facilities of (a) maintenance or repairs not recurring annually, and renewals and replacements; (b) repairs or replacements resulting from an emergency or caused by some unusual or extraordinary occurrence, to the extent that the moneys in other available Funds, together with insurance proceeds, if any, available therefor are insufficient to meet such emergency; (c) items of equipment; and (d) engineering expenses incurred in connection with the above permitted uses; and (ii) similar costs relating to certain highway and railroad grade crossings. The Authority may from time to time transfer any money from the Reserve Maintenance Fund to the Revenue Fund when such amount is no longer needed for the purposes of the Reserve Maintenance Fund. In addition, to the extent that amounts in the Senior Debt Service Fund and unencumbered moneys in the General Reserve Fund, the Other Authority Projects Operating Fund and the Facilities Capital Improvement Fund are insufficient to pay debt service, when due, on the Bonds, deficiencies will be made up from amounts in the Reserve Maintenance Fund.

Tolls, Fees and Charges

Toll Covenant. Pursuant to the Bond Resolution, the Authority has covenanted at all times to fix, charge and collect such tolls, fees and charges for the use of the Facilities as are required in order that, in each fiscal year, Net Revenues shall at least equal the Net Revenue Requirement for such year. "Net Revenue Requirement" means, with respect to any period of time, an amount equal to the greater of (i) the sum of amounts required to make payments with respect to Aggregate Debt Service, deposits to the Senior Debt Service Reserve Fund, Reserve Maintenance Payments (minimum, $30 million a year), and the amounts required to be deposited in the Junior Indebtedness Fund pursuant to the Supplemental Resolution or other resolution or agreement authorizing outstanding Junior Indebtedness or (ii) 1.20 times the sum of the Aggregate Debt Service for such period.[*]

If the Authority determines that Net Revenues may be inadequate, it is required to cause a study to be made by an Independent Consultant that will recommend a schedule of tolls, fees and charges which will provide sufficient Net Revenues in the following year to comply with the revenue covenant described above and which will provide additional Net Revenues to eliminate any deficiency in funds and accounts held under the Bond Resolution at the earliest practicable time, and the Authority will place in effect as soon as practicable either (i) the recommended schedule of tolls, fees and charges, or (ii) a different schedule of tolls, fees and charges developed by the Authority which will provide sufficient Net Revenues in the following fiscal year to comply with the revenue covenant described above and which will provide additional Net Revenues in such following fiscal year to eliminate any deficiency at the earliest practicable time, which conclusion is concurred in by an Independent Consultant. See **Appendix C** – "Summary of Certain Provisions of the Bond Resolution – Tolls, Fees and Charges".

Ability To Set Tolls. The Authority's power under the Act to fix, collect and alter toll rates is not subject to the approval of any governmental entity. Tolls on The Governor Mario M. Cuomo Bridge and the Grand Island Bridges, each constructed pursuant to the General Bridge Act of 1946, as amended, may be subject to the standard imposed by Section 135 of the Surface Transportation and Uniform Relocation Assistance Act of 1987, Pub. L. 100-17 to the effect that such tolls be "just and reasonable". The Authority believes that the tolls on all of its vehicular toll facilities are just and reasonable.

Agreement of the State

Under the Act, the State has agreed with the holders of the bonds and notes of the Authority, including the Bonds, that it will not limit or alter the rights vested by the Act in the Authority to establish and collect such fees, rentals and charges as may be convenient or necessary to produce sufficient revenue to meet the expense of maintenance and operation and to fulfill the terms of any agreements made with such holders of bonds, or in any way impair the rights and remedies of such bondholders and noteholders. In addition, the State has agreed with the holders of bonds and notes of the Authority secured by a pledge of tolls from any bridge constructed by the Authority across the Hudson River south of Bear Mountain bridge or from any part of the Original Project which includes such bridge, that no bridge or tunnel constituting a connection for vehicular traffic over, under or across the Hudson River between the present location of the Bear Mountain bridge and the boundary line between New York and New Jersey at the west side of the Hudson River will be constructed or maintained so long as the obligations of such bonds and notes for principal and interest shall not have been paid or otherwise discharged.

AUTHORITY GOVERNANCE, FACILITIES AND OPERATIONS

Thruway Facilities and Operations

The Thruway System is one of the largest tolled highway systems in the United States and is a critical component in the national interstate network. The original Thruway roadway system was constructed between 1949 and 1960 and is one of the oldest components of the national Interstate Highway System. In 1991, State legislation made the Authority additionally responsible for the operation and maintenance of 11 miles of I-287 Cross-Westchester Expressway. (The New York State Department of Transportation

[*] During any period during which the Junior Indebtedness Obligations are outstanding, the Authority has covenanted pursuant to the Junior Indebtedness Resolution, to maintain tolls in such amounts in order that Net Revenues will at least equal both the Net Revenue Requirement under the Bond Resolution and the Junior Indebtedness Net Revenue Requirement under the Junior Indebtedness Resolution, namely that Net Revenues at any time required shall equal or exceed 1.20 times the sum of Aggregate Debt Service and the amount required to be deposited in the Junior Indebtedness Debt Service Payment Account.

(“NYSDOT”) remains responsible for capital improvements to this roadway.) The Thruway System is now over 570 miles in total length and includes 134 interchanges.

The Thruway System serves travelers with a variety of needs and purposes, including commuters, business travelers, recreational travelers, and commercial vehicle traffic and provides the major route of access for visitors to the State’s tourist destinations including Niagara Falls, the Finger Lakes, the Adirondacks, the Catskills and New York City. The Thruway System has provided a dependable roadway system for these travelers, sustaining and encouraging economic growth, fostering job creation and generating tax revenues to the State and its local governments. Underscoring its importance to the State, region and nation, in 2018 Thruway customers traveled approximately 8.4 billion vehicle-miles on the highway, averaging over 23.1 million vehicle-miles per day. Due to the extent of its maintenance activities, good infrastructure conditions and the dedication of a specialized troop of the New York State Police to patrol the Thruway System, it has remained one of the safest roadway networks in the nation.

The Thruway System is comprised of 2,840 lane miles of roadway. In addition, the Authority has maintenance responsibility for 814 bridges and also owns 27 travel plazas and three Welcome Centers located at intervals along the Thruway System, operated by three food service and two fuel concessionaires that are open 24-hours daily, 7 days a week. Routine maintenance activities are performed by Authority staff from 21 maintenance locations grouped into four divisions. Also, the Authority’s tolling system is extensive, and it manages sophisticated incident response, ITS and traveler information systems to enhance mobility, safety and service.

The Thruway System connects the principal cities of the State from New York City to Albany, and on to Utica, Syracuse and Rochester through to Buffalo and the Pennsylvania State Line. Because the Thruway System corridor serves 37 of the State’s 62 counties and the majority of the State’s population, it is the principal artery of travel and commerce within the State. It also is an important interstate connector, joining with the Massachusetts Turnpike (I-90), Connecticut Turnpike (I-95), New Jersey’s Garden State Parkway, as well as several other Interstate routes such as I-287 from New Jersey; I-90 in Pennsylvania; I-290 around the north side of Buffalo; I-390 and I-490 serving Rochester; I-81, I-481 and I-690 at Syracuse; I-790 in Utica; I-87 (the Northway), I-88, I-90, I-787, and I-890 at Albany; and I-84 at Newburgh. As a result, the Thruway System is a vital link to long distance interstate travel and a high proportion of its patrons are from out-of-state.

The Thruway System is comprised of two types of toll systems – a controlled (ticket) system and a barrier system. The controlled system (approximately 481 miles) makes up the largest portion of the Thruway System, running from Woodbury (in the southeast corner of the State) north along I-87 to Albany, then west on I-90 to Buffalo and south of Lake Erie to the Pennsylvania border. In addition to this main stretch of the controlled system, there is a small tolled branch south and east of Albany, known as the Berkshire Spur.

On the controlled system, tolls are charged based on the actual distance traveled by the customer. Meanwhile, barrier toll plazas have a fixed toll rate for each vehicle class and payment type (e.g., Cash, E ZPass, as well as Commuter and other E-ZPass Discounts). The two barrier systems (four barriers located in the NYC metropolitan region and one barrier located in the Buffalo region) are comprised of The Governor Mario M. Cuomo Bridge (formerly Tappan Zee Bridge Barrier), Yonkers Barrier, New Rochelle Barrier, Spring Valley Barrier, Harriman Barrier and the Grand Island Bridges. Under the existing policy, toll rates across the system are based on vehicle classifications, related to the number of axles per vehicle and the height of the vehicle over the first two axles. Approximately 266.4 million toll transactions occurred on the Thruway System in 2018, generating over $736.5 million in toll revenues.

For a further description of the Thruway System’s facilities, traffic patterns on the Thruway System, and an analysis of the Thruway System’s financial history and projections for the future, see **Appendix A-1** **—** “December 2019 Financial Requirements Report of Traffic Engineer” and **Appendix A-2** – “Bring-Down Letter of Traffic Engineer”.

Board Members

The Act grants to the Authority Board the broad powers of the Authority, as summarized herein under the caption "THE AUTHORITY". The Authority Board continues in existence so long as the Authority has any indebtedness or other obligations outstanding. Pursuant to the New York State Public Officers Law, members of the Authority whose terms have expired continue to serve until a successor is appointed and qualified.

Joanne M. (Joanie) Mahoney was confirmed as a member of the Authority Board on March 30, 2015. Ms. Mahoney serves a term that expired on January 1, 2020. Ms. Mahoney was named as the chief operating officer at SUNY College of Environmental Science and Forestry. Previously, Ms. Mahoney served as the Onondaga County Executive, a position to which she was elected in November 2007, and is the first woman to serve in that role. She was re-elected in November, 2011. In 2010, then Governor-elect Andrew Cuomo asked Ms. Mahoney to serve as co-chair of his transition team and in 2012, he appointed Ms. Mahoney to serve as a trustee for the New York Power Authority. A Syracuse native, Ms. Mahoney graduated from Corcoran High School, and then from Syracuse University's School of Management and Syracuse University's College of Law. After spending time in private practice, Ms. Mahoney worked for five years as a criminal prosecutor in the District Attorney's office before being elected Councilor-at-Large in the City of Syracuse, where she served a four year term.

José Holguín-Veras, Ph.D., P.E., was confirmed as a member of the Authority Board in May 2010. Mr. Holguín-Veras serves in a term that expired on December 12, 2018. Dr. Holguín-Veras is a Professor and Director of the Center for Infrastructure, Transportation, and the Environment at the Rensselaer Polytechnic Institute. Dr. Holguín-Veras received a Bachelor of Science degree in Civil Engineering from Universidad Autónoma de Santo Domingo; Master of Science degree in Transportation from Universidad Central de Venezuela; and a doctoral degree in transportation from the University of Texas at Austin.

Robert L. Megna was confirmed as a member of the Authority Board in June 2016. Mr. Megna currently serves as the Senior Vice Chancellor and Chief Operating Officer for the State University of New York (SUNY) System Administration. Previously, Mr. Megna served as executive director of the Authority from 2015 to 2016. Prior to joining the Authority, Mr. Megna served for six years as director at the New York State Division of the Budget and previously served as commissioner of the New York State Department of Taxation and Finance. Mr. Megna holds master's degrees in public policy from Fordham University and economics from the London School of Economics.

George L. Miranda was confirmed as a member of the Authority Board in June 2017. Mr. Miranda is an At-Large Vice President of the Teamsters in New York, President of the Teamsters National Hispanic Caucus and Chairman of the Board of Directors for the Teamsters Airline Division. George Miranda is also Chairman of the Board of Directors of the Consortium for Worker Education and a Vice President of the New York City Central Labor Council.

J. Donald Rice, Jr., was confirmed as a member of the Authority Board in May 2010. Mr. Rice serves in a term that expired on June 13, 2018. Mr. Rice is founder and Chief Executive Officer of Rice Financial Products Company, a New York City-based full service municipal investment banking firm. Mr. Rice received a M.B.A. with distinction from Harvard Business School and a bachelor's degree in engineering with honors from Kettering University.

Stephen M. Saland was confirmed as a member of the Authority board in June 2016. Mr. Saland represented the 99th District in the New York State Assembly between 1980 until 1990, and served as New York State Senator for the 41st District from 1990 to 2012. He is also a past-President of the National Conference of State Legislatures. Mr. Saland holds a Bachelor of Arts degree from the University of Buffalo and a Juris Doctor from Rutgers Law School.

Heather C. Briccetti was nominated by the Governor and confirmed by the New York State Senate as a member of the Authority Board in June 2019. Ms. Briccetti is the President and Chief Executive Officer of The Business Council of New York State, Inc. Ms. Briccetti joined The Business Council in 2007 and has also served as Vice President of Government Affairs. Ms. Briccetti's career spans decades in the public and private sectors. Prior to The Business Council, Ms. Briccetti was a consultant and lobbyist for Powers and Company. She has also served as assistant counsel to the New York State Senate majority, as a legislative aide and counsel to the New York State Assembly majority committee on Racing and Wagering, and special counsel in the New York State Attorney General's office. Ms. Briccetti received a bachelor's degree in political science from the State University of New York at Binghamton and graduated from Albany Law.

Senior Staff

The day-to-day management of the Authority is primarily the responsibility of the following senior staff members:

Executive Director. Matthew J. Driscoll serves as Executive Director of the Authority. Prior to joining the Authority, Mr. Driscoll served as Commissioner of the New York State Department of Transportation. From 2010 to 2015, Mr. Driscoll served as President and Chief Executive Officer of the New York State Environmental Facilities Corporation, which provides low-cost financing to local governments for wastewater and drinking water infrastructure. From 2001 through 2009, Mr. Driscoll served as the 52nd Mayor of the City of Syracuse. Mr. Driscoll also serves as a member of Governor Cuomo's Strategic Implementation Assessment Team and as a member of the Financial Restructuring Board for Local Governments.

Chief of Staff. Matthew Trapasso was appointed to serve as Chief of Staff of the Authority on April 4, 2019. Mr. Trapasso previously served as Senior Policy Advisor for Transportation for Governor Andrew M. Cuomo. Mr. Trapasso has also held positions within the State at the New York State Department of Taxation and Finance and New York State Senate. He has a Bachelor's Degree from Siena College and a Master's Degree from New England College.

Chief Financial Officer and Treasurer. Matthew A. Howard was appointed to serve as the Chief Financial Officer and Treasurer of the Authority in January, 2015. Mr. Howard's career in public service spans nearly 23 years, and includes leadership roles in fiscal management, public policy and public administration. Prior to his appointment, Mr. Howard served as the Secretary to the New York State Assembly Committee on Ways and Means. In this role he worked as a chief budget negotiator for the Assembly during its negotiations with the Office of the Governor and the New York State Senate. Mr. Howard received his undergraduate degree from Springfield College and Master's Degree in Public Administration from Cornell University.

Chief Engineer. Richard Lee, P.E. was appointed Chief Engineer of the Authority in October 2016. Prior to joining the Authority, he served in a number of positions in both Design and Construction throughout his 34-year career with the New York State Department of Transportation. Most recently, from 2009-2016, he was the Deputy Chief Engineer (Design) and Director of the Office of Design. Mr. Lee graduated from Union College in Schenectady, New York with a Bachelor of Science Degree in Civil Engineering.

New NY Bridge Project Director. Jamey Barbas, P.E. was appointed to serve as New NY Bridge Project Director in November, 2015. Prior to assuming such role for the Authority, Ms. Barbas served as Senior Vice President and Global Practice Leader for Major Structures at Louis Berger. Prior to joining Louis Berger, she held leadership positions in several international consulting firms. Ms. Barbas has extensive management and design experience including several award winning, domestic and international projects. A registered professional engineer in the State of New York, Ms. Barbas has over 30 years of experience in bridge management, design, construction, and inspection, with a special emphasis on complex and long span bridges. She led the inspection, design and construction support services for the reconstruction of the Williamsburg Bridge in New York City – one of the largest bridge reconstruction projects ever undertaken in the United States, and was the Bridge Design Manager for the major bridges of the AutoRoute 30 project in Montreal, Canada. Ms. Barbas was Principal, Design Manager, and/or Lead Technical Advisor on various mega Design-Build, Construction Manager/General Contract and P3 projects worldwide, including the Indiana Toll Road ($3.8B), Pocahontas Parkway ($350M), AutoRoute A25 Cable-stayed bridge ($450M), AutoRoute 30 ($1.7B), Port Mann cable-stayed bridge ($2B), PR5/PR22 toll road ($1.1B), Forth Road Bridge in Scotland ($800M), Sarah Mildred Long Bridge ($180M) and the I-77 North Carolina

($700M). Ms. Barbas was also a peer advisor to the State of New York and the Authority and a member of the Review Team which assisted in the evaluation of the proposals for the New NY Bridge Project.

General Counsel. Vacant.

Director of Administrative Services. John F. Barr was appointed Director of Administrative Services on November 16, 2006. Prior to joining the Authority, Mr. Barr served as the Executive Deputy Commissioner of the New York State Department of Civil Service. Mr. Barr received a Bachelor of Arts degree in History from Hartwick College. Mr. Barr earned his Juris Doctor at Thomas M. Cooley Law School.

Director of Maintenance and Operations. Mark A. Hixson, P.E. is the Director of Maintenance and Operations for the Authority. He previously served as the Authority's Deputy Director since 2008, the Superintendent of Maintenance from 2003-2008, and before that as Deputy Division Director and Division Highway Engineer in the Authority's Albany Division. Upon joining the Authority in April 1987, he served in various roles in the Department of Engineering. Mr. Hixson has over 32 years of transportation engineering and management experience. He is a graduate of Clarkson University with a B.S. in Civil and Environmental Engineering and received an MBA from Sage Graduate School. He also holds a Graduate Studies Certificate from Cornell University's School of Industrial and Labor Relations and is a graduate of the AASHTO Executive Leadership Institute. Mr. Hixson has been a licensed Professional Engineer in the State of New York since 1989.

Director of Audit and Management Services. Harry A. Lennon was appointed Director for the Department of Audit and Management Services in May 2012. Prior to this appointment, Mr. Lennon served as Senior Confidential Investigator Auditor for the Department of Audit and Management Services. During this time, Mr. Lennon also served as Infrastructure Security Officer. Prior to joining the Authority, Mr. Lennon served as a Confidential Investigator for the New York State Ethics Commission. At the beginning of his career, Mr. Lennon served as a Police Officer for the Supreme Court of the United States. Mr. Lennon earned his Bachelor of Science degree at the University of Scranton.

Director of Information Technology. Kim McKinney serves as the Chief Information Officer for the Authority. Prior to this appointment, she served as the Chief Technology Officer (CTO) for the past two years and has played an integral role transforming the Authority through the use of technology. From 2014 to 2016, Ms. McKinney was appointed to the role of CIO for Transportation and Economic Development for NYS Information Technology Services. In this role, she was responsible for setting strategic direction, technology vision and IT services that supported the business missions of the Department of Transportation, Department of Homes and Community Renewal, Department of Economic Development and Governor's Office of Storm Recovery. Prior to her role as the Cluster CIO, she was appointed the Chief Operations Officer (COO) for NYS ITS. Prior to joining the state, Kim served as Chief Information Officer and Commissioner of Information Technology for Orange County, NY and Chief Information Officer for Broome County, NY. Prior to working in government, Ms. McKinney worked in the private sector and at Binghamton University. She received her Bachelor of Science from Penn State University and her MBA from Binghamton University.

Organization

To administer its responsibilities for the Thruway System and Other Authority Projects, the Authority is organized into nine operating departments and employs approximately 2,201 permanent employees.

The departments are Engineering, Maintenance and Operations, Administrative Services, Finance and Accounts, Legal, Media Relations & Communications, Audit and Management Services and Information Technology.

The Department of Engineering includes Asset and Innovation Management, Capital Program and Contracts Management, Program Delivery, and Transportation Planning and Environmental Services. The Department oversees the development and implementation of the Authority's and Corporation's long range capital programs. It has the professional capacity to design and inspect some capital projects in-house and accordingly does not have to rely solely on outside consultants.

The Department of Maintenance and Operations manages and maintains the highway, bridge and facilities infrastructure and equipment in a cost-effective manner in order to offer Thruway users high levels of safety and service. It is responsible for all toll collection activities, traffic management and travelers' services including concessions. The Department helps develop the multi-year Capital Program designed to preserve the condition, serviceability and safety of the roadway, bridges and facilities. The Department also continues to explore and implement innovative designs and technologies to enhance the safety and efficiency of the Thruway System. Direct field management of the maintenance and operations functions is handled through the four division offices (New York, Albany, Syracuse and Buffalo) under the auspices of the four Division Directors who report to the Director of Maintenance and Operations.

The Department of Maintenance and Operations also acts as liaison with New York State Police Troop T, whose 320 members patrol the Thruway System. Beginning in 2016, the Authority has reimbursed the State for payment of State Police Troop T enforcement on the Thruway System, but reimbursement of such costs to the State are not payable as Operating Expenses and are payable only from the General Reserve Fund.

RESULTS OF OPERATIONS

Financial Results of Operations

Set forth below are certain revenue and expense items ($ in millions) and certain other financial information derived from the Authority's audited financial statements for each of the Authority's fiscal years 2014 through 2018. The revenues and operating expenses below are presented in accordance with the Bond Resolution and the Junior Indebtedness Resolution and were derived by adjusting information contained in the Authority's audited financial statements, which are prepared in conformity with generally accepted accounting principles. This information is qualified by, and should be read in conjunction with, the audited financial statements for the Authority's fiscal year ended December 31, 2018 included in **Appendix B** to this Official Statement. See also "MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS" below.

RESULTS OF OPERATIONS
FOR THE CALENDAR YEARS 2014-2018
(in $ millions)

	2014	2015	2016	2017	2018
Toll Revenue[1]	$664.1	$691.7	$708.3	$731.5	$736.5
Concession Revenue	13.6	14.6	14.8	14.9	14.9
Other Revenues	18.8	20.0	26.2	45.7	47.4
Total Revenues	696.5	726.3	749.3	792.1	798.8
Thruway Operating Expenses[2]	286.1	287.4	311.6	329.7	339.9
Reserve for Claims and Indemnities and Environmental Remediation[3]	5.9	1.8	1.8	2.7	5.0
Net Revenue (A)	404.5	437.1	435.9	459.7	453.8
General Revenue Bond Debt Service	252.0	236.3	227.8	236.4	225.0
Less Interest Earnings on Gen. Rev. Bond Debt Service Reserve Funds	(1.0)	(0.9)	(0.5)	(1.8)	(4.7)
Net General Revenue Bond Debt Service (B)	251.0	235.4	227.3	234.6	220.3
Net Revenue after Gen. Rev. Bond Debt Service	153.5	201.8	208.6	225.1	233.5
Reserve Maintenance Deposit[4]	35.7	97.1	68.8	103.2	74.1
Net Junior Indebtedness Debt Service (C)	0.0	0.0	29.2	43.7	79.2
Retain for Operations/Adjustment for Cash Basis[5]	15.4	18.1	8.5	19.3	24.6
Facilities Capital Improvement Deposit[6]	10.0	20.5	14.0	5.0	12.0
Canal Corporation (Net of Federal Aid)[2]	46.8	52.0	13.8	0.0	0.0
General Reserve Fund Provision - Canal Capital and State Police[7]	45.2	13.6	73.9	54.0	43.6
General Reserve Fund - Subordinate Debt[7]	0.4	0.4	0.4	0.0	0.0
Remaining Balance	0.0	0.0	0.0	(0.1)	0.0
Adjustment to Cash Basis[8]	0.0	0.0	0.0	0.1	0.0
Balance After Cash Adjustment	0.0	0.0	0.0	0.0	0.0
General Revenue Bond Debt Service Coverage Ratio (A/B)	1.61	1.86	1.92	1.96	2.06
Junior Indebtedness Debt Service Coverage Ratio (A/(B + C))	1.61	1.86	1.70	1.65	1.52

(1) Based on the Authority's audited financial statements for the years 2014, 2015, 2016, 2017 and 2018.

(2) Operating expenses do not include the liability of $39.4 million in 2014, $43.9 million in 2015, $46.1 million in 2016, $38.8 million in 2017 and 52.7 million in 2018 for Thruway, $8.7 million in 2014, $10.4 million in 2015, and $10.7 million in 2016 for Canal Corporation, relative to the implementation of Governmental Accounting Standards Board ("GASB") Statement No. 45, which establishes reporting standards for post-employment health care benefits and represents the unfunded expenses for the years as noted. In 2015, the Authority adopted GASB Statement No. 68 Accounting and Financial Reporting for Pensions and GASB Statement No. 71 Pension Transition for Contributions Made Subsequent to the Measurement Date. The adjustment to comply with GASB 68 and GASB 71 was $9.0 million in 2015, $7.7 million in 2016, $4.4 million in 2017 and ($2.6) million in 2018 for Thruway, and ($1.3) million in 2015 and $1.3 million in 2016 for Canal Corporation.

(3) Includes $0.7 million for Environmental Remediation Reserve in 2014, $0.8 million in 2015, $0.7 million in 2016, $0.8 million in 2017 and $1.1 million in 2018. In addition, $2.5 million was provided as an AET transition reserve in 2018.

(4) Reflects the minimum required deposit to the Reserve Maintenance Fund ($30,000,000) as well excess revenue used for pay-as-you-go capital projects (see "SOURCES OF PAYMENT AND SECURITY FOR THE BONDS – Reserve Maintenance Fund").

(5) In 2014, $14.3 million was retained for use in 2015, in 2015, $22.5 million was retained for 2016, in 2016, $2.3 million was retained for 2017, in 2017, $20.5 million was retained for 2018, and in 2018, $29.4 million was retained for 2019.

(6) The Facilities Capital Improvement Fund has been designated for capturing project costs relating to the New NY Bridge Project.

(7) Funds transferred to cover Canal Corporation capital program expenditures as well as interest and commitment fees from a line of credit secured in 2012 to finance emergency repair work on the Canal system due to damage from Tropical Storms Irene and Lee. Beginning in April 2016, the State Police costs were reimbursed for Troop T.

(8) Reflects differences in cash and accrual basis and timing differences relating to permit sales, investments and Debt Service.

Note: Totals may not add due to rounding.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS

Discussion of Results of Operations: 2014 through 2018

A number of significant factors have impacted the Authority's operating results during the years 2014-2018. During the period 2014 to 2015, traffic and revenues along the Thruway System grew due to lower fuel prices and a moderate economic recovery. However, during the same 2014-2015 period traffic was adversely impacted by road closures during major weather events. To maintain fiscal balance during this period, the Authority pursued a number of significant cost containment initiatives, including reduced energy consumption and costs, joint procurements with other State entities to enhance buying power and reduce costs, reduced staffing and a transition to a more flexible workforce, extending the useful life of equipment and facilities, and many other initiatives.

2014. Total revenues were $696.5 million or $15.7 million above the prior year due to commercial revenues at the Tappan Zee Bridge and Yonkers Barrier being positively impacted by traffic diverting to the Thruway System to avoid construction closures on the George Washington Bridge from June through December 2014. In addition, commercial revenues system wide were positively impacted by the implementation of an Automated Vehicle Classification system which ensures commercial vehicles using E-ZPass are charged the correct toll rate. Concession revenue increased by $0.3 million, while other revenue increased by $0.2 million.

Total operating expenses increased by $8.8 million primarily due to higher estimated costs for litigation claims filed against the Authority, as well as higher workers' compensation insurance costs and higher snow and ice control costs.

2015. Total revenues were $726.3 million or $29.8 million above the prior year due to lower fuel prices and continued economic recovery. Additionally, in 2014 there was a road closure and loss of revenues due to major weather events.

2016. Total revenues were $749.3 million or $23.0 million above the prior year primarily due to higher traffic volumes across most of the Thruway System and an extra day due to leap year in February 2016. In addition, a shift in commercial truck traffic from the George Washington Bridge to the Tappan Zee Bridge also contributed to the increase.

Total operating expenses increased by $24.2 million primarily due to higher costs for pensions, Tolls by Mail administration, claims filed against the Authority, administrative fees charged by the State and health insurance for active and retired employees.

2017. Total revenues were $792.1 million or $42.8 million above the prior year primarily due to higher traffic volumes across most of the Thruway System, the elimination of a five-percent discount on tolls paid by non-New York E-ZPass accountholders, increased E-ZPass and Tolls by Mail fees and interest on investments. A further shift in commercial truck traffic from the George Washington Bridge to the Tappan Zee Bridge also contributed to the increase.

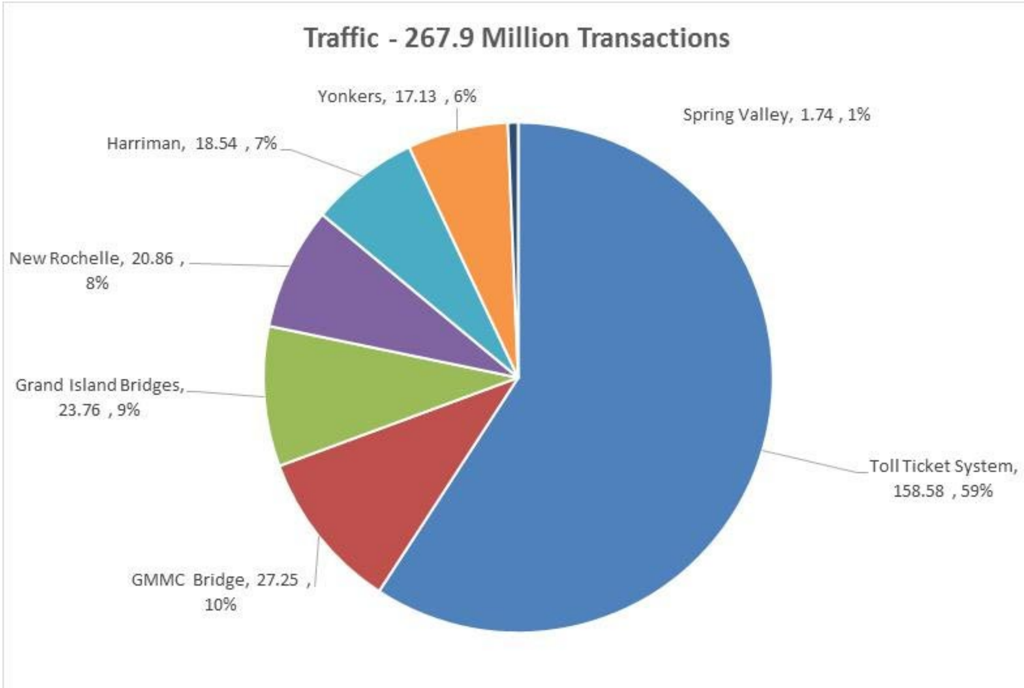
Total operating expenses increased by $18.1 million compared to 2016. The increase is primarily due to higher costs for personal services, Tolls by Mail administration, administrative fees charged by the State, and snow and ice control expenses.

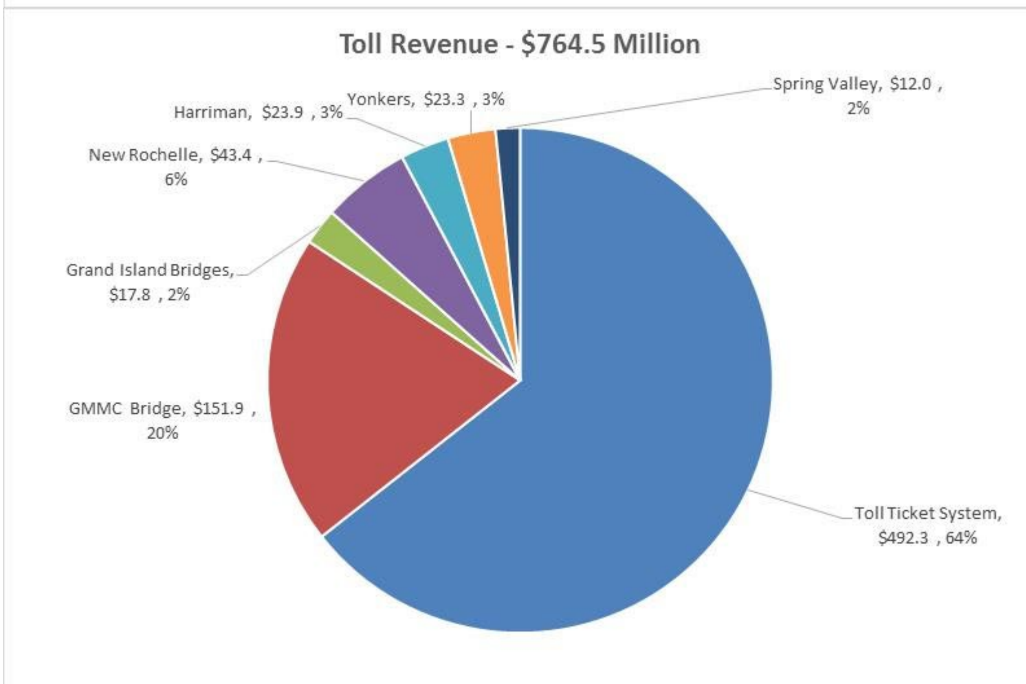
2018. Total revenue was $798.8 million, an increase of $6.7 million, or 0.8% compared to 2017. Toll revenue for the year was $736.5 million, an increase of $5.0 million, or 0.7% compared to 2017.

Total operating expenses and State Police Troop T reimbursement costs were $454.6 million, an increase of $15.9 million, or 3.6% compared to 2017. Salary costs increased $5.2 million, or 3.7% compared to 2017. This increase is primarily due to incentives aimed at retaining toll collection employees during the Authority's transition to all electronic tolling. Professional and other services increased $5.6 million, or 12.3% compared to 2017. This increase is primarily due to the Authority's ongoing shift from cash-based toll collection to all electronic tolling.

Traffic and Revenue

The following charts show traffic and toll revenues at the various pay points and total revenues for 2018(1):





See **Appendix A-1 —** "December 2019 Financial Requirements Report of Traffic Engineer" and **Appendix A-2** – "Bring-Down Letter of Traffic Engineer" for a more detailed discussion of historical traffic, revenue and expenses for the years 2009 through 2018 and forecasted data for the years 2019 through 2024.

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(1) Based on the Authority's 2018 audited financial statements and reflects actual results of traffic operations at 2018 year-end. "Traffic" refers to number of all toll and non-tolled transactions at all locations where tolls are collected. Toll Revenue does not reflect volume discounts totaling $28.0 million taken under the Authority's commercial charge account program.

Note: Totals may not add due to rounding.

NEW YORK STATE INFRASTRUCTURE GRANT AND TOLL RELATED INITIATIVES

As part of an initiative to materially improve critical transportation infrastructure in the State and to moderate the future need for Thruway System toll adjustments, the State in 2015, at Governor Cuomo's urging, appropriated $1.285 billion for general Thruway System capital projects, including $535 million for system-wide projects and $750 million for the New NY Bridge Project. The State's 2016-2017 Enacted Budget provided for an additional $700 million in grant moneys for investment in Thruway infrastructure. The $700 million in 2016 grant moneys and the $1.285 billion from the 2015 enacted State budget are collectively referred to as "NYS Infrastructure Grant Contributions". Of the NYS Infrastructure Grant Contributions, $1.2 billion has been used or is expected to pay costs of the New NY Bridge Project. The 2020 Budget includes the spend down of the remaining balance.

In July 2019, Authority announced the formation of a Toll Advisory Panel to review toll rates, potential resident and commuter discount programs and commercial vehicle rates on The Governor Mario M. Cuomo Bridge. In July 2019, the panel convened meetings to gather feedback from the public related to any potential toll adjustments at The Governor Mario M. Cuomo Bridge.

On December 19, 2019, the Authority Board approved a proposal to begin the toll adjustment process on The Governor Mario M. Cuomo Bridge and other tolling changes that support the Statewide conversion to cashless tolling, which is scheduled to be completed by the end of 2020. The approval authorizes the Authority to begin the public process required to implement the toll rate changes supporting the fiscal stability of the Authority. The Authority, supported by analysis by its independent traffic engineer, has determined that there will be additional revenues needed for the Authority to fulfill its system-wide operating, debt service, and capital needs through the upcoming forecast period. Thruway System tolls have not been adjusted since 2010.

The proposed passenger car toll adjustment for The Governor Mario M. Cuomo Bridge includes:

- Beginning January 1, 2021, an increase of NY E-ZPass rates by 50 cents in 2021 to $5.25 and 2022 to the rate of $5.75;
- Beginning January 1, 2021, the commuter discounted rate will be 40 percent off the NY E-ZPass rate only for passenger vehicles that opt into the program; and,
- A new resident E-ZPass plan will be offered for Westchester and Rockland County residents that will keep their rate flat through 2022. The program will be offered to passenger vehicles with a NY E-ZPass who opt into the plan and can provide proof of residency (i.e. documentation showing their vehicle is registered in one of these two counties, etc.).

Additionally, the Authority Board approved the following proposed changes to support the Thruway System's system-wide conversion to cashless tolling:

- With the conversion to cashless tolling in 2020, the standard NY E-ZPass toll rate will become the base toll rate and beginning January 1, 2021, a 30 percent rate differential would be established for Tolls by Mail toll rates. Such differential toll rates have been standard practice among other systems that have converted to cashless tolling.
- Beginning January 1, 2021, establishment of a 15 percent rate differential above the NY E-ZPass rate for Non-NY E-ZPass tolls.
- Clarify Authority Board Policy that beginning Jan. 1, 2021, all transactions that are processed through a license plate image review will pay the Tolls by Mail rate.
- Beginning January 1, 2021, implementation of a $2 administrative surcharge per billing statement for Tolls by Mail statements to support the administrative costs associated with processing transactions through the Tolls by Mail program.

Any potential toll adjustments along the Thruway system are subject to the State Administrative Procedure Act (SAPA), the Public Authorities Law, and the State Environmental Quality Review Act. Public hearings for SAPA will be conducted in 2020.

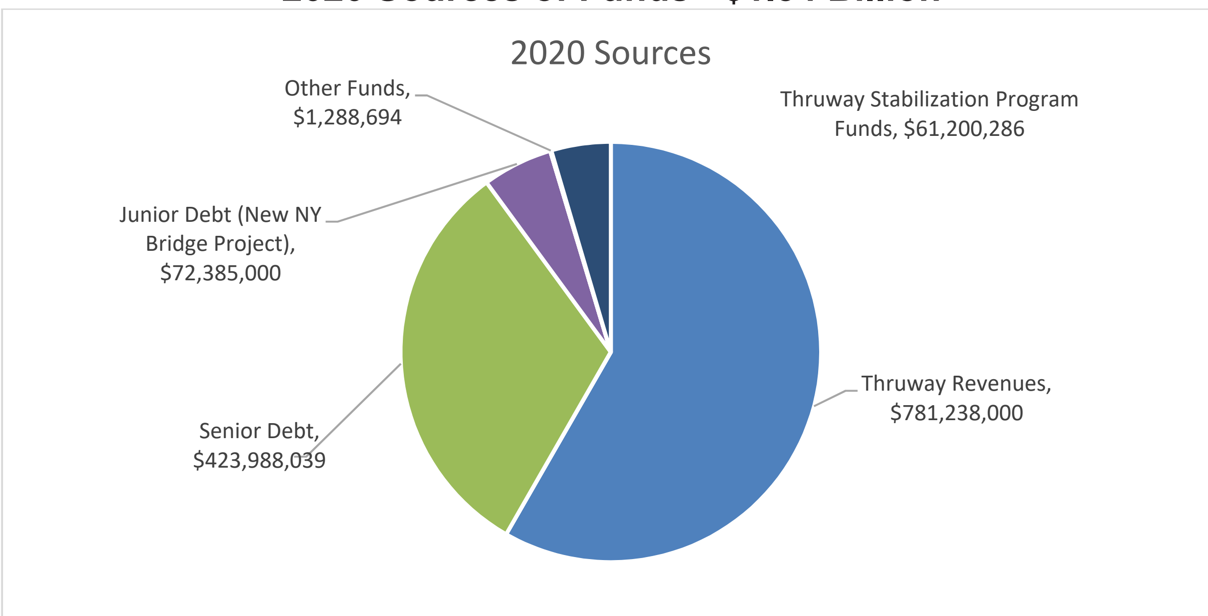
BUDGET AND CAPITAL PROGRAM; TRAFFIC ENGINEER'S REPORT

2020 Budget

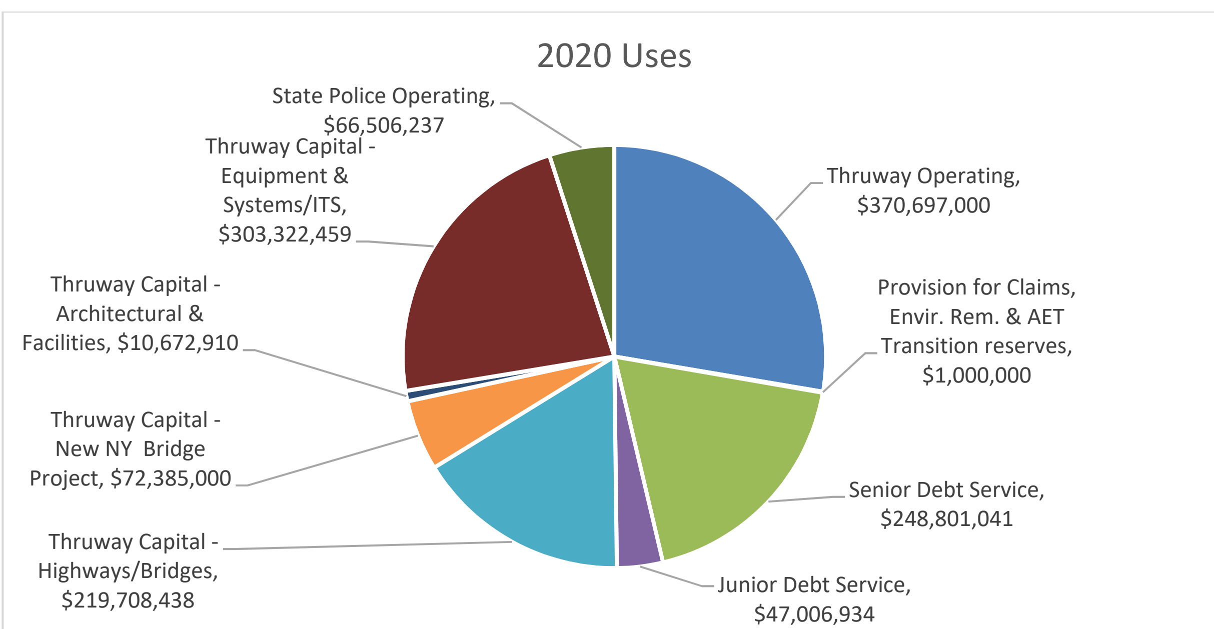
The Board of the Authority adopted a 2020 Budget (the "2020 Budget") at its November 18, 2019 meeting. The following charts and discussion present the 2020 Budget and shows the differences in sources and uses of funds between the 2019 Revised Budget and the 2020 Budget.

Sources and uses of the 2020 Budget are highlighted in the following charts.

2020 Sources of Funds - $1.34 Billion



2020 Uses of Funds - $1.34 Billion



2020 Budget Compared to 2019 Revised Budget

	2019 Revised Budget	2020 Budget	Change from 2019 Revised Budget
SOURCES:			
Thruway Revenues	$799,719,000	$781,238,000	($18,481,000)
Prior Year Reserve Balances	152,856,579	0	(152,856,579)
General Revenue Bonds Debt	0	423,988,039	423,988,039
Junior Indebtedness Obligations	12,790,000	72,385,000	59,595,000
Other Funds	10,380,571	1,288,694	(9,091,877)
Thruway Stabilization Program Funds	397,554,768	61,200,286	(336,354,482)
Total Sources	**$1,373,300,918**	**$1,340,100,019**	**($33,200,899)**
USES:			
Operating Expenses:			
Thruway Operating	358,335,420	370,697,000	12,361,580
State Police Operating	66,606,922	66,506,237	(100,685)
Sub Total	424,942,342	437,203,237	12,260,895
Provisions for Claims, Env. Remediation & Cashless Tolling Transition	4,600,000	1,000,000	(3,600,000)
Total	429,542,342	438,203,237	8,660,895
Retained for Working Capital	5,000,000	0	(5,000,000)
Debt Service:			
General Obligation Bonds Debt	229,479,761	248,801,041	19,321,280
Junior Indebtedness Obligations	53,434,467	47,006,934	(6,427,533)
Interest on Junior Indebtedness Notes	26,130,468	0	(26,130,468)
Total Debt Service	309,044,696	295,807,975	(13,236,721)
Capital Program:			
Thruway Capital - Highways and Bridges	222,067,096	219,708,438	(2,358,658)
Thruway Capital - New NY Bridge	220,000,000	72,385,000	(147,615,000)
Thruway Capital - Architectural & Facilities	15,810,164	10,672,910	(5,137,254)
Thruway Capital - Equipment & Systems/ITS	171,806,620	303,292,459	131,485,839
Thruway Capital – State Police Equipment/Facilities	30,000	30,000	0
Total Capital Program	629,713,880	606,088,807	(23,625,073)
Total Uses	**$1,373,300,918**	**$1,340,100,019**	**($33,200,899)**

2020 Budget Compared to 2019 Revised Budget

- The 2020 Budget provides for an overall budget of $1.3 billion, representing a $33.2 million reduction or 2.4 percent decrease from revised 2019 levels.

- The 2020 Budget forecasts total traffic of 269.6 million vehicles, reflecting growth of 2.4 million vehicles or 0.9 percent above 2019. This corresponds to a toll revenue forecast of $735.8 million, reflecting a decrease of $3.8 million or 0.5 percent below 2019 levels.

- The 2020 Budget provides a total of $371.7 million for operating expenses of the Authority (including provisions). This represents an increase of $8.7 million or 2.4 percent above revised 2019 levels. The 2020 Budget also provides $66.5 million for reimbursement to the State Police for the cost of the Troop T patrolling of the Thruway System.

- The 2020 Budget provides a total of $606 million to support the capital program of the Authority. This represents a decrease of $23.6 million or 3.8 percent below revised 2019 levels.

- The 2020 Budget provides a 2020-2024 Capital Program that would provide $2.15 billion for Authority capital projects. This includes $317.4 million for the New NY Bridge Project that will result in the completion of The Governor Mario M. Cuomo Bridge and $1.83 billion for system-wide projects on the Thruway System.

2019 Preliminary Financial Results through November 30, 2019

- Through November 30 2019 the Authority has collected revenues of $751.5 million. This reflects an increase of $17.8 million or 2.4% above revenues collected for the same time period in 2018. These actual results through November 30, 2019 are $8.9 million or 1.2% above the level for the 2019 Revised Budget that was approved by the Authority Board in November 2019.

- Through November 30, 2019, the Authority operating expenses and provisions totaled $318.12 million. This reflects an increase of $6.02 million or 1.9% above 2018 levels. These actual results through November 30, 2019 are $6.7 million or 2.1% below the level for the 2019 Revised Budget that was approved by the Authority Board in November 2019.

2020-2024 Capital Program

Annually, the Authority adopts a one-year contracts program based on the prioritization of projects scheduled in its Capital Program. This annual contracts program is approved by the Board and represents the Authority's official capital construction program for the year. Project selection considers the following priority factors: safety, bridge and highway condition rating, capacity needs, and facility needs.

As the Thruway System is at the end of its sixth decade of operation, the necessity for reconstruction and rehabilitation of the aging Thruway infrastructure requires an increasing level of investment. At the same time, travelers on the roadway during peak travel periods are experiencing delays resulting from increasing traffic volumes. Authority staff, utilizing enhanced and modernized asset management systems, historical records of past remedial work, and their knowledge of the current condition of facilities, developed the multi-year Capital Program.

The multi-year Capital Program is designed to address several key objectives that are critical to Thruway customers and is intended to maximize the benefit to the Thruway System. These objectives are system reliability, increased customer service, improved safety and mobility and environmental stewardship. The multi-year Capital Program also will take advantage of technology improvements and innovations in the field of transportation management. As evidenced through the plan, the Authority is committed to providing customers with the mobility and service they expect, and to preserving the main transportation artery that supports New York State's economy.

The 2020-2024 Capital Program totals $2.15 billion in investments for capital projects and equipment and including a subtotal of $317.4 million for the New NY Bridge Project. See "—Funding of the

2020-2024 Capital Program – The New NY Bridge Project" for a more detailed description of the New NY Bridge Project.

The 2020-2024 Capital Program will complete major, job-sustaining reconstruction projects that were let during the previous multi-year Capital Program and includes reconstruction and rehabilitation of roadway, bridges, facilities, equipment and support systems of the Thruway System. The 2020-2024 Capital Program provides for the replacement or rehabilitation of 41 bridges, the resurfacing/rehabilitation/reconstruction of approximately 1,172 lane miles of highway and the reduction of congestion in key corridors. From 2020 through 2024, the Authority estimates that the investments made in this program will preserve overall highway and bridge conditions in the "good" category, allowing for the continued reliability of the Thruway System.

Total Capital Program Expenditures. The following table presents the year-by-year actual cash expenditure for the period from 2008-2018 and reflects the 2019 Revised Budget and projections for the 2020-2024 Capital Program. The table also includes the Authority's projections for capital expenditures on the New NY Bridge Project, which began in 2013. With this level of capital expenses, the Authority can continue to provide good service to patrons, meet the growing demands of increased use with up-to-date technology and other necessary improvements, and assure that the system is not adversely affected by deteriorating bridge and pavement conditions.

ACTUAL AND PROJECTED CAPITAL PROGRAM EXPENDITURES[1]
2008-2024
(in millions)

		Thruway Highway and Bridge Capital Expenditures	Equipment Replacement and Other Facility Capital Needs	Canal Capital Program[2]	Subtotal Capital Program Expenditures	New NY Bridge	Thruway AETC Projects	Total Capital Program Expenditures
2008	Actual	$ 288.7	$ 36.2	$30.3	$355.2			$ 355.2
2009	Actual	259.6	35.4	26.1	321.1			321.1
2010	Actual	311.0	39.9	26.8	377.7			377.7
2011	Actual	367.6	49.5	27.4	444.5			444.5
2012	Actual	322.4	22.9	45.7	390.9			390.9
2013	Actual	183.7[3]	30.7	37.5	251.9	$613.4		865.3
2014	Actual	170.7	33.7	76.7	281.1	594.2		875.3
2015	Actual	251.3	35.2	48.8	335.3	702.0		1,037.3
2016	Actual	200.1	36.5	30.3	266.9	790.7		1,057.6
2017	Actual	184.7	44.8		229.5	479.1		708.6
2018	Actual	222.9	76.7		299.6	264.1	$ 28.1	591.8
2019	Projected	222.1	49.5		271.6	220.0	138.1	629.7
2020	Projected	219.7	48.9		268.6	72.4	265.1	606.1
2021	Projected	231.1	45.6		276.7	245.0	83.8	605.5
2022	Projected	243.9	54.4		298.4		10.5	308.9
2023	Projected	259.7	50.2		310.0			310.0
2024	Projected	265.7	50.5		316.2			316.2
Total[1]		$4,204.9	$740.6	$349.6	$5,295.1	$3,981.0[4]	$525.5	$9,801.7

(1) Totals may not add due to rounding.
(2) As noted above Canal system costs for the years 2017 and thereafter will be no longer be Authority costs. The portion of the total cost shown in 2016 incurred after March 31, 2016 will be reimbursed by the New York Power Authority.
(3) Includes $8.3 million of Pre-Design Environmental costs.
(4) Does not include prior years' expenses that had been paid from the Construction Fund that are included in the column titled "Thruway Highway and Bridge Capital Expenditures".

Funding of the 2020-2024 Capital Program

The 2020-2024 Capital Program totals $2.15 billion including the New NY Bridge Project. The 2020-2024 Capital Program is funded with a combination of Net Revenues, General Revenue Bond proceeds, Junior Indebtedness Obligation proceeds (for the New NY Bridge Project only) and Federal, State and other funds.

The Authority's Capital Program Management Group (the Authority's Chief Engineer, Chief Financial Officer and Director and Maintenance and Operations) and the Authority Board continually monitor projected system needs and balance them with available resources. The Authority is also enhancing and modernizing its asset management system to ensure the efficient and effective delivery of the 2020-2024 Capital Program, resulting in smart project selections and enhancing its ability to respond to price variability and other changes that would impact funding, project cost and delivery. It is important to note that the Authority's Board has the independent power, without approval by the Legislature, Governor or other official or entity, to increase toll rates to maintain a high level of operating safety and services on the Thruway System, to maintain and rehabilitate the Thruway System, to pay debt service, to meet toll covenants and to maintain the balance of revenues and expenses.

Funding sources projected to be applied to complete the 2020-2024 Capital Program are set forth in the following chart.

	2020 – 2024 Capital Program					
	2020	**2021**	**2022**	**2023**	**2024**	**2020-24 Total**
Thruway System:						
General Revenue Bond Proceeds	$408.7	$290.4	$257.8	$238.0	$239.0	$1433.9
Reserve Maintenance Fund	62.4	67.8	50.3	71.8	76.9	329.3
Federal, State and Other Funds	1.3	2.4	0.8	0.2	0.2	4.8
NYS Grant proceeds	61.2	0.0	0.0	0.0	0.0	61.2
Sub-Total	$533.7	$360.5	$308.9	$310.0	$316.2	$1,829.2
New NY Bridge Project:						
Junior Indebtedness Obligations	72.4	245.0	0.0	0.0	0.0	317.4
Facilities Capital Improvement Fund	0.0	0.0	0.0	0.0	0.0	0.0
Thruway Stabilization Program Funds	0.0	0.0	0.0	0.0	0.0	0.0
Sub Total – New Bridge Program	72.4	245.0	0.0	0.0	0.0	317.4
Grand Total	**$606.1**	**$605.5**	**$308.9**	**$310.0**	**$316.2**	**$2,146.6**

Note: Totals may not add due to rounding

The New NY Bridge Project

The Tappan Zee Bridge was a major state and regional crossing of the Hudson River in the dense core of the Northeast with no nearby alternative crossings and a significant source of toll revenues for the Thruway System. Opened to traffic in 1955, it was built with a projected useful life of 50 years and serviced traffic that was 40% more than it was designed to handle. Due to growing congestion, the aging of its structural components, and the fact that it had no shoulders for emergency services or disabled vehicles, no mass transit capability and suffered from seismic and other structural deficiencies, the Tappan Zee Bridge was the subject of numerous replacement studies. In 2011, the New NY Bridge Project was advanced to replace the Tappan Zee Bridge.

The New NY Bridge Project (now known as "The Governor Mario M. Cuomo Bridge") is designed to provide:

- At least a 100-year design life before major maintenance is required, greatly improving operational efficiencies and lowering life-cycle costs;
- Four travel lanes in each direction to match the highway approaches on either side of the Hudson River;

- Dedicated bus lanes during commuter rush hours;
- A structural envelope with the strength and capacity to allow for potential future transit modes, including commuter rail, light rail and/or bus rapid transit service;
- Conformance with current seismic, safety, security and geometric requirements;
- Adequate shoulders to properly manage traffic incidents and emergencies;
- All Electronic Tolling ("AETC") and reconfigured toll plazas to reduce barrier-related congestion;
- Enhanced environmental features that will lessen long term impacts on the Hudson River; and
- Accommodation for bike/pedestrian use.

Formal construction of the New NY Bridge Project began in October 2013. The north span of The Governor Mario M. Cuomo Bridge was substantially completed and opened to two-way vehicular traffic on August 25, 2017. The second span of the bridge was substantially completed and opened for vehicular traffic on September 12, 2018, whereupon westbound traffic was redirected solely to the north span and eastbound traffic was redirected solely to the south span.

The New NY Bridge Project is being constructed under fixed-price, date-certain, Design-Build Contract with TZC LLC (the Design-Build Contract"). TZC LLC is a special purpose joint venture of Fluor Enterprises, Inc., American Bridge Company, Granite Construction Northeast, Inc. and Traylor Brothers Inc. The total estimated cost of the New NY Bridge Project is \$3.9 billion, including over \$650 million of contingency and allowances – over 20% of the underlying \$3.14 billion Design-Build Contract price for changes in law, unforeseen costs associated with delay or other factors, and any potential owner-directed changes.

As of November 30, 2019, \$3.6 billion in total had been spent on the New NY Bridge Project. Of this amount, \$158.5 million was spent in 2019.

TZC LLC's performance is secured by a construction security package that includes a joint and several guarantee of TZC LLC's performance from its members, including a parent guarantee from Fluor Corp. which has credit ratings of "BBB" with a negative outlook from S&P Global Ratings and "Baa3" with a stable outlook from Moody's Investors Service. While construction is substantially completed, the construction security package includes surety bonds for payment and performance of approximately \$1.5 billion each, contractual liquidated damages for delays in completing major project milestones and for lane closures, and a maximum liability cap of 50% of the contract price.

The following photographs show the substantially completed Governor Mario M. Cuomo Bridge:

(Views of the Hudson River looking west toward Rockland County)

AETC Implementation

The Authority commenced conversion to all-electronic tolling ("AETC" or "Cashless Tolling") on its system, beginning with the Tappan Zee Bridge in April 2016. The Governor Mario M. Cuomo Bridge opened with AETC in August 2017. Throughout 2018, AETC was implemented on the Grand Island Bridges, the Harriman, Yonkers, Spring Valley and New Rochelle Barriers. The Authority expects full implementation of AETC across the Thruway System by the end of 2020.

Implementing AETC offered the Authority's patrons advantages including reduced travel times, enhanced safety and improved traffic flow, and provides environmental benefits by limiting idling and reducing delays, as vehicles no longer have to stop at a toll plaza; instead, overhead gantries detect E-ZPass or use cameras to read license plates of non-E-ZPass customers who are later billed by mail. In the opinion of the Authority's Traffic Engineers, AETC has resulted in (i) small traffic changes and payment type shifts, and (ii) some uncollectable revenues associated with video tolling. This is in addition to the lag in time to allow for video toll revenues collection. Video toll enforcement has been enhanced by a new regulation enacted by the State on January 20, 2016 authorizing the Department of Motor Vehicles to suspend the registrations of New York State drivers with five or more toll violations in 18 months. In 2017, this was changed to three violations over a five year period. See **Appendix A-1 —** "December 2019 Financial Requirements Report of Traffic Engineer" and **Appendix A-2** – "Bring-Down Letter of Traffic Engineer".

Bridge Inspection Program and Condition Ratings

There are 872 bridges on the Thruway System, excluding bridges on the Cross-Westchester Expressway for which the Authority has not assumed any inspection responsibility. The Authority currently has inspection responsibility for 814 of these bridges, including 370 mainline and ramp bridges and 443 overhead bridges carrying interchange traffic as well those carrying State and local roads, pedestrian or railroad traffic. The New York State Department of Transportation ("NYSDOT") is responsible for inspecting the remaining bridges.

The Authority's inspection program exceeds current Federal and State standards. The inspection process strives for strict adherence to both the qualification and training of inspectors, and inspection methodologies as prescribed by NYSDOT. All bridges are inspected biennially as required by the State's Uniform Code of Bridge Inspection (the "Bridge Code"). The Authority contracts with outside consultants to conduct this inspection for most of its bridges. In addition to the Bridge Code requirement, the Authority performs an annual inspection of suspension components of pin and hanger assemblies of bridges, inspection of bridges over waterways after each major flood event, and inspection of bridges after any seismic activity in the area. During each general biennial or interim inspection, certain superstructure elements which could cause the failure of a bridge receive particularly close inspection. Bridges over waterways which are identified for underwater diving inspection are also inspected regularly at a frequency recommended in the last diving inspection report as per guidelines issued by NYSDOT.

The Authority currently has maintenance responsibility for 814 bridges, while NYSDOT and other entities have maintenance responsibility for the remaining bridges. The Authority's bridge maintenance engineers review each bridge inspection report to determine maintenance and rehabilitation needs. A maintenance and rehabilitation program is implemented through in-house crews or through a contracts program depending upon the extent of work required to be performed at any bridge.

A comparison of the Authority's Bridge Condition Ratings for the years 2017 and 2018 are shown as follows.

BRIDGE RATINGS		
CONDITION	**NO. OF BRIDGES**	
	Dec. 2017	Dec. 2018[1]
GENERAL RECOMMENDATION 5-7 Bridges in generally good condition with only minor to moderate repairs required.	679	689
GENERAL RECOMMENDATION 4 Bridges in good to fair condition requiring reconditioning of some structural elements.	122	115
GENERAL RECOMMENDATION 2-3 Bridges in poor condition requiring major repairs or replacement.	8	9

1. In December 2018, the Authority had maintenance and inspection responsibility for 813 bridges. One new bridge was added in 2019 - the south span of the Gov. Mario M. Cuomo Bridge.

The change in the Authority's bridge ratings between December 2017 and 2018 is due to aging of facilities and replacement of the Tappan Zee Bridge. As of December 31, 2018 there were nine bridges with a general recommendation of 3. Three of the bridges are currently being replaced. An additional four bridges with a general recommendation of 3 will be replaced in the 2020-2024 Capital Program.

Federal Funding

Pursuant to the provisions of an agreement dated July 19, 1982, entered into among the Authority, the United States Department of Transportation and the State and in accordance with the provisions of Title 23, United States Code, as amended ("Title 23"), the Authority historically has received Federal funds in connection with the funding of various resurfacing, restoration and rehabilitation projects on certain designated interstate portions of the Thruway System. In recent years the amount of Federal aid received by the Authority has been *de minimis* and the Authority does not currently expect to receive Federal aid in 2020-2024 to fund Thruway capital projects.

Report of Independent Traffic Engineer

The Authority retained Stantec Consulting Services, Inc., as Traffic Engineer ("Stantec"), to prepare a study (the "October 2019 Traffic Engineer's Report") that reviewed the operations and physical condition of the Thruway System. The study further projects the financial results of the Authority's operations in the years 2019-2024. In December 2019, Stantec prepared a report entitled "New York State Thruway Financial Requirements and Proposed Toll Adjustments" (the "December 2019 Financial Requirements Report") that contained revenue forecasts for the Thruway System and a recommended schedule of toll rates designed to allow the Authority to sustain healthy financial metrics through the end of 2024. In accordance with the recommendations set forth in the December 2019 Financial Requirements Report, on December 19, 2019, the Authority Board approved a proposal to begin the toll adjustment process on The Governor Mario M. Cuomo Bridge and other tolling changes. The approval authorizes the Authority to begin the public process required to implement the toll rate changes. Stantec prepared a letter, dated February 12, 2020 (the "Bring-Down Letter"), which updated and supplemented its findings contained in the December 2019 Financial Requirements Report.

The forecast of traffic and revenues detailed in this section of the Official Statement are based on the proposed toll rate schedule. The December 2019 Financial Requirements Report projects that with the proposed toll adjustments, the Authority will generate sufficient revenues needed to successfully complete the New NY Bridge Project while fulfilling its system-wide operating, debt service, and capital needs, management's financial policies with respect to debt service coverage (1.55x General Revenue Bonds and 1.35x General Revenue Bonds and Junior Indebtedness Obligations combined) as well as the contractual financial covenants contained in its Bond Resolution and Junior Indebtedness Resolution through the forecast period. Future funding needs through 2024 were established by the Authority at amounts necessary to maintain levels of safety and service, good infrastructure conditions, support Thruway operations, and maintain the Authority established debt service coverage policy targets.

The Authority has the ability to counter any Net Revenue shortfalls through periodic toll adjustments. In the Traffic Engineer's opinion, toll rate adjustments will be necessary to fill identified revenue shortfalls, inadequate debt service coverage ratios and low pay-as-you-go financing. According to the Traffic Engineer, these toll rate adjustments can be implemented on the Thruway System and will result in only small changes to traffic patterns. In addition, the October 2019 Traffic Engineer's Report, the December 2019 Financial Requirements Report and the Bring-Down Letter conclude that if the Authority through whatever means generates enough Net Revenue to match its needs it will be able to:

- Fully fund necessary operations, maintenance and capital expenses;
- Meet the covenants of the Bond Resolution and the Junior Indebtedness Resolution;
- Complete the New NY Bridge Project;
- Preserve good overall infrastructure conditions of the Thruway System;
- Comply with the requirements of the Authority's Fiscal Management Guidelines; and
- Maintain targeted levels of debt service coverage.

In the Traffic Engineer's opinion, with the necessary toll adjustments, the Authority will continue to be able to provide good service to its customers and will continue to fulfill its critical role in supporting the State's economy through the forecast period. Finally, the Traffic Engineer found that the modifications to toll rates that are necessary to achieve these goals are attainable and will not result in significant traffic losses or diversions as a result of those increases.

The October 2019 Traffic Engineer's Report, the December 2019 Financial Requirements Report and the Bring-Down Letter contain the following additional conclusions:

- The Authority has the independent, statutory ability to adjust its toll rates and provide significant amounts of additional revenue;
- The Authority's toll rates are relatively low and compare well to other toll systems, allowing for future rate setting flexibility with minimal long-term traffic diversion impact;
- The Authority's on-going operational streamlining efforts have limited growth in operational expenses and can be anticipated to provide recurring, long-term savings;
- Infrastructure conditions and the capacity of the Thruway System should not affect the projected growth of traffic and toll revenues throughout the forecast period;
- The Authority's facilities have been maintained at high standards over the years, resulting in good overall infrastructure conditions throughout the Thruway System;
- The Authority's planned extensive and regular maintenance programs, asset management systems and long-term capital planning process provide confidence that overall operational and structural integrity of its facilities will be maintained;
- Target levels of future maintenance and capital expenditures beyond the current 2020-2024 Capital Program will support the integrity and reliability of the Thruway System;
- The New NY Bridge Project – Since September 2018, both spans of The Governor Mario M. Cuomo Bridge have been open to vehicular traffic and deconstruction of the Tappan Zee Bridge has been completed. Thus the project can be fully completed within the project's budget; and
- The Authority can fully implement Thruway System-wide AETC within the parameters described in the forecasting methodology for conversion to AETC in the Traffic Engineer's Report.

The conclusions presented above are subject to the limitations and assumptions detailed in the October 2019 Traffic Engineer's Report, the December 2019 Financial Requirements Report and the Bring-Down Letter. The December 2019 Financial Requirements Report and the Bring-Down Letter are contained in **Appendix A-1** and **Appendix A-2** hereto, respectively, which should each be read in their entirety. See "NEW YORK STATE INFRASTRUCTURE GRANT AND TOLL RELATED INITIATIVES" for a detailed description of the proposed toll adjustments as approved by the Authority Board. The October 2019 Traffic Engineer's Report is available for review on the Authority's website.

Projected Results

The Traffic Engineer has analyzed the Authority's current operations, and projects financial results of the Authority's operations for the years 2019-2024. The forecast of traffic and revenues detailed in the December 2019 Financial Requirements Report and the Bring-Down Letter are based on the projected toll schedule approved by Authority's Board on December 19, 2019 and on other information provided by the Authority. The increased revenue projections contained in the December 2019 Financial Requirements Report and the Bring-Down Letter are anticipated to enable the Authority to maintain levels of safety and service, good infrastructure conditions, meet its system-wide operating, debt service, and capital needs, as well as maintain the Authority's contractual debt service coverage covenants contained in its Bond Resolution and Junior Indebtedness Resolution and the Board's established debt service coverage policy targets.

The projections summarized in the following table, entitled "Projected Results" show the Traffic Engineer's findings for the years 2019 through 2024. See "Report of Independent Traffic Engineer" above, and **Appendix A-1** – "December 2019 Financial Requirements Report of Traffic Engineer" and **Appendix A-2** – "Bring-Down Letter of the Traffic Engineer".

Projected Results
(in millions)

	Actual 2018	Revised Budget 2019	Projected 2020	Projected 2021	Projected 2022	Projected 2023	Projected 2024
Toll Revenue[1]	$736.5	$739.6	$735.8	$770.7	$804.0	$812.1	$819.6
Other Revenues	62.3	61.3	58.2	93.2	106.2	99.7	99.9
Total Revenues	798.8	800.9	793.9	863.9	910.2	911.9	919.4
Thruway Operating Expenses	339.9	358.3	370.7	374.8	380.4	386.1	391.9
Reserve for Claims and Indemnities and Environmental Remediation	5.0	4.6	1.0	1.0	1.0	1.0	1.0
Net Revenue (A)	453.8	437.9	422.3	488.1	528.8	524.8	526.5
Gen. Rev. Bond Debt Service	225.0	232.9	234.3	246.9	282.2	251.4	256.1
Less Interest Earnings on Gen. Rev. Bond Debt Service Reserve Funds	(4.7)	(3.4)	(0.7)	(0.7)	(0.8)	(0.9)	(0.9)
Net Gen. Rev. Bond Debt Service (B)	220.3	229.5	233.6	246.2	281.3	250.5	255.3
Net Revenue after Gen. Rev. Bond Debt Service	233.5	208.4	188.7	241.9	247.5	274.2	271.2
Reserve Maintenance Deposit[2]	74.1	103.7	63.1	125.6	102.7	83.0	76.8
Total Junior Indebtedness Debt Service	79.5	53.8	46.7	48.8	75.9	121.0	122.8
Less Interest Earnings on Junior. Indebtedness Debt Service Reserve Acct.	(0.3)	(0.4)	(0.4)	(0.4)	(0.3)	(0.3)	(0.3)
Net Junior Indebtedness Debt Service (C)	79.2	53.4	46.4	48.4	75.6	120.7	122.5
Retain for Operations/Adjustment for Cash Basis	24.6	1.1	12.7	0.0	0.0	0.0	0.0
Facilities Capital Improvement Deposit	12.0	8.0	0.0	0.0	0.0	0.0	0.0
General Reserve Fund Provisions – State Police	43.6	42.2	66.5	67.8	69.2	70.6	72.0
Balance	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Debt Service Coverage Ratio on Gen. Rev. Bonds (A/B)[3]	2.06	1.91	1.81	1.98	1.88	2.09	2.06
Gen. Rev. Bonds & Junior Indebtedness Debt Service Coverage Ratio (A/(B+C))[3]	1.52	1.55	1.51	1.66	1.48	1.41	1.39
Proposed Non-Refunding Debt Issuances/Year:							
Gen. Rev. Bonds	-0-	-0-	375.1	238.7	221.8	244.3	257.8
Junior Indebtedness	-0-	65.3	-0-	245.8	-0-	-0-	-0-

Source: Stantec Consulting Services, Inc., December 2019 Financial Requirements Report dated December 18, 2019.

(1) Revenue projections include additional revenues of $73.9 million in 2021, $95.5 million in 2022, $93.4 million in 2023 and $94.0 million in 2024 resulting from proposed changes that were part of the Toll Adjustment plan approved by the Authority Board in December 2019. In addition, total revenues include Tolls by Mail revenues that are earned in a fiscal year but not collected until later fiscal years. The amounts earned but not collected until later years are projected to be $1.1 million in 2019 and $12.7 million in 2020. Without these revenues included, General Revenue Bond debt service coverage is 1.90 times in 2019 and 1.75 times in 2020. The combined General Revenue Bond and Junior Indebtedness Obligation debt service coverage without these revenues is projected to be 1.54 times in 2019 and 1.46 times in 2020.

(2) Reflects the minimum required deposit to the Reserve Maintenance Fund ($30,000,000) as well excess revenue intended for pay-as-you-go capital projects (see "SOURCES OF PAYMENT AND SECURITY FOR THE BONDS – Reserve Maintenance Fund").

(3) Authority Board adopted Fiscal Management Guidelines require a minimum 1.5x General Revenue Bond debt service coverage ratio, and ongoing Authority management commitments prescribe a minimum 1.55x General Revenue Bond debt service coverage ratio and a minimum 1.35x combined General Revenue Bond and Junior Indebtedness Obligation debt service coverage ratio, and are not required by the terms of either the Bond Resolution or the Junior Indebtedness Resolution. The Bond Resolution requires a 1.2x minimum debt service coverage ratio only on General Revenue Bonds while the Junior Indebtedness Resolution requires a 1.2x minimum debt service coverage ratio on General Revenue Bonds and Junior Indebtedness Obligations.

Note: Totals may not add due to rounding.

Future availability of Net Revenues will affect the level of debt service coverage and the amount of debt issued under both the Bond Resolution and the Junior Indebtedness Resolution to fund Authority capital expenditures. The Authority has covenanted to maintain tolls in order that Net Revenues will at least equal both the Net Revenue Requirement under the Bond Resolution and the Junior Indebtedness Net Revenue Requirement under the Junior Indebtedness Resolution for each year. See "SOURCES OF PAYMENT AND SECURITY FOR THE BONDS — Tolls, Fees and Charges".

In addition, the Authority continually monitors its projected needs and financial plan. It also continually reviews projections of revenues and expenses and has the independent power, without approval by the Legislature, the Governor or other person or entity, to increase toll rates to maintain a high level of operating safety and services on the Thruway System, to maintain and rehabilitate the Thruway System, to pay debt service, to meet toll covenants and to maintain the balance of revenues and expenses.

ADDITIONAL AUTHORITY INFORMATION

Employee Relations

Authority employees are represented pursuant to New York State's Public Employees' Fair Employment Act (Taylor Law) by two unions, International Brotherhood of Teamsters (the "Teamsters") and Civil Service Employees Association ("CSEA"). The Teamsters represent the Authority's maintenance, toll collection and clerical employees while the CSEA represents Authority professional, supervisory and technical employees. At its March 27, 2017 Authority Board meeting, the Authority approved the terms of a collective bargaining agreement with CSEA effective through July 1, 2022. At its November 13, 2017 Authority Board meeting, the Authority approved the terms of a collective bargaining agreement with the Teamsters, effective through July 1, 2022.

Retirement Plans and Other Post-Employment Benefits

The Authority is a participating employer in the New York State and Local Employees' Retirement System ("ERS"). ERS is a cost-sharing multiple-employer retirement system that provides retirement benefits as well as death and disability benefits. Plan benefits are provided under the provisions of the New York State Retirement and Social Security Law and are guaranteed under the State Constitution. The Authority's election to participate in the State plans is irrevocable. Employees in permanent positions are required to enroll in ERS, and employees in part-time or seasonal positions have the option of enrolling in ERS. ERS Tiers I through IV are noncontributory except for employees with less than 10 years of service who contribute 3% of their salary. All Tier V employees contribute 3% of their salary. All Tier VI employees contribute between 3% and 6% of their salary, based upon the amount of their annual salary. Under State law, the Comptroller certifies annually the rates, expressed as proportions of payroll of members, which are used in computing the contributions required to be made by employers. The rates billed by the Comptroller for ERS during the year ended December 31, 2018 ranged from 9.3% to 21.6% and during the year ended December 31, 2017 ranged from 9.3% to 21.7%.

The approximate required Authority contributions for each of the years were as follows (in thousands):

	ERS[(1)]
2018	$22,454
2017	21,026
2016	24,795
2015	28,815

(1) 2015 and 2016 include contributions for both the Authority and the Canal Corporation.

The Authority's contributions in each of the foregoing years were equal to 100% of the contributions required for the period.

Other Post-Employment Benefits

The Authority provides other postemployment benefits, principally employer funded health care. With the exception of part-time toll collectors, substantially all Authority employees may become eligible for these benefits if they reach normal retirement age while working for the Authority. The Authority participates in the New York State Health Insurance Program ("NYSHIP"), an Agent Multiple-Employer Plan. The Authority contributes to the plan to satisfy obligations on a pay-as-you-go basis. For the year ended December 31, 2018, the Authority paid $30.6 million on behalf of retirees.

The following table summarizes the Authority's OPEB liability at December 31, 2018 (in thousands):

	2018
OPEB Liability	$1,083,760
OPEB Covered Payroll	146,100
OPEB Liability as a percentage of Covered payroll	741.8%

During 2018, the Authority implemented Government Accounting Standards Board Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other than Pensions*. As a result, comparable amounts for years prior to 2018 are not available.

See Note 1u – Adoption of GASB 75, Note 7 – Retirement Benefits and Note 9 – Other Postemployment Benefits in the Authority's financial statements in **Appendix B** to this Official Statement for a further discussion of the Authority's retirement and OPEB programs.

Investments

The Bond Resolution enumerates various investments for Authority funds as authorized by law. See **Appendix C** — "Summary of Certain Provisions of the Bond Resolution — Definitions — Investment Obligations" and "Investments of Funds". The Act limits investments to those obligations in which the Comptroller of the State may invest public funds pursuant to Section 98-a of the State Finance Law, as amended from time to time. Title 7, Section 2925 of the Public Authorities Law requires that the Authority Board annually review and approve its investment policies and practices and provides for an annual independent audit of all investments. **Appendix B** includes a copy of the Authority's financial statements and a list of its investments as of December 31, 2018 and 2017. The Authority's investment policies emphasize preservation of principal and the Authority believes its practices are fiscally responsible.

Insurance

Pursuant to the Bond Resolution, the Authority purchases various insurance policies to provide against loss of or damage to the Facilities and loss of revenue, to the extent necessary and reasonably obtainable, to protect the interests of the Authority and the Bondholders. The insurance program is comprised of a combination of policies from major insurance companies, self-insurance and contractual transfer of liability, including naming the Authority as an additional insured and indemnification.

Property damage to bridges is insured through two policies with major insurance companies equal to the maximum probable loss from a single occurrence. The Thruway System's largest bridge, The Governor Mario M. Cuomo Bridge, is separately covered by a commercial insurance policy providing loss of revenue and damage coverage in the amount of $1,088.2 million in total for the two spans. A second policy provides terrorism coverage for both spans in the amount of $500 million per occurrence. All of the other Authority's bridges are covered separately, whereby loss of revenues is insured through a use and occupancy policy that covers any interruption in excess of fifteen days with a maximum recovery period of 30 months.

The Authority purchases insurance for workers' compensation benefits and various liability exposures. In addition, the Authority is self-insured for property damage to its division headquarters buildings, maintenance facilities and toll plazas and third party liability, including automobile liability.

There are two funded reserves for these exposures, a $2.6 million insurance fund and a reserve for public liability claims which, as of December 31, 2019, totaled $12.8 million.

Insurance for the Authority's service area facilities is provided by the concessionaires. Also, the liability related to construction projects, tandem trailer operations, authorized garage operations and similar type risks is transferred through contractual indemnification and compliance with Authority insurance requirements.

Other Bond Programs

Pursuant to its statutory mandate, the Authority has from time to time issued bonds to provide funds to finance primarily non-Authority transportation projects in the State. Those bonds and the programs discussed below have no lien on the Revenues, assets or properties of the Authority which secure the Bonds and the Junior Indebtedness Obligations. Those bond programs include the Local Highway and Bridge Service Contract Bonds, the General Highway and Bridge Trust Fund Bonds, State Personal Income Tax Revenue Bonds (Transportation), as well as the State Sales Tax Revenue Bond program, all issued or expected to be issued in multiple series for State and local highway purposes. These bond programs require varying debt service payments which are payable solely from payments received by the Authority under contractual agreements with the State. In each of these bond programs, the obligation of the State to make such payments is subject to, and dependent upon, annual State legislative appropriations. The State may from time to time authorize the Authority by statute to undertake additional financing activities.

INVESTMENT CONSIDERATIONS

The Series N Bonds are special obligations of the Authority which are secured and payable solely from the Net Revenues available therefor under the Bond Resolution. The following is a discussion of certain investment considerations that should be considered in evaluating an investment in the Series N Bonds. This discussion does not purport to be either comprehensive or definitive. The order in which such considerations and risks are presented is not intended to reflect either the likelihood that a particular event will occur or the relative significance of such an event. Moreover, there may well be other considerations and risks associated with an investment in the Series N Bonds in addition to those set forth herein. Investors are advised to read the entire Official Statement, including the appendices hereto, to obtain information essential to the making of an informed investment decision.

Traffic Engineer's Report

As the Traffic Engineer for the Authority, Stantec was requested by the Authority to prepare in December 2019 a December 2019 Financial Requirements Report presenting its analyses and findings relative to recent trends in traffic and revenue on the Thruway System. See "**Appendix A-1** — December 2019 Financial Requirements Report of Traffic Engineer" attached to this Official Statement. Certain information contained in the December 2019 Financial Requirements Report was updated by Stantec in the Bring-Down Letter. See **Appendix A-2** – Bring-Down Letter of Traffic Engineer" attached to this Official Statement. *The revenue forecasts contained in the December 2019 Financial Requirements Report and in the Bring-Down Letter are based upon certain assumptions and limits set forth or incorporated therein which should be reviewed by potential investors to assure an understanding of some of the risks inherent in such estimates and projections. The December 2019 Financial Requirements Report projected the Authority's programmatic needs for the period through 2024 and concluded that with certain proposed toll adjustments, the Authority will generate sufficient revenues needed for the Authority to fulfill its system-wide operating, debt service, and capital needs through the upcoming forecast period. In accordance with this conclusion, the December 2019 Financial Requirements Report recommended specific toll level adjustments beginning in January 2021 (which recommendation was adopted by the Authority Board at its December 19, 2019 meeting). See "*NEW YORK STATE INFRASTRUCTURE GRANT AND TOLL RELATED INITIATIVES" for a detailed description of the proposed toll adjustments as approved by the Authority Board. The December 2019 Financial Requirements Report and the Bring-Down Letter are not a guarantee of any future events or trends and the forecasts therein are subject to future economic and social conditions and demographic developments that cannot be predicted with certainty. Further, the estimates, projections and assumptions in the December 2019 Financial Requirements Report and the Bring-Down Letter are inherently subject to significant economic and competitive uncertainties and contingencies, many of which are beyond the control of the Authority. Failure to achieve or realize any of the assumptions listed in the December 2019 Financial Requirements Report and in the Bring-Down Letter may have a materially adverse effect upon the Net Revenues actually realized by the Authority.

The information provided with respect to toll revenues collected by the Authority is based on historical data. The amount of future toll revenues to be collected by the Authority depends upon a number of factors, some of which are not in the control of the Authority. Some of these factors include a decline in traffic on the Thruway System due to general economic conditions, diversion of traffic to alternative non-toll routes, increased fuel costs, limited supply of fuel, availability of alternate forms of travel and shipping, and government regulations, such as Clean Air Act requirements, increased mileage standards or higher fuel taxes, which could significantly restrict motor vehicle use, as well as international events affecting fuel supply and costs.

As shown in the December 2019 Financial Requirements Report, the Bring-Down Letter and the Authority's financial plan, significant additional revenue is required starting in 2022 in order for the Authority to meet its Board-adopted financial policies, comply with its rate covenants and meet all of its financial obligations. The Traffic Engineer states in its December 2019 Financial Requirements Report that *"Based on our experience and knowledge of the Thruway System, it is our opinion that the essentiality of the Thruway System, its currently low relative toll rates, and the size of future rate adjustments that may be needed to produce these additional revenues can be achieved."* Revenue actions which the Authority determines to be necessary to meet its financial policies and rate covenants are contingent on future Board action, environmental reviews and traffic demand.

In addition, with the implementation of AETC at all existing barriers on the Thruway System in 2018, and planned implementation of AETC for the Thruway System's mainline by the end of 2020, the December 2019 Financial Requirements Report and the Bring-Down Letter discuss in detail their forecasting methodology for the AETC system for non-E-ZPass patrons and their estimates for potential revenue offsets attributable to the inability to collect from all video toll customers. Although the Authority has covenanted in the Bond Resolution to fix, charge and collect tolls for the use of the Thruway System in amounts so that, in each calendar year, the Net Revenues shall at least equal the Net Revenue Requirement for such year, there can be no assurance that the traffic on the Thruway System will continue to be sufficient for the Authority to generate the necessary revenues to meet its obligations under the Bond Resolution.

Toll-Backed Components of the 2020-2024 Capital Program

The planned and ongoing capital improvements to the Thruway System to sustain a state of good repair are primarily dependent upon additional debt and pay-as-you-go funding. Revenue actions which the Authority determines to be necessary to fund such capital program obligations are contingent on future Board action, environmental reviews and traffic demand. The Authority has consistently fulfilled its responsibilities to maintain a state of good repair and its safety record exceeds the norms of the national interstate highway system. The Authority expects to maintain access to the capital markets to finance its capital costs and other system-wide capital needs through adherence to Board-adopted fiscal policies that assure continuation of the Authority's stable credit ratings, as well as strict controls over future operating costs and a disciplined approach to capital project selection.

Risks Relating to Natural and Catastrophic Events

It is possible that a natural disaster (earthquake, landslide), severe weather (tornados, floods, hurricanes, extreme wind and storm), or any other event (terrorism, explosion, ship strike) that damages the Thruway System, including The Governor Mario M. Cuomo Bridge, could reduce toll revenues projected to be generated by the Thruway System or significantly increase the expense of maintaining or restoring elements of the Thruway System. These risks are generally covered by Authority insurance policies for property damage and business interruption, and, in the extreme, assistance from FEMA. If any of the foregoing events occur, to the extent not fully covered by insurance or federal disaster assistance, the Authority's ability to meet its financial obligations, including the payment of debt service could be adversely affected.

Risks Relating to the Design-Build Contract for the New NY Bridge Project

The New NY Bridge Project was procured using a Design-Build Contract that transfers many risks normally retained by the Authority to the design-build joint venture, including such items as design defects, changed geotechnical conditions, project management and coordination, and commodity price escalation, among others. As noted above, the Design-Build Contract was awarded to a consortium, TZC LLC, whose members have extensive experience in large infrastructure developments and are providing significant levels of financial security to the Authority. Design-build contracts are viewed as providing greater cost certainty than traditional contracting methods. However, it is possible that despite these modifications to traditional contracting processes, additional costs beyond the initial contract price may be incurred by the Authority relating to such risks as pre-existing contamination beyond what had been identified in prior studies or change orders related to evolving homeland security considerations. To mitigate these risks, the Authority budgeted contingencies and allowances for such possibilities of approximately 20% of the Design-Build Contract price. The first span of The Governor Mario M. Cuomo Bridge was opened to vehicular traffic on August 25, 2017, the second span was opened to vehicular traffic on September 12, 2018 and the original Tappan Zee Bridge has been fully demolished. The Authority does not expect that actual exposure for additional costs would exceed these budgeted amounts, but in that event additional Junior Indebtedness Obligations for completion could be required. See Note 11a – Contingencies and Commitments – Governor Mario M. Cuomo Bridge Claims in the Authority's financial statements in **Appendix B** to this Official Statement for a discussion of the status of certain claims asserted by TZC LLC and "THE NEW NY BRIDGE PROJECT" above for more detail on the Design-Build Contract and TZC LLC.

Risks Relating to the Implementation of All Electronic Toll Collection

The Authority is currently planning to convert the entire Thruway System to AETC by the end of 2020. The Authority converted the barrier at The Governor Mario M. Cuomo Bridge in April 2016. The Authority's conversion to AETC of its remaining barriers (Grand Island Bridges, and the Harriman New Rochelle, Yonkers and Spring Valley Barriers) occurred during 2018. The Authority is planning to complete system-wide AETC with conversion of the entire controlled system to AETC by the end of 2020.

While there are many benefits to AETC, the Thruway System-wide conversion to AETC presents revenue risk that must be considered. Electronic toll collection records patron trips through the use of overhead gantries at AETC locations equipped with readers to detect E-ZPass transponders, and cameras to photograph license plates of non-E-ZPass customers. Trips charged to patrons using E-ZPass transponders are recorded and paid to the Authority electronically through their related pre-paid E-ZPass accounts; non-E-ZPass customers are billed by mail. AETC for both E-ZPass customers and non-E-ZPass customers is dependent upon uninterrupted gantry operation, including physical and technological components. The Authority mitigates the technology and recording risk by careful design of each AETC location and physically protecting its AETC equipment, hardware and software, providing for appropriate backup equipment and periodic testing. Additionally, the Authority has secured an insurance policy for The Governor Mario M. Cuomo Bridge with respect to its AETC equipment that also includes coverage for certain lost toll revenues, although the future availability of such policy at a reasonable price cannot be assured. Collection for non-E-ZPass customer trips recorded via AETC can be affected by the inability to invoice due to poor license plate photos. The timely collection of tolls can also be affected by delays in invoicing patrons, delays in payment, or non-payment. The Authority mitigates collection risk through marketing of E-ZPass to patrons, the use of late fees as part of the invoicing process, imposing additional violation fees for repeat offenders and non-payors, seeking enforcement of motor vehicle regulation mandating suspension of vehicle registration for non-payors, entering into reciprocity agreements with other states for toll enforcement, and improving and updating technology where possible.

See **Appendix A-1 —** "December 2019 Financial Requirements Report of Traffic Engineer" and **Appendix A-2** – "Bring-Down Letter of Traffic Engineer", for a discussion of additional considerations relating to the Authority's implementation of AETC on the Thruway System.

Ratings of the Bonds Could be Lowered or Withdrawn

Two credit rating agencies have assigned credit ratings to the Bonds, including the Series N Bonds. The ratings of the Bonds are not a recommendation to purchase, hold or sell the Bonds, and the ratings do not comment on the market price or suitability of the Bonds for a particular investor. The ratings of the Bonds may not remain for any given period of time and may be lowered or withdrawn.

Certain Matters Relating to Enforceability of Obligations

The remedies available to the owners of the Series N Bonds upon the occurrence of an Event of Default under the Bond Resolution are, in many respects, dependent upon regulatory and judicial actions that are often subject to discretion or delay. Under existing law and judicial decisions, including specifically the United States Bankruptcy Code, the remedies specified in the Bond Resolution may not be readily available or may be limited. However, the Authority is not authorized under existing State law to file for bankruptcy under the United State Bankruptcy Code. Enforcement of such remedies (i) may be subject to general principles of equity which may permit the exercise of judicial discretion, (ii) are subject to the exercise in the future by the State and its agencies and political subdivisions of the police power inherent in the sovereignty of the State, (iii) may be subject, in part, to the provisions of the United States Bankruptcy Act and other applicable bankruptcy, insolvency, reorganization, moratorium or similar laws relating to or affecting the enforcement of creditors' rights generally, now or hereafter in effect, and (iv) are subject to the exercise by the United States of the powers delegated to it by the Constitution of the United States of America. The various legal opinions to be delivered concurrently with the delivery of the Series N Bonds will be qualified to the extent that the enforceability of certain legal rights related to the Series N Bonds is subject to limitations imposed by bankruptcy, reorganization, insolvency or other similar laws affecting the rights of creditors generally and by equitable remedies and proceedings generally.

Legislative Action

Legislation is introduced from time to time in the State Legislature which, if adopted, may affect the Authority and/or the Thruway System. The Authority cannot predict whether or not these bills will be enacted into law or how such legislation may affect the Authority and its ability to pay debt service on the Series N Bonds. Under the Act, the State has agreed with the holders of the bonds and notes of the Authority, including the Bonds, that it will not limit or alter the rights vested by the Act in the Authority to establish and collect such fees, rentals and charges as may be convenient or necessary to produce sufficient revenue to meet the expense of maintenance and operation and to fulfill the terms of any agreements made with such holders of bonds, or in any way impair the rights and remedies of such bondholders and noteholders.

The FY 2021 Executive Budget Proposal for the State of New York contains proposed legislation that would merge the New York State Bridge Authority into the Authority.

LITIGATION

There is no litigation pending or, to the knowledge of the Authority, threatened in any court, questioning the creation, organization or existence of the Authority, the title to office of the members or officers of the Authority, the validity of any provision of the Series N Bonds or the Bond Resolution, or any proceedings of the Authority taken with respect to the issuance or sale thereof, or seeking to restrain or enjoin the issuance, sale, execution or delivery of the Series N Bonds.

A class action lawsuit pertaining to the Authority's all electronic toll collection was filed in the United States District Court for the Southern District of New York on April 30, 2018 (*Jason Farina, Charles Gardner, Dorothy Troiano, Deloris Ritchie, and Mirian Rojas v. Metropolitan Transportation Authority, Triborough Bridge and Tunnel Authority, 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 plaintiffs allege that the $50/$100 violation fee imposed for each toll violation at the bridges and tunnels of the Authority, Metropolitan Transportation Authority/Triborough Bridge and Tunnel Authority, and Port Authority of New York and New Jersey ("Authority Defendants") is excessive and defendants' fee policies, practices and collection methods are illegal and unconstitutional because they allegedly violate the protection against excessive fines contained in the Eighth Amendment of the United States Constitution and Article I, Section 5 of the New York State Constitution; the Due Process clauses of the United States Constitution and New York State Constitution; and the Fair Debt Collection Practices Act. Plaintiffs also allege that the Authority Defendants have committed deceptive business practices in violation of New York General Business Law §§349-350, have been unjustly enriched and breached E-ZPass agreements. The plaintiffs on behalf of a putative class of persons and entities who have E-ZPass accounts or received a Tolls by Mail bill and have been assessed a fee seek declaratory and injunctive relief invalidating the fees/penalties and the defendants' policies, practices and collection methods pertaining to such; payment of restitution to the class; disgorgement of gains; actual damages; punitive, treble, statutory and exemplary damages; pre-judgment interest; and costs, including attorneys' fees. The United States District Court for the Southern District of New York granted the Authority's motion to dismiss on August 21, 2019. Plaintiffs have the right to appeal the decision to the United States Court of Appeals for the Second Circuit.

On April 18, 2019, a class action lawsuit (*Carl Kettle, Larry Biesuz Jr., and David Tredo v. New York State Thruway Authority and Linebarger Goggan Blair & Sampson, LLP*) pertaining to the Authority's all electronic toll collection program (referred to in this Official Statement as "AETC") at the Grand Island Bridges was filed in the United States District Court for the Western District of New York. The lawsuit alleges that the Authority's $50 violation fee imposed for untimely payment of a cashless toll for travel on the Grand Island Bridges is unconstitutional because it violates the protection against excessive fines contained in the Eighth Amendment of the United States Constitution and Article I, Section 5 of the New York State Constitution and the Due Process clauses of the United States Constitution and New York State Constitution. The Authority has filed a motion to dismiss with the United States District Court for the Western District of New York. On December 5, 2019, the magistrate judge for the Western District of New York issued a report and recommendation recommending the granting in part and denying in part of the Authority's motion to dismiss. The report and recommendation stated that there was no Excessive Fines Clause violation under the Eighth Amendment, the alleged common law fraud claim failed to state a cause of action with specificity, and plaintiff agreed to discontinue the remaining claims in response to the motions. However, the report and recommendation also stated that plaintiffs have a due process claim against the Authority based on alleged lack of notice to plaintiffs.

The Seneca Nation of Indians filed an action April 11, 2018, in United States District Court for the Western District of New York, alleging that the October 5, 1954 permanent easement for a portion of Thruway going through the Seneca Nation's Cattaraugus Reservation was never legally valid or effective because the easement did not comply with federal law requiring approval of the Secretary of the Interior. *Seneca Nation v. Andrew Cuomo, Eric T. Schneiderman, Paul A. Karas, Thomas P. DiNapoli, The New York State Thruway Authority*. The Seneca Nation is seeking an injunction requiring a valid easement, an injunction requiring that the Comptroller of the State of New York segregate and hold in escrow all future toll monies collected on the Thruway System that are fairly attributable to the portion of the easement, and compensation pro rata for future use of its land or to prohibit the collection of tolls on the portion of land through the territory. A motion to dismiss the lawsuit was filed on June 5, 2018. On Dec. 19, 2018, the Magistrate Judge for US District Court for Western District of New York recommended dismissal of the lawsuit. In 2004, the Second Circuit for the United States Court of Appeals had upheld the dismissal of a similar lawsuit brought by the Seneca Nation.

The Authority is a party to various legal proceedings including negligence suits, many of which arise in the normal course of the Authority's operations, a majority of which will, in the opinion of the Authority, be disposed of within the amounts which the Authority has reserved or has available therefor, or, as applicable, within the amounts of insurance coverage provided therefor and without any material adverse effect on the financial position of the Authority. The Authority maintains a claims reserve sufficient to cover anticipated liability and it is periodically replenished.

TAX MATTERS

Federal Income Taxes

In the opinion of Harris Beach PLLC, Bond Counsel to the Authority, and assuming compliance with the representations, certifications and covenants described below, under existing statutes, regulations, administrative rulings and court decisions as of the date of such opinion, interest on the Series N Bonds is excluded from gross income for federal income tax purposes. Furthermore, in the opinion of Bond Counsel, such interest is not an item of tax preference for purposes of calculating the federal alternative minimum tax imposed on individuals.

The Internal Revenue Code of 1986, as amended (the "Code"), establishes certain requirements that must be met at the time of, and subsequent to, the issuance and delivery of the Series N Bonds in order that interest on the Series N Bonds be and remain excluded from gross income for federal income tax purposes. Included among these continuing requirements are certain restrictions and prohibitions on the use of proceeds of Series N Bonds, restrictions on the investment of proceeds of Series N Bonds and other moneys or properties, and the rebate to the United States of certain earnings in respect of investments. Noncompliance with such continuing requirements may cause the interest on the Series N Bonds to be included in gross income for federal income tax purposes retroactive to the date of issuance of the Series N Bonds irrespective of the date on which such noncompliance occurs. The Bond Resolution and the Arbitrage and Use of Proceeds Certificate delivered by the Authority at the time of delivery of the Series N Bonds (the "Arbitrage Certificate") contain certain factual certifications, covenants, representations and warranties as to compliance with the requirements of the Code. In rendering the above-described opinion, Bond Counsel will assume the accuracy of such factual certifications and continuing compliance by the Authority with such covenants, representations and warranties set forth in the Bond Resolution and the Arbitrage Certificate.

Bond Counsel expresses no opinion regarding any other federal tax consequences related to the ownership or disposition of, or receipt or accrual of interest on, the Series N Bonds. The proposed form of the approving opinion of Bond Counsel relating to the Series N Bonds is attached to this Official Statement as Appendix E.

The Series N Bonds are initially offered to the public at prices greater than the amounts payable thereon at maturity. As a result of the tax cost reduction requirements of the Code relating to amortization of bond premium, under certain circumstances, an initial owner of Series N Bonds may realize a taxable gain upon disposition of such Series N Bonds even though they are sold or redeemed for an amount equal to such owner's original cost of acquiring such Series N Bonds. Owners of Series N Bonds are advised that they should consult with their own tax advisors with respect to the tax consequences of owning such Series N Bonds.

In addition to the matters referred to in the preceding paragraphs, prospective purchasers of the Series N Bonds should be aware that the accrual or receipt of tax-exempt interest on the Series N Bonds may otherwise affect the federal income tax liability of the recipient. The extent of these other tax consequences may depend upon the recipient's particular tax status or other items of income or deduction. Bond Counsel expresses no opinion regarding any such consequences. Examples of collateral federal income tax consequences of acquiring or holding the Series N Bonds include, without limitation, (i) with respect to certain insurance companies, the Code reduces the deduction for loss reserves by a portion of the sum of certain items, including interest on the Series N Bonds, (ii) interest on the Series N Bonds earned by certain foreign corporations doing business in the United States may be subject to a branch profits tax imposed by the Code, (iii) passive investment income, including interest on the Series N Bonds, may be subject to federal income taxation under the Code for certain S corporations that have certain earnings and profits, and (iv) the Code requires recipients of certain Social Security and certain other federal retirement benefits to take into account, in determining gross income, receipts or accruals of interest on the Series N Bonds.

In addition, the Code generally denies the interest deduction for indebtedness incurred or continued by a taxpayer, including without limitation, banks, thrift institutions, and certain other financial institutions to purchase or carry tax-exempt obligations, such as the Series N Bonds. The foregoing is not intended as an exhaustive list of potential tax consequences.

All prospective purchasers of the Series N Bonds should consult with their tax advisors in order to understand the implications of the Code as to these and other federal and state tax consequences, as well as any local tax consequences, of purchasing or holding the Series N Bonds.

All quotations from and summaries and explanations of provisions of law do not purport to be complete, and reference is made to such laws for full and complete statements of their provisions.

State and Local Income Tax

In the opinion of Bond Counsel, under existing statutes, including the Act, interest on the Series N Bonds is exempt from personal income taxes imposed by the State of New York or any political subdivision thereof.

Any noncompliance with the federal income tax requirements set forth above would not affect the exemption of interest on the Series N Bonds from personal income taxes imposed by New York State or any political subdivision thereof.

Bond Counsel expresses no opinion regarding any other state or local tax consequences related to the ownership or disposition of, or the receipt or accrual of interest on, the Series N Bonds.

Interest on the Series N Bonds may or may not be subject to state or local income taxes in jurisdictions other than the State of New York under applicable state or local tax laws. Bond Counsel expresses no opinion, however, as to the tax treatment of the Series N Bonds under other state or local jurisdictions. Each purchaser of Series N Bonds should consult his or her own tax advisor regarding the taxable status of the Series N Bonds in a particular state or local jurisdiction other than the State of New York.

Other Considerations

Bond Counsel has not undertaken to determine or to inform any person whether any actions taken (or not taken) or events occurring (or not occurring) after the date of issuance of the Series N Bonds may adversely affect the value of, or the tax status of, interest on, the Series N Bonds.

Certain requirements and procedures contained or referred to in the Bond Resolution, the Arbitrage Certificate and other relevant documents may be changed and certain actions may be taken or omitted under the circumstances and subject to the terms and conditions set forth in such documents, upon the advice or with the approving opinion of nationally recognized bond counsel. Bond Counsel expresses no opinion as to any federal, state or local tax consequences with respect to the Series N Bonds or the interest thereon if any such change occurs or action is taken or omitted upon the advice or approval of a bond counsel other than Bond Counsel.

No assurance can be given that any future legislation, including amendments to the Code or State income tax laws, regulations, administrative rulings, or court decisions, will not cause interest on the Series N Bonds to be subject, directly or indirectly, to federal or State or local income taxation, or otherwise prevent Bondholders from realizing the full current benefit of the tax status of such interest. Further, no assurance can be given that the introduction or enactment of any such future legislation, or any judicial decisions or action of the Internal Revenue Service, including but not limited to the promulgation of a regulation or ruling, or the selection of the Series N Bonds for audit examination or the course or result of any Internal Revenue Service examination of the Series N Bonds or obligations which present similar tax issues, will not affect the market price or marketability of the Series N Bonds.

RATINGS

Moody's Investors Service, Inc. ("Moody's") has rated the Series N Bonds "A1". S&P Global Ratings ("S&P") has rated the Series N Bonds "A".

Ratings reflect only the respective views of such organizations, and any desired explanation of the significance of such ratings should be obtained from the rating agencies furnishing the same. The Authority furnished to such rating agencies certain materials and information in addition to that provided here. There is no assurance that such ratings will prevail for any given period of time or that they will not be revised downward or withdrawn entirely by any or all of such rating agencies if, in the judgment of any or all of them, circumstances so warrant. Any such downward revision or withdrawal of such rating or ratings may have an adverse effect on the market price of the Series N Bonds. A securities rating is not a recommendation to buy, sell or hold securities and may be subject to revision or withdrawal at any time.

SALE BY COMPETITIVE BIDDING

The Series N Bonds were awarded pursuant to two separate competitive bidding processes on February 20, 2020. The Series N Bonds Maturity Group 1, comprised of Series N Bonds maturing in the years 2033 through 2040, inclusive, were sold to BofA Securities, Inc. The Series N Bonds Maturity Group 2, comprised of Series N Bonds maturing in the years 2041 through 2050, inclusive, were sold to J.P. Morgan Securities LLC. The Series N Bonds Maturity Group 1 will be purchased at an aggregate price of $205,686,990.75, which reflects an aggregate original issue premium of $47,960,104.55 and an underwriters' discount of $93,113.80. The Series N Bonds Maturity Group 2 will be purchased at an aggregate price of $330,938,319.95, which reflects an aggregate original issue premium of $38,758,319.95.

The respective initial purchasers (the "Initial Purchasers") have supplied the information as to the initial public offering prices of the Series N Bonds as set forth on the inside cover of this Official Statement. The Series N Bonds may be offered and sold to certain dealers at prices lower than the public offering prices set forth on the inside cover page, and such public offering prices may be changed from time to time by the Initial Purchasers.

LEGALITY OF INVESTMENT

Pursuant to the Act, the Series N Bonds are made securities in which all public officers and bodies of the State and all municipalities and municipal subdivisions, all insurance companies and associations and other persons carrying on an insurance business, all banks, bankers, trust companies, savings banks and saving associations, including savings and loan associations, building and loan associations, investment companies and other persons carrying on a banking business, all administrators, guardians, executors, trustees and other fiduciaries and all other persons whatsoever who are now or may hereafter be authorized to invest in bonds or other obligations of the State, may properly and legally invest funds including capital in their control or belonging to them. The Series N Bonds are also made securities which may be deposited with and may be received by all public officers and bodies of the State and all municipalities and municipal subdivisions for any purpose for which the deposit of bonds or other obligations of the State is now or may hereafter be authorized.

LEGAL MATTERS

All legal matters incident to the authorization and issuance of the Series N Bonds are subject to the approval of Harris Beach PLLC, New York, New York, Bond Counsel to the Authority. Certain legal matters will be passed on by Bryant Rabbino LLP, Disclosure Counsel to the Authority. Certain legal matters are subject to the approval of Joseph P. Igoe, Esq., Deputy General Counsel of the Authority.

CONSULTANT'S AND ACCOUNTANT'S REPORTS

The December 2019 Financial Requirements Report and the Bring-Down Letter are contained in **Appendix A-1** and **Appendix A-2**, respectively, of this Official Statement in reliance upon the authority of Stantec as experts. The Traffic Engineer has advised the Authority that they have reviewed the summaries contained in this Official Statement of the information, estimates and projections contained in the October 2019 Traffic Engineer's Report, the December 2019 Financial Requirements Report and the Bring-Down Letter and that, in their opinion, the statements made herein are correct and fairly present in summary form the information contained in such reports, and that all material assumptions or qualifications with respect to such statements are reflected therein. The October 2019 Traffic Engineer's Report is available for review on the Authority's website but is not incorporated by reference in this Official Statement.

The financial statements of the Authority as of December 31, 2018 and 2017, and for the years then ended, included in **Appendix B** of this Official Statement have been audited by BST & Co. CPAs, LLP, independent auditors, as stated in their report appearing in herein. The Authority has engaged BST & Co. CPAs, LLP to audit the Authority's financial statements for the fiscal year ended December 31, 2019 and expects to receive the audited financial statements and the report of BST & Co. CPAs, LLP thereon in late March 2020.

CO-FINANCIAL ADVISORS

The Authority has retained Public Resources Advisory Group and Acacia Financial Group, Inc. to serve as Co-Financial Advisors (the "Co-Financial Advisors") in connection with the issuance of the Series N Bonds. Although the Co-Financial Advisors have reviewed the Official Statement, the Co-Financial Advisors have not undertaken to make an independent verification or to assume responsibility for the accuracy, completeness, or fairness of information in the Official Statement. Public Resources Advisory Group and Acacia Financial Group, Inc. are independent financial advisory firms not engaged in the business of underwriting, trading or distributing municipal securities or other public securities.

CONTINUING DISCLOSURE UNDER SEC RULE 15c2-12

In order to assist the purchasers of the Series N Bonds in complying with Rule 15c2-12 promulgated by the Securities and Exchange Commission ("SEC"), the Authority and the Trustee will enter into a written agreement (the "Agreement") for the benefit of the holders of the Series N Bonds to provide continuing disclosure. The Authority will undertake for the benefit of the holders of the Series N Bonds to provide to the Municipal Securities Rulemaking Board ("MSRB"), on an annual basis on or before 120 days after the end of each fiscal year, commencing with the fiscal year ending December 31, 2020, certain financial information and operating data concerning the Authority and the sources of revenue for Bonds issued under the Bond Resolution referred to herein as "Annual Information" and described in more detail below. The Authority will also undertake to provide no later than 120 days after the end of each of its fiscal years, commencing with the fiscal year ending December 31, 2020, the Authority's annual financial statements for such year, prepared in accordance with GAAP and audited by an independent firm of certified public accountants in accordance with generally accepted auditing standards, to the MSRB; provided, however, that if audited financial statements are not then available, unaudited financial statements shall be so provided and such audited financial statements shall be provided to the MSRB if and when available. In addition, the Authority will undertake, for the benefit of the holders of the Series N Bonds, to provide to the MSRB, in a timely manner not in excess of ten (10) Business Days, the notices of certain events described below. The Authority may from time to time designate an agent to act on its behalf in providing or filing notices, documents and information as required under the Agreement, and revoke or modify any such designation.

The Annual Information shall consist of the financial information and operating data of the type included in this Official Statement under the headings "RESULTS OF OPERATIONS — Financial Results of Operations", "MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS — Traffic and Revenue", and "BUDGET AND CAPITAL PROGRAM; TRAFFIC ENGINEER'S REPORT — 2020 Budget," and "— Funding of the 2020-2024 Capital Program" which shall include information relating to the following: (i) current toll rates for all classes of vehicles; (ii) statements of Revenues, Operating Expenses and Net Revenues for the most recent fiscal year; (iii) statements of traffic and operating revenues for the most recent fiscal year; (iv) summary of the most recent inspection by the Authority, its Independent Consultant, or other professional engineer or engineers retained for the purpose of such inspection; (v) status of the Authority's capital planning process; and (vi) statement of the Authority's debt service coverage for the most recent fiscal year.

The notices described above include notices of any of the following events with respect to the Series N Bonds: (1) principal and interest payment delinquencies; (2) non-payment related defaults, if material; (3) unscheduled draws on debt service reserves reflecting financial difficulties; (4) unscheduled draws on credit enhancements reflecting financial difficulties; (5) substitution of credit or liquidity providers, or their failure to perform; (6) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices of determinations with respect to the tax status of the Series N Bonds, or other material events affecting the tax status of the Series N Bonds; (7) modifications to the rights of security holders, if material; (8) bond calls, if material, and tender offers; (9) defeasances; (10) release, substitution, or sale of property securing repayment of the securities, if material; (11) rating changes; (12) bankruptcy, insolvency, receivership or similar event of the Authority; (13) the consummation of a merger, consolidation, or acquisition involving the Authority or the sale of all or substantially all of the assets of the Authority, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material; (14) appointment of a successor or additional trustee or the change of name of a trustee, if material; (15) incurrence of a financial obligation by the Authority, if material, or agreement to covenant, events of default, remedies, priority rights, or other similar terms of a financial obligation, any of which affect security holders, if material; and (16) default, event of acceleration, termination event, modification of terms, or other similar events under the terms of the financial obligation of the Authority, any of which reflect financial difficulties. For the purposes of the events identified in clauses (15) and (16) above, the term "financial obligation" means a (i) debt obligation; (ii) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation; or (iii) guarantee of (i) or (ii). The term "financial obligation" shall not include municipal securities as to which a final official statement has been provided to the MSRB consistent with Rule 15c2-12. In addition, the Authority will undertake, for the benefit of the holders of the Series N Bonds, to provide to the MSRB, in a timely manner, notice of any failure by the Authority to provide the Annual Information and annual financial statements by the date required in the Authority's undertakings described above.

The sole and exclusive remedy for breach or default under the Agreement to provide continuing disclosure described above is an action to compel specific performance of the undertakings of the Authority, and no person, including the holder of the Series N Bonds, may recover monetary damages thereunder under any circumstances. Any Series N Bondholder, including any beneficial owner, may enforce the Agreement for the equal and proportionate benefit of all holders similarly situated to the extent provided in the Agreement. A breach or default under the Agreement shall not constitute an Event of Default under the Bond Resolution. In addition, if all or any part of Rule 15c2-12 ceases to be in effect for any reason, then the information required to be provided under the Agreement, insofar as the provision of Rule 15c2-12 no longer in effect required the provision of such information, shall no longer be required to be provided.

The Authority has not in the previous five years failed to comply, in all material respects, with any previous undertakings pursuant to Rule 15c2-12.

The foregoing undertakings are intended to set forth a general description of the type of financial information and operating data that will be provided; the descriptions are not intended to state more than general categories of financial information and operating data; and where an undertaking calls for information that no longer can be generated or is no longer relevant because the operations to which it related have been materially changed or discontinued, a statement to that effect will be provided. As a result, the parties to the Agreement do not anticipate that it often will be necessary to amend the informational undertakings. The Agreement, however, may be amended or modified under certain circumstances set forth therein. Copies of the Agreement when executed by the parties thereto upon issuance of the Series N Bonds will be on file at the office of the Authority.

MISCELLANEOUS

The references herein to the Act and the Bond Resolution are brief outlines of certain provisions thereof. Such outlines do not purport to be complete and reference is made to the Act and the Bond Resolution for full and complete statements of such provisions. Copies of the Act and the Bond Resolution are on file at the offices of the Authority and the Trustee.

The agreements of the Authority with the holders of the Series N Bonds are fully set forth in the Bond Resolution. Neither any advertisement of the Series N Bonds nor this Official Statement is to be construed as a contract with purchasers of the Series N Bonds.

Any statements in this Official Statement involving matters of opinion, forecasts or estimates, whether or not expressly stated, are intended merely as expressions of opinion, forecasts or estimates and not as representations of fact.

The delivery of this Official Statement by its Chief Financial Officer and Treasurer has been duly authorized by the Authority.

NEW YORK STATE THRUWAY AUTHORITY

By: /s/ Matthew A. Howard
Chief Financial Officer and Treasurer

APPENDIX A-1

DECEMBER 2019 FINANCIAL REQUIREMENTS REPORT OF TRAFFIC ENGINEER

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New York State Thruway Financial Requirements and Proposed Toll Adjustments

December 18, 2019

Prepared for:

New York State Thruway Authority

Prepared by:

Stantec Consulting Services, Inc.

Table of Contents

1.0 INTRODUCTION AND EXECUTIVE SUMMARY 1

2.0 THE NEW YORK STATE THRUWAY SYSTEM 3
2.1 BACKGROUND 3
2.2 ROADWAYS 4
2.3 BRIDGES 5
2.4 SERVICE AREAS AND BUILDINGS 6
2.5 SAFETY, INCIDENT RESPONSE AND TRAVELER INFORMATION SYSTEMS 7
2.6 ANNUAL ROUTINE MAINTENANCE ACTIVITIES 8

3.0 HISTORICAL REVIEW OF THE AUTHORITY'S FINANCES 9
3.1 HISTORICAL OPERATING AND MAINTENANCE EXPENSES 9
3.2 HISTORICAL CAPITAL EXPENDITURES 11
3.3 HISTORICAL DEBT SERVICE EXPENSES 13
3.4 HISTORICAL TRAFFIC AND REVENUES 13
3.4.1 Traffic 13
3.4.2 Toll Revenues 15
3.4.3 Other Revenues 16
3.5 HISTORICAL FLOW OF FUNDS ANALYSIS 18

4.0 THRUWAY TRIPS AND CUSTOMERS 20

5.0 CAPITAL PROGRAM 23
5.1 2019-2024 CAPITAL PROGRAM DETAILS 23
5.2 THE NEW NY BRIDGE PROJECT / GOVERNOR MARIO M. CUOMO BRIDGE 24
5.3 PLANNED CAPITAL EXPENDITURES 25
5.4 THE IMPACT OF THE CAPITAL PROGRAM ON CONDITIONS 26

6.0 EXPENSES AND REVENUES WITH THE CURRENT TOLL SCHEDULE 29
6.1 PROJECTED OPERATING AND MAINTENANCE EXPENSES 29
6.2 PROJECTED DEBT SERVICE EXPENSES 29
6.3 PROJECTED TRAFFIC AND REVENUES 30
6.3.1 Projected Traffic with Current Toll Schedule 30
6.3.2 Projected Toll Revenue with Current Toll Schedule 30
6.3.3 Other Revenues/Total Revenues with Current Toll Schedule 31
6.4 FLOW OF FUNDS 32

7.0 PROPOSED MODIFICATIONS TO CURRENT TOLL RATES AND THE IMPACT TO THE AUTHORITY'S FINANCIALS 34
7.1 RECENT HISTORY OF TOLL ADJUSTMENTS ON THE THRUWAY SYSTEM 34
7.2 CURRENT TOLL RATES ON THE THRUWAY SYSTEM 34
7.3 PROPOSED TOLL MODIFICATIONS 36

7.4 COMPARISON OF PROPOSED THRUWAY TOLL RATES TO OTHER REGIONAL TOLL FACILITIES 39
7.4.1 Toll Rate Comparison 39
7.4.2 Comparison of Tolls by Mail Charges 44
7.5 TRAFFIC AND REVENUE WITH PROPOSED TOLL MODIFICATIONS 44
7.6 FUNDING REQUIREMENT AND SOURCES 46

8.0 SUMMARY OF FINDINGS 47

9.0 LIMITS AND DISCLAIMERS 49

APPENDIX: PROPOSED TOLL RATE SCHEDULES 51

List of Figures

Figure 1: New York State Thruway Toll Systems 4
Figure 2: Historical Thruway Traffic Volumes 14
Figure 3: 2018 System Wide Traffic and Revenue Distribution 20
Figure 4: 2018 Passenger Car and Commercial Vehicle Traffic Distribution by Facility 21
Figure 5: Distribution of 2018 Toll Revenues by Thruway Facility 22
Figure 6: New NY Bridge Project 25
Figure 7: Historical and Forecasted Thruway Pavement Distress Indices (PDI), 2005-2024 27
Figure 8: Historical and Forecasted Thruway Bridge Condition Ratings, 1990-2024 28
Figure 9: Governor Mario M. Cuomo Bridge Proposed 2022 Passenger Car Toll Rates and Share of Traffic in Each Category 39
Figure 10: Round Trip Toll Rates on Major Toll Crossings in the Northeast, Passenger Cars 40
Figure 11: Round Trip Toll Rates on Major Toll Crossings in the Northeast, 5-Axle Trucks 41
Figure 12: Peak Toll Rates Per-Mile on Toll Roads in the Northeastern Quadrant of U.S., Passenger Cars 42
Figure 13: Peak Toll Rates Per-Mile on Toll Roads in the Northeastern Quadrant of U.S, 5-Axle Trucks 43

List of Tables

Table 1: Proposed Toll Modifications 2
Table 2: The Thruway System 5
Table 3: The Thruway System’s Actual Operating and Maintenance Expenses, 2008 – 2018 (millions) 10
Table 4: Actual Capital Expenditures, 2008-2018 (millions) 11
Table 5: 2008-2018 Actual Funding Sources, Thruway Authority (millions) 12
Table 6: Actual Debt Service, Thruway System, 2008-2018 (millions) 13
Table 7: The Thruway System’s Actual 2008-2018 Tolled Traffic (millions of trips) 15
Table 8: The Thruway System’s Actual 2008-2018 Toll Revenues (millions) 16
Table 9: Summary of 2008 – 2018 Actual Thruway System Gross Total Revenues (millions) 18
Table 10: Historical Thruway Flow of Funds and Debt Service Coverage (millions) 19
Table 11: Controlled System Toll Plazas with the Highest Volumes, 2018 22
Table 12: Projected 2019-2024 Total Capital Expenditures (millions) 26
Table 13: Projected 2019-2024 Funding Sources, Thruway Authority (millions) 26
Table 14: Bridge Conditions, December 2018 and December 2017 28
Table 15: The Thruway System’s Projected 2019-2024 Operating and Maintenance Expenses (millions) 29
Table 16: Projected 2019-2024 Debt Service with Current Toll Schedule, Thruway System (millions) 30
Table 17: Projected 2019-2024 Tolled Traffic with Current Toll Schedule (millions of trips) 30
Table 18: Projected 2019-2024 Toll Revenues with Current Toll Schedule (millions) 31
Table 19: Projected 2019-2024 Thruway System Total Gross Revenues with Current Toll Schedule (millions) 31

Table 20: Historical and Projected Thruway Flow of Funds and Debt Service Coverage with Current Toll Schedule (millions) ... 33
Table 21: Current Thruway Toll Structure ($) ... 35
Table 22: Proposed Toll Modifications ... 36
Table 23: Proposed Toll Schedule for Passenger Cars and 5-Axle Trucks ... 37
Table 24: Proposed Annual Toll Increase Amounts for Passenger Cars and 5-Axle Trucks ... 38
Table 25: Comparison of Tolls by Mail Charges on Cashless Tolling Facilities Nationwide ... 44
Table 26: Projected 2019-2024 Traffic with Proposed Toll Schedule (millions of trips) ... 45
Table 27: Projected 2019-2024 Revenues with Proposed Toll Schedule (millions) ... 45
Table 28: Projected 2019-2024 Total Gross Revenues with Proposed Toll Schedule (millions) ... 46
Table 29: Projected 2019-2024 Debt Service with Proposed Toll Schedule, Thruway System (millions) ... 46
Table 30: Total Projected Annual Requirements with Proposed Toll Schedule (millions) ... 47
Table 31: Projected Funding Sources with Proposed Toll Schedule (millions) ... 47
Table 32: Historical and Projected Thruway Flow of Funds and Debt Service Coverage with Proposed Toll Schedule (millions) ... 48

1.0 INTRODUCTION AND EXECUTIVE SUMMARY

Since its opening 65 years ago, the Thruway has served as an essential and central artery of the State's transportation system, providing a vital link between its major cities from the Atlantic Ocean to Canada and the Great Lakes. Over the years, the Authority has taken actions that have allowed for safe and efficient travel for millions of passenger and commercial customers.

The Thruway serves travelers with a variety of essential needs and purposes, including commuters, business travelers, recreational travelers, and commercial vehicle traffic that transports goods and services throughout the State. The Thruway has provided a dependable roadway system for these travelers, sustaining and encouraging economic growth, fostering job creation and generating tax revenues for the State and its local governments. Underscoring its importance to the State, region and nation, Thruway customers traveled approximately 8.4 billion vehicle-miles on the highway in 2018, averaging 23.1 million vehicle-miles per day.

Significant capital improvements and maintenance work is undertaken each year to keep its highways and bridges in a state of good repair, ensuring safe and efficient travel for the heavy traffic demands of today's world. In addition to on-going capital and maintenance tasks, the Thruway is also continually evolving to better serve its patrons, improving customer service with advances in technology and adding new capacity to highways and bridges in the corridors with high travel demand.

Over the last several years, though the economy has improved the Authority has been faced with relatively low growth in revenues and higher costs (relative to health insurance costs and winter storm events). Even after more than ten years without a rate adjustment the Authority has been able to maintain its financial strength while financing the capital needs of the aging Thruway System, making tough decisions to downsize, prioritize and adjust Capital Program projects to continue funding the annual operating and capital program budgets, and has received State stabilization funds to support the New NY Bridge project and Authority's capital needs. It is important to note that prior toll adjustments were originally designed to only provide sufficient revenues to finance the 2005-2011 Capital Program.

With the impending full completion of the New NY Bridge Project and the opening of the Governor Mario M Cuomo Bridge in 2018, the Authority is undertaking a new Capital Plan that includes the system wide implementation of cashless tolling. With revenue needs projected to be above those generated by the existing toll rates beginning in 2022, additional revenues are needed to successfully meet its future growing capital needs, fund outstanding debt and provide reliable service to its patrons.

It is only with these additional revenue actions that the Authority will be able to continue to maintain its highway and bridges in a state of good repair, fulfill its critical role in supporting the State's recovering economy and meet bondholder covenants established under its General Revenue Bond Resolution ("Bond Resolution").

Accordingly, in accordance with Section 609(1)(b) of the Bond Resolution, Stantec has been retained to produce this study and recommend a schedule of toll rates that will allow the Authority to sustain healthy financial metrics through the end of 2024.

Based on this strategy, Stantec recommends that the Authority implement proposed toll increases which are summarized in Table 1.

Table 1: Proposed Toll Modifications

GOVERNOR MARIO M. CUOMO BRIDGE RATES	
Toll Modification Element	**Description**
Increase NY E-ZPass by $0.50 per year in 2021 and 2022	On January 1, 2021 the NY E-ZPass toll rates on the Bridge will be increased by the amount of 50 cents to $5.25. On January 1, 2022 the NY E-ZPass toll rates on the Bridge will be increased another 50 cents to $5.75.
40% Commuter Discount Program*	Beginning on January 1, 2021, the commuter discounted rate will be 40 percent off the NY E-ZPass rate for passenger vehicles that opt in to the program. Similar to today, the rates assume that a minimum of 20 trips are made in that month; if fewer than 20 trips are taken per month, customers are charged for each trip not taken. This program is offered to class 2L vehicles only, with a New York E-ZPass.
Resident Discount Program*	A new resident E-ZPass Plan will be offered for Westchester and Rockland residents that will keep their rate frozen at the current $4.75 rate. This program is offered only to class 2L vehicles with a New York E-ZPass who opt in to the plan and provide proof of residency (e.g., having a vehicle registered in one of these counties).
Commercial Rates	Class 2H through 4H and S class tolls will be increased proportionate to the car toll increases for each payment type. Class 5H through 7H truck tolls will be increased 20% more than the car toll increases for each payment type
CHANGES TO SUPPORT SYSTEM-WIDE CONVERSION TO CASHLESS TOLLING	
Incentivize NY E-ZPass Usage	Establish that with the conversion to system-wide cashless tolling in 2020, NY E-ZPass toll rates would be based on the current toll rates first established in 2010, and beginning on January 1, 2021 a 30 percent rate differential (a toll rate 30 percent above the NY E-ZPass rate) would be established for Tolls By Mail toll rates.
Non-NY E-ZPass Rates	Beginning on January 1, 2021, establish a 15 percent rate differential (a toll rate 15 percent above the NY E-ZPass rate for Non-NY E-ZPass tolls).
Image Tolls Policy	Clarify Board Policy that beginning on January 1, 2021, all transactions that are processed as image tolls will pay the Tolls By Mail toll rate. This clarification would apply to customers who have an E-ZPass account yet their toll transaction must be processed via the Tolls by Mail process (e.g., due to failure to mount the E-ZPass transponder properly and a toll transaction is processed through a license plate image review).
Impose a $2 Administrative Surcharge on Tolls by Mail Bills	Beginning on January 1, 2021, implement a $2 administrative surcharge per billing statement for non-E-ZPass statements to support the administrative costs associated with processing transactions through the Tolls by Mail program and to incentivize more customers to sign up for an E-ZPass account.

**It should be noted that 89 percent of passenger trips will pay a discounted rate compared to the Tolls by Mail rate and that 45 percent of this traffic will be paying the discounted rates for the commuter and resident plans.*

Additional detail can be found in Section 7.3, Table 23, and the Appendix. The impact of the proposed toll action on the Authority's revenues and long-term financial plan is described in more detail herein.

2.0 THE NEW YORK STATE THRUWAY SYSTEM

2.1 BACKGROUND

At 570 miles in length, the New York State Thruway is one of the largest tolled highway systems in the United States and is a critical component in the national interstate network. There are few alternatives to the Thruway as it connects the principal cities of the State from New York City to Albany, and on to Utica, Syracuse and Rochester through to Buffalo and the Pennsylvania state line. The Thruway corridor serves 37 of the State's 62 counties and the majority of the State's population. Approximately 266.4 million toll transactions occurred on the Thruway in 2018, generating about $736.5 million in toll revenues[1].

The Thruway is an important interstate connector, joining with the Massachusetts Turnpike (I-90), Connecticut Turnpike (I-95), New Jersey's Garden State Parkway, as well as several other Interstate routes such as I-287 from New Jersey; I-90 in Pennsylvania; I-290 around the north side of Buffalo; I-390 and I-490 serving Rochester; I-81, I-481 and I-690 at Syracuse; I-790 in Utica; I-87 (the Northway), I-88, I-90, I-787, and I-890 at Albany; and I-84 at Newburgh. It also makes direct connections with numerous major State highways.

The Thruway is comprised of two types of toll systems – a controlled (ticket) system and a barrier system, as shown in Figure 1. The controlled system (approximately 481 miles) makes up the largest portion of the Thruway, running from Woodbury (in the southeast corner of the State) north along I-87 to Albany, then west on I-90 to Buffalo and south of Lake Erie to the Pennsylvania border. In addition to this main stretch of the controlled system, there is a small branch south and east of Albany providing a connection to the Massachusetts border and the I-90 Massachusetts Turnpike. The barrier systems - located in the southeast corner of the State and the northwest corner of the State - are comprised of The Governor Mario M. Cuomo Bridge (formerly Tappan Zee Bridge barrier), Yonkers Barrier, New Rochelle Barrier, Spring Valley Barrier (where passenger cars only are toll-free), Harriman Barrier, and the Grand Island Bridges. All barriers currently operate with cashless tolling.

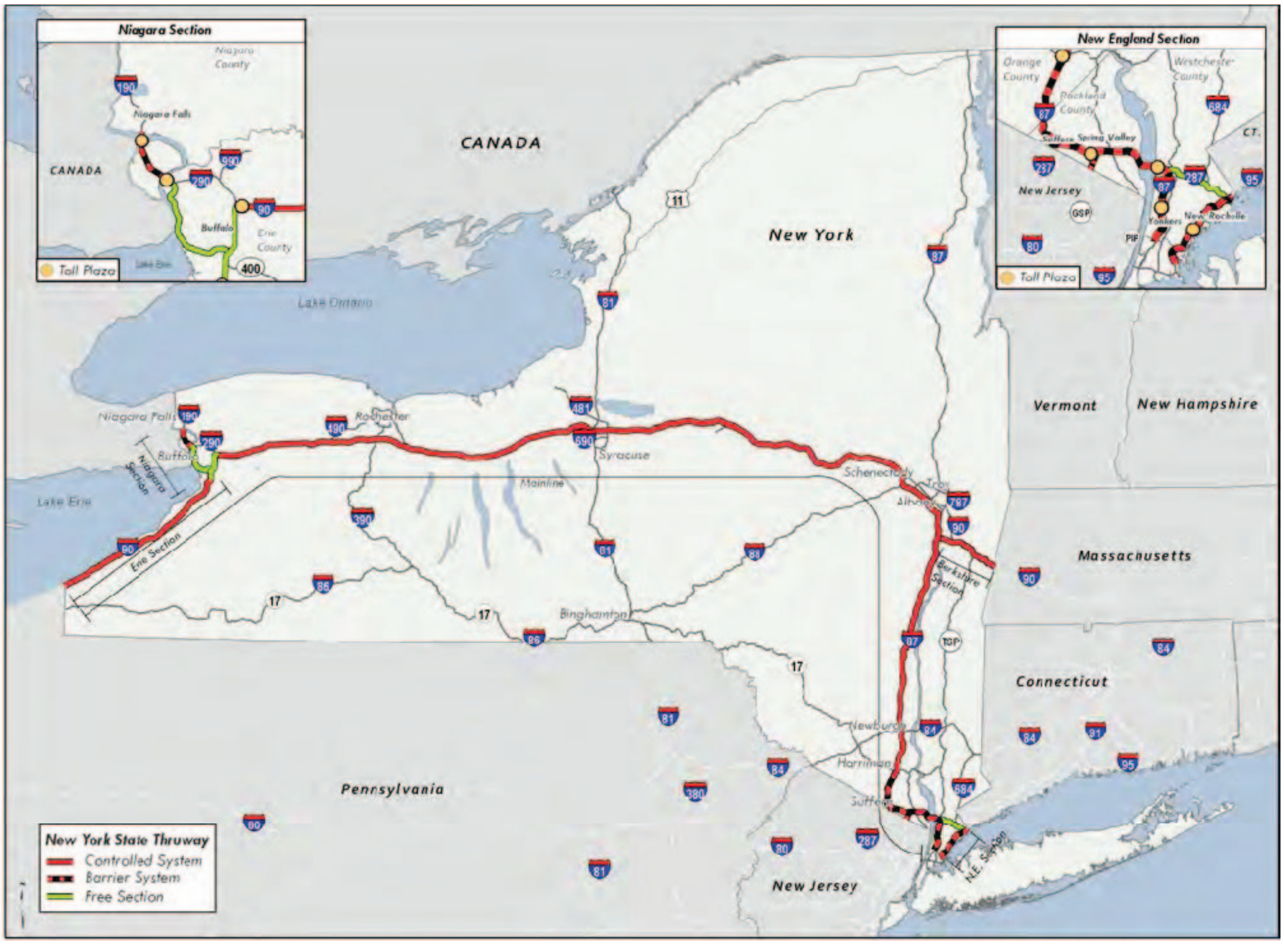
Under the existing policy, toll rates across the Thruway System are based on vehicle classification, related to the number of axles per vehicle and the height of the vehicle over the first two axles. On the controlled system, tolls are charged based on the actual distance traveled by the customer. Meanwhile, barrier toll plazas have a fixed toll rate for each vehicle class and payment type (e.g., Tolls by Mail, non-NY and New York *E-ZPass*, as well as Commuter and other *E-ZPass* Discounts).

Portions of the roadways under the Thruway jurisdiction are currently toll-free. These include a nine-mile section in the Buffalo area between the controlled sections; I-190 between Buffalo and Grand Island; I-90 between Albany (Interchange 24) and I-88 (Interchange 25A); and the Cross Westchester Expressway (I-287). In addition, there are stretches of roadway on the sections with fixed-toll barriers where short trips can be made without passing through a toll barrier.

The Authority recently completed conversion of all its toll collection barriers to cashless tolling. At The Governor Mario M. Cuomo Bridge (formerly Tappan Zee Bridge barrier), cashless tolling was implemented on April 23, 2016. Cashless tolling began at both of the Grand Island Bridges on March 30, 2018, at the Harriman Barrier on September 28, 2018, and at the Yonkers Barrier on November 19, 2018. The Spring Valley Barrier and New Rochelle Barrier were converted to cashless tolling on December 20, 2018. The ticket controlled system will be converted to cashless tolling in October 2020.

[1] $764.5 million in gross toll revenues minus $28.0 million in commercial volume discounts

Figure 1: New York State Thruway Toll Systems



2.2 ROADWAYS

The 2,800 lane-mile Thruway roadway system was constructed between 1949 and 1960 and is one of the oldest components of the national Interstate Highway System. In addition to the Authority's mandate to operate and maintain the original components of the Thruway, the Authority was given responsibility for several other transportation facilities in the early 1990s:

- In 1991, the Cross-Westchester Expressway (I-287), which starts at I-87 near Tarrytown and travels east for 11 miles to the Thruway's New England Section (I-95) in Rye became the Authority's responsibility for maintenance and operational expenditures only. Capital improvements remain the responsibility of the New York State Department of Transportation (NYSDOT); and

- In 1991, via an agreement with NYSDOT, the Authority began to operate and maintain I-84, a 71-mile section of roadway that connects the Pennsylvania state line to the Connecticut state line. After November 2007, the agreement was amended, and the Authority was fully reimbursed by NYSDOT for all operating and maintenance costs associated with I-84 from that point forward. The operation and maintenance responsibility of I-84 was legislatively returned to NYSDOT as of October 11, 2010.

The Thruway System is currently about 570 total miles in length and has 134 interchanges. The various sections of the roadway currently maintained by the Authority are listed in Table 2.

Table 2: The Thruway System

Section	Controlled Section	Barrier Section	Length (miles)
The Mainline (New York City – Buffalo)	X	X	426
Erie Section (Buffalo – Pennsylvania Line)	X		70
Niagara Section I-90 (Buffalo – Niagara Falls)		X	21
Berkshire Section (Selkirk – Massachusetts Line)	X		24
New England Section (I-95) (Bronx – Connecticut Line)		X	15
Garden State Parkway Connection (Spring Valley – New Jersey)			3
Cross-Westchester Expressway (I-287) (Mainline I-87 in Tarrytown – I-95 in Rye)			11
Total			**570**

X= tolled section of the Thruway

Thruway pavements are typically nine inches of reinforced Portland cement concrete placed on 12 inches of granular sub-base. Shoulders are made up of treated granular material with asphaltic wearing surface. A large portion of the roadway's base dates back to its original construction, highlighting the need for heavy maintenance, reconstruction and rehabilitation activities to retain the riding surface in a state of good repair.

The Authority has an established process under which it selects highway projects for its capital program, which relies strongly on information and analytical tools embodied within the Authority's Asset Management Systems, and coordination with the Department of Maintenance and the Authority's four geographic divisions. Projects are prioritized based on safety, riding surface condition, and the impact on asset useful life and capacity. This process has historically allowed the Authority to maintain good overall surface and riding conditions of its highway pavement.

2.3 BRIDGES

The Authority has maintenance and inspection responsibility for 814 bridges that carry Thruway traffic as well as local roads and State highways over the Thruway System. The structural characteristics of these bridges vary: about 15 percent are concrete structures, either pre-stressed girder, arch, rigid frame or box culverts. The remaining 85 percent of the bridges are steel structures with asphalt overlaid, reinforced concrete decks. As with the roadway, an overwhelming majority of the structures date back to the original opening of the Thruway System in the 1950s and require continual and significant repair, rehabilitation and reconstruction investments to prevent deteriorating conditions.

The largest bridge on the Thruway System is the twin-span Governor Mario M. Cuomo Bridge over the Hudson River, which is located approximately 20 miles north of New York City and replaced the 61-year old Tappan Zee Bridge. The new bridge consists of multi steel girder/composite deck approach spans at each end with cable-stayed spans over the main Hudson River shipping channels. Each of the twin bridge spans is approximately three miles in total length, with chamfered towers supporting the cables. Construction on the bridge project began in 2013. The north span of The Governor Mario M. Cuomo Bridge was opened to northbound (westbound) traffic on August 26, 2017 and to southbound (eastbound) traffic on October 6,

2017. Southbound traffic was shifted to the south span when it was opened to traffic in September 2018. Each span operates with four lanes of vehicle traffic per direction, with cashless tolling, continuing to collect tolls from southbound traffic only. When the project is fully completed, the north span will have a shared-use bike and pedestrian path. More details on the project can be found on the project website http://www.newnybridge.com.

In addition to The Governor Mario M. Cuomo Bridge, the Thruway System includes other large and unique bridge structures: the Castleton-on-Hudson Bridge across the Hudson River on the Berkshire Section; the four Grand Island Bridges spanning branches of the Niagara River north of Buffalo; and the three bridges crossing Catskill, Kaaterskill, and Normanskill Creeks in the Catskill Region.

As with its highways, the Authority pursues a similar established process under which it selects bridge projects for rehabilitation or replacement. Potential bridge capital projects are identified by Authority field engineering staff and are vetted through the Authority's Asset Management Systems. This process has allowed the Authority to target bridge projects towards those that are critical to maintain safety and good structural conditions.

2.4 SERVICE AREAS AND BUILDINGS

The Authority currently owns 603 buildings of various types. These include large maintenance and administrative facilities as well as storage sheds, utility buildings, and other minor facilities. The buildings include:

- 234 section maintenance and storage buildings
- 66 salt sheds
- 83 toll and toll storage buildings
- 161 service area buildings (including water and waste water buildings)
- 3 New York State Welcome Centers, one with an additional storage building
- Port Byron Old Erie Canal Heritage Park Visitors Center
- 21 State Police barracks and storage buildings
- 33 radio shelter buildings

Note that this list does not include buildings that are being constructed to support The Governor Mario M. Cuomo Bridge.

The Authority's Administrative Headquarters is located just off Interchange 23 at 200 Southern Boulevard in Albany, overlooking the Thruway mainline and the Albany Division maintenance complex. This building has been the Authority's Headquarters since it was constructed in 1972.

The Thruway's maintenance responsibility is divided into four divisions, with each division having its own headquarters facility. These Division headquarters are located in Suffern, Albany, Syracuse, and Buffalo. The Division headquarters serve several functions that include housing the administrative staff for the maintenance program, as well as providing offices for State police and toll collection, traffic and customer service personnel.

Service areas providing fuel, restaurants and other amenities for the 27 service areas owned by the Authority are operated through concessionaire agreements. The buildings, parking areas, and wastewater treatment plants are maintained by Thruway staff. These service areas are located at intervals along the Thruway System and are currently operated by three food service concessionaires: HMS Host Family Restaurants, Inc. (12 plazas), McDonald's Corporation (11 plazas) and Delaware North Companies Travel Hospitality Services, Inc. (4 plazas), and Taste NY (at the Mohawk Valley Welcome Center which opened in June 2017, the Western New York Welcome Center that opened August 31, 2018, and the Capital Region Welcome Center that opened November 23, 2018). In addition, there are two fuel service operators, Dunne Manning (12 plazas) and Sunoco, Inc. (R&M) (15 plazas). The Authority collected $14.88 million in concession payments from these vendors in 2018.

All food and fuel centers are open 24 hours daily, seven days a week and offer parking, fuel, public restrooms (including family assist restrooms equipped for persons with disabilities), ATMs, and free Wireless Internet Service. There is also a brand name food vendor at each service area open to the public 24 hours a day, seven days a week. Furthermore, many service areas have seasonal farm markets, gift shops, fax machines, sell *E-ZPass* On-the-Go (retail *E-ZPass* transponders) and staff a number of Tourist Information Centers. The Mohawk Valley Welcome Center opened in 2017 and showcases the rich heritage of New York State's historical past, a Walk of Fame highlighting influential individuals from the Mohawk Valley, an ADA compliant playground, covered porch overlooking the scenic Erie Canal, three electric vehicle charging stations, and pet comfort areas. The new Western New York Welcome Center, located in the Town of Grand Island, is inspired by the architectural designs of Frank Lloyd Wright and features a Walk of Fame highlighting influential figures in Western New York State, a Great Lakes shipwreck-themed children's play area, an "I LOVE NY" sculpture, electric vehicle charging stations, a motorcycle shelter, pet comfort area, and parking spaces for cars, buses/RVs, and trucks. The new Capital Region Welcome Center features a historic Dutch-style building façade, and has a music-themed children's playground, an artifact wall, "I LOVE NY" interactive kiosks, and Electric Vehicle charging stations.

The Authority and its concessionaires continue to make various improvements at the service areas, including updating food concepts and the overall appearance of the interiors and exteriors of the buildings, renovating gas stations, and adding trucker's lounges and increased tractor trailer parking. The Authority is currently preparing to utilize design-build contracting procurement to substantially re-build and modernize the travel plaza elements of each of the 27 service areas. The contract is currently subject to the procurement process and is expected to be awarded by the end of 2019.

2.5 SAFETY, INCIDENT RESPONSE AND TRAVELER INFORMATION SYSTEMS

The Thruway Statewide Operations Center (TSOC), housed at the Authority's Administrative Headquarters in Albany, is the central location for the coordination of all traffic incident response, emergency management, and dissemination of traveler information along the entire Thruway. The TSOC operates 24 hours a day, seven days a week, 365 days a year. The Authority exchanges traffic and Intelligent Transportation Systems (ITS) data with NYSDOT through the Regional Traffic Operation Centers and uses the traveler's resource website 511ny.org to provide drivers with a view of traffic operations across the State so they may make more informed travel choices.

The TSOC controls an Advanced Traffic Management System that integrates and controls all current and future ITS devices and systems. Such devices include 80 Permanent Variable Message Signs, 166 Closed Circuit Television cameras, 13 Highway Advisory Radio stations, 125 real-time vehicle detector sites, and 90 Portable Variable Message Signs. The Authority has started to integrate the following ITS devices located on the Governor Mario M. Cuomo Bridge: 2 Permanent Message Signs, 27 Closed Circuit Television Cameras, 8 real-time vehicle detector sites, 119 Lane Indicator Signs, 4 Weather Stations, 17 Message Signs on the Shared-Use Path, 8 Weigh-In-Motion sensors and 20 Variable Speed Limit Signs.

The Authority also offers an email alert service (TRANSalert) to its customers to inform them of major unscheduled incidents that may affect their travel plans and the Thruway website (www.thruway.ny.gov) offers a centralized location to access a multitude of traveler information. In addition, an iPhone and Android app was released in November 2017 with live traveler information, interactive feedback and a Thruway travel planner.

Finally, a troop of New York State Police (Troop T) is entirely dedicated to policing on the Thruway System. The principal mission for Troop T is to increase safety on the roadway and reduce fatal and personal injury auto accidents. They achieve this through enforcement and education. Through the years, Troop T has participated in traffic enforcement initiatives directed at drivers who engage in behavior known to cause fatalities or exacerbate the fatality rate, such as speed, failure to use seatbelts and drunk and/or drugged driving. Since 2016, Troop T has participated in an annual campaign to raise awareness of New York's Move Over Law, which requires motorists to drive with care, slow down, and safely move over when approaching emergency vehicles, tow trucks, construction and maintenance vehicles that are stopped along the side of the road. Additionally, in April 2018, Troop T boosted patrols along the Thruway during 'Operation Work Brake'; this campaign cracked down on speeding motorists and aggressive driving before, in, and around construction zones. However, the greatest proven method to reduce fatalities is the day-to-day visible enforcement of traffic laws by the patrol troopers on the highway.

Good overall highway conditions, traveler access to online and radio information services, good incident and weather response and the efforts of Troop T contributed to a very low accident fatality rate in 2017. The fatality rate on the Thruway is among the lowest in the nation at 0.22 fatalities per 100 million miles traveled. This compares to an index of 1.16 nationwide in 2017[2] and 0.77 for all of New York State[3] in 2017.

2.6 ANNUAL ROUTINE MAINTENANCE ACTIVITIES

Over the years, the Authority has developed comprehensive plans for the maintenance of its facilities. Formal pavement and bridge management systems have been developed to address maintenance issues and provide input into the development of long-term infrastructure management programs. Routine maintenance activities are performed by Authority staff from 21 maintenance locations grouped into four divisions. Additional oversight of maintenance activities is provided by the four division highway and bridge maintenance headquarters and by The Governor Mario M. Cuomo Bridge maintenance team. Responsibilities include snow and ice removal, pavement and bridge repair and maintenance, guiderail and safety work, responding to incidents and accident damage, and right-of-way maintenance. Maintenance activities also include innovative preventative maintenance operations to preserve the highway system and minimize added capital improvement costs.

Environmental stewardship has become an important factor in ongoing maintenance decisions. Examples of these types of enhancements by the Authority are the use of solar-powered ITS elements, the planting of living snow fencing, the use of beet juice as an additive to road salt to promote adhesion and snow melting, and the purchase of flex fuel vehicles.

In addition to the original mandate of the Authority to operate and maintain the controlled and barrier systems along the Thruway, the Authority was given responsibility over the Cross-Westchester Expressway (I-287) in 1991. This highway starts at I-87 near Tarrytown and travels east for 11 miles to the Thruway's New England Section (I-95) in Rye. In 1991, it became the Authority's responsibility for maintenance and operational expenditures only. Capital improvements have remained the responsibility of NYSDOT.

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[2] "2017 Fatal Motor Vehicle Crashes: Overview." National Highway Traffic Safety Administration, Oct. 2018, https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812603.

[3] "General Statistics." Insurance Institute for Highway Safety Highway Loss Data Institute, Dec. 2018, www.iihs.org/iihs/topics/t/general-statistics/fatalityfacts/state-by-state-overview.

3.0 HISTORICAL REVIEW OF THE AUTHORITY'S FINANCES

The following section provides an overview of the Authority's operating, capital and debt service costs and revenue trends from 2008 through 2018. The section concludes with an overall view of the financial health of the Authority during this period.

3.1 HISTORICAL OPERATING AND MAINTENANCE EXPENSES

The Authority's operating and maintenance (O&M) expenses include non-capitalized costs for the maintenance of highway and building facilities; equipment purchases; snow and ice removal; Thruway toll collection; administrative costs and fringe benefits; Thruway traffic operations; and provisions for funding environmental and other liability reserves. In past years the Authority was also responsible for the O&M for the New York State Canal System, however, effective January 1, 2017, the New York State Canal Corporation (NYSCC) became a subsidiary of the New York Power Authority, and the Authority was relieved of all responsibilities related to the Canal System.

In recent years the Authority was able to limit the level of growth in O&M costs primarily through staffing reductions and a stronger workforce management program. During this period, the Authority reduced its workforce by approximately 10 percent. In addition, the Authority reduced or eliminated expenditures for equipment and projects, cancelled or deferred scheduled salary increases and other employee benefits, relied more heavily upon part-time and seasonal workforces, reduced toll lane staffing hours, enhanced energy efficiency measures, reduced overtime and discretionary expenses, and a number of other actions. Combined with new actions planned to further modernize the management and streamline operations, these ongoing initiatives will generate recurring savings and aid the Authority in maintaining fiscal balance in the future.

Table 3 summarizes the Authority's actual 2008-2018 operating and maintenance expenses. A significant reduction in O&M costs is shown beginning in 2013, where as part of a State-supported initiative to reduce the Authority's Operating Expenses, New York State relieved the Authority of $85 million for certain fiscal responsibilities, including about $56 million to fund the operations of New York State Police (Troop T) whose 320 members patrol the Thruway System.

At the Governor's initiative, the State's 2016-2017 Enacted Budget included the transfer of the NYSCC to the NYPA. This transfer of the NYSCC, and its related expenses and revenues, is offset by Thruway Authority reimbursement to the State for the State Police costs associated with Troop T expenses of the State. As noted previously, Troop T provides State Police patrol on the Thruway. This reimbursement is provided for from the General Reserve Fund (after supporting operating and debt service costs) and is not included under operations and maintenance related expenses of the Authority.

On April 23, 2016 cashless tolling was implemented at The Governor Mario M. Cuomo Bridge (formerly Tappan Zee Bridge barrier). Cashless tolling began on Grand Island Bridges in March 2018, at the Harriman Barrier in September 2018, Yonkers Barrier in November 2018, and Spring Valley and New Rochelle Barriers in December 2018. Actual costs for account management of the Tolls by Mail program were included in the budgets and actual costs for 2016 through 2018.

Table 3: The Thruway System's Actual Operating and Maintenance Expenses, 2008 – 2018 (millions)

Year	Thruway Operations	Reserves(1)	Total Operating Expenses(2)
2008	$334.8	$2.5	$337.3
2009	339.4	7.3	346.7
2010 (3)	358.2	6.0	364.2
2011	365.4	4.6	370.0
2012	357.0	2.0	359.0
2013	279.6	3.5	283.1
2014	286.1	5.9	292.0
2015	287.4	1.8	289.1
2016 (4)	311.6	1.8	313.3
2017	329.7	2.7	332.4
2018 (5)	339.9	5.0	345.0

(1) Includes provisions for legal claims and indemnities and reserves for environmental remediation.
(2) Prior to 2017, the Authority was also responsible for the O&M for the New York State Canal System, however, effective January 1, 2017, the NYSCC became a subsidiary of the New York Power Authority, and the Authority was relieved of all responsibilities related to the Canal System. Canal O&M expenses are not included in this table.
(3) In 2010, operating expenses include $13.3 million for the special early retirement surcharge ($11.4 million for the Thruway and $1.9 million for the Canal) and $5.6 million in Federal Enhancement funds was received for Canal operations.
(4) Cashless tolling began at The Governor Mario M. Cuomo Bridge (formerly Tappan Zee Bridge barrier) on April 23, 2016.
(5) Cashless tolling began on Grand Island Bridges in March 2018, at the Harriman Barrier in September 2018, Yonkers Barrier in November 2018, and Spring Valley and New Rochelle Barriers in December 2018.

3.2 HISTORICAL CAPITAL EXPENDITURES

Given the age of the Thruway System and the high percentage of its infrastructure that dates back to original construction, significant capital investments have been necessary to complement maintenance activities for the system to remain reliable and in a state of good repair. Actual capital expenditures for 2008 through 2018 are shown in Table 4. The most notable changes during this time period were the New NY Bridge Project (construction of the Governor Mario M. Cuomo Bridge) which began in 2013, and the transfer of jurisdiction for the Canal System from the Authority to the NYPA in January 2017.

Table 4: Actual Capital Expenditures, 2008-2018 (millions)

Year	Thruway Highway and Bridges Capital Expenditures	Equipment Replacement and Other Facility Capital Needs(1)	Canal System and Other Authority Projects(2)	Subotal Capital Program Expenditures	New NY Bridge Project Capital Costs	Total Capital Program Expenditures
2008	288.7	36.2	30.3	355.2		355.2
2009	259.6	35.4	26.1	321.1		321.1
2010	311.0	39.9	26.8	377.7		377.7
2011	367.6	49.5	27.4	444.5		444.5
2012	322.4	22.9	45.7	390.9		390.9
2013	183.7	30.7	37.5	251.9	$613.4	865.3
2014	170.7	33.7	76.7	281.0	594.2	875.3
2015	251.3	35.2	48.8	335.3	702.0	1,037.3
2016	200.1	36.5	30.3	266.9	790.7	1,057.7
2017	184.7	44.8	0.0	229.5	479.1	708.6
2018	222.9	104.7	0.0	327.7	264.1	591.8

Note: Numbers may not add due to rounding.
(1) Includes capital costs for system-wide cashless tolling conversion
(2) These costs were payable only after Thruway operating and maintenance and debt service costs, and, as noted herein, jurisdiction for the Canal System was transferred to the NYPA effective January 2017.

Table 5 summarizes actual funding sources for the previous Capital Programs. Federal aid allocated by the NYSDOT to the Authority declined from $30.9 million in 2007 to $0 in 2011, predominately the result of an agreement with NYSDOT expiring in 2005 which had previously authorized aid to the Authority to support its capital and operational needs. This declining federal aid plus relatively low toll revenue growth led to a reduction in the level of pay-as-you-go financing for the 2005-2011 Capital Program. An additional $100 million of federal aid was allocated to the Authority's Capital Program in 2012-2016. In 2012, there was an increase of other funding sources for the Capital Program, including some Canal storm-related repairs reimbursed by FEMA and to account for NYSDOT and MTA shares of the pre-design/environmental costs of the New NY Bridge Project. At this time no additional federal authorizations are assumed for the 2019-2024 Capital Program.

The Authority issued its Series 2013A Junior Indebtedness Obligations on December 18, 2013 in the principal amount of $1.6 billion to finance a portion of the New NY Bridge Project capital costs. The Authority entered into a TIFIA Loan Agreement on December 19, 2013 with the United States Department of Transportation authorizing a loan for an amount up to $1.6 billion which is secured by the Authority's issuance of the Series 2013B Junior Indebtedness Obligations. The Authority paid the Series 2013A Junior Indebtedness Obligations with the proceeds of the Series 2019A JIO Notes and available cash resources of the Authority. The Authority paid the principal of the Series 2019A JIO Notes from a draw of the full $1.6 billion amount under the TIFIA Loan and fully paid the TIFIA loan using proceeds from the Junior Indebtedness Obligation (Series 2019B) issuance that was completed in October 2019. In May 2016, the Authority had issued an additional series of Junior Indebtedness Obligations (Series 2016A) in the amount of $850 million to finance a portion of costs of the New NY Bridge Project.

Additionally, in 2015 New York State had appropriated grant money in the amount of $1.285 billion to fund Thruway capital projects, including $750 million for the New NY Bridge Project and $535 million for Thruway System-wide projects. The State's 2016-2017 Enacted Budget included an additional appropriation of $700 million for capital assistance to the Authority. The State gave a total of $1.2 billion in grants to the Authority for the New NY Bridge Project.

Table 5: 2008-2018 Actual Funding Sources, Thruway Authority (millions)

Year	Funding Sources						
	Federal Aid	State Stabilization (1)	Other	Bond / Note Proceeds	Subtotal Exclusive of Thruway Revenues on Pay-As-You-Go Basis	Revenues Required from Tolls, etc.	Pay-As-You-Go %
2008	$17.6		$1.3	$299.5	$318.4	$36.8	15.7%
2009	10.0		2.7	258.4	271.1	50.1	19.6%
2010	8.7		4.9	305.8	319.4	58.3	19.0%
2011	0.0		6.4	366.0	372.4	72.1	17.7%
2012	11.2		54.2	268.7	334.1	56.8	31.3%
2013	22.8		24.1	725.4	772.2	93.1	16.2%
2014	51.3		9.9	721.6	782.8	92.7	17.6%
2015	51.2	$387.4	9.2	491.8	939.5	97.7	52.6%
2016	5.8	509.6	27.3	415.9	958.6	99.0	60.7%
2017	0.1	181.2	0.4	464.2	645.9	62.8	34.5%
2018	0.0	448.0	56.1	3.0	507.0	84.8	99.5%

Note: Numbers may not add due to rounding.

(1) Incorporates portions of State grant assistance of $1.285 billion from the 2015-2016 State Budget and $700 million from the 2016-2017 State Budget. The remaining State grant funds have been or are expected to be drawn down in the period from 2017-2020.

3.3 HISTORICAL DEBT SERVICE EXPENSES

As a result of a higher level of capital investment and the reduced pay-as-you-go financing in recent years the Authority utilized additional bond/note proceeds to finance commitments made in the multi-year Capital Programs. As summarized in Table 6, the greater reliance on bonds and the issuance of short-term notes to finance programmed capital improvements resulted in annual debt service payments increasing from $163.5 million in 2008 to $299.5 million in 2018.

Table 6: Actual Debt Service, Thruway System, 2008-2018 (millions)

Year	Senior Debt Service	Debt Defeasance	Bond Anticipation Note (BAN) or Line of Credit Interest	Junior Debt Service	Total Debt Service
2008	$163.5	-	$0.0	-	$163.5
2009	166.3	-	10.6	-	176.9
2010	167.3	-	23.8	-	191.2
2011	167.4	-	14.4	-	181.8
2012	198.5	-	2.0	-	200.5
2013	239.8	-	0.3	-	240.1
2014	250.9	-	0.4	-	251.3
2015	235.4	-	0.4	-	235.7
2016	227.3	-	0.4	$29.2	256.9
2017	234.6	-	0.0	43.7	278.2
2018	220.3	-	0.0	79.2	299.5

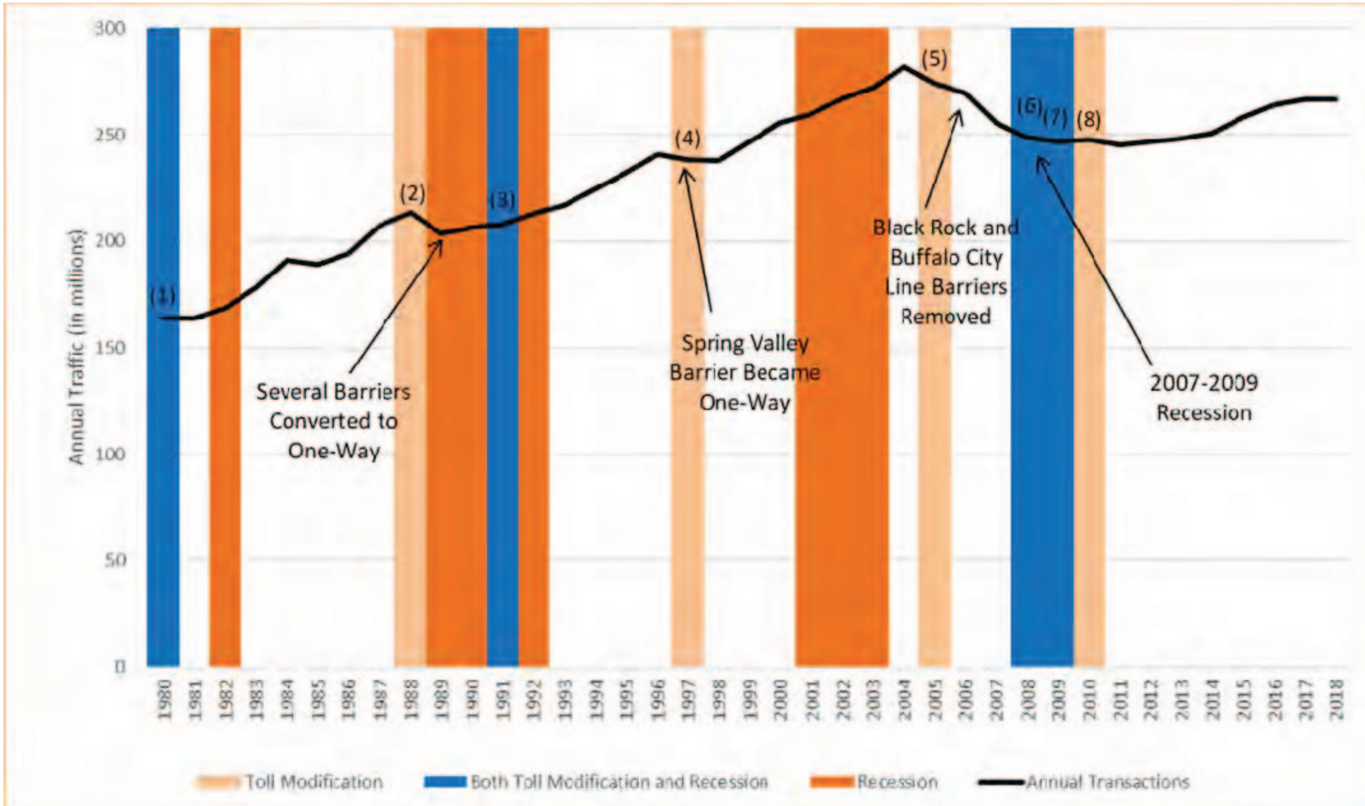
Note: Numbers may not add due to rounding.

3.4 HISTORICAL TRAFFIC AND REVENUES

3.4.1 Traffic

Figure 2 presents historical total traffic on the Thruway since 1980. Historically, slow traffic growth and traffic losses have been associated with economic downturns, toll increases, high fuel costs, harsh weather conditions and/or traffic shifts due to construction. It is important to note that the volumes shown are not adjusted for the various toll collection changes that occurred on the Thruway. For example, the 2005 toll modification resulted in the elimination of several commercial vehicle classes that were based on a single vehicle receiving two toll tickets/transactions, resulting in an apparent decrease in commercial traffic counts. This was a one-time occurrence that did not represent a decrease in actual number of vehicle trips made on the Thruway. Similarly, in October 2006, tolls were removed from the Buffalo City Line and Black Rock toll barriers which reduced total toll transactions on the Thruway by approximately 17 million annually.

Figure 2: Historical Thruway Traffic Volumes



(1) 1980 - Average Toll Increase of 25% Passenger Cars, 30% Commercial
(2) 1988 - Average Toll Increase of 32% Passenger Cars, 38% Commercial
(3) 1991 - Spring Valley Toll Adjustment, Passenger Cars Only
(4) 1997 - Tappan Zee Corridor Relief (Congestion Pricing)
(5) 2005 - System Reclassification, Average Toll Increase of 25% Passenger Cars, 35% Commercial
(6) 2008 - Average Toll Increase of 10% for All Vehicles, Plus Reduction of E-ZPass Discount in July
(7) 2009 - Average Toll Increase of 5% for All Vehicles
(8) 2010 - Average Toll Increase of 5% for All Vehicles (not apparent in all toll schedules, due to rounding)

Table 7 presents a recent history of tolled traffic on the various elements of the Thruway System. "Other Barriers" includes the barrier toll locations in Yonkers, New Rochelle, Spring Valley (trucks only), Harriman, and the Grand Island Bridges. The system experienced traffic losses throughout the 2007-2009 recession, followed by several years of nearly flat growth. At the George Washington Bridge, tolls increased four times between December 2012 and December 2015 and construction closures occurred, leading to considerable truck traffic growth on The Governor Mario M. Cuomo Bridge, its biggest competitor. From 2014 through 2016 there has been moderate growth, with traffic volumes exceeding the pre-recession 2007 volumes. Since 2016, traffic has remained relatively flat; this follows the nationwide trend in vehicle miles traveled.

The biggest change during this timeframe was the construction of The Governor Mario M. Cuomo Bridge which began in 2013. Cashless tolling began on the bridge in April 2016. The northern span of The Governor Mario M. Cuomo Bridge opened to northbound traffic in late August 2017, and in early October 2017 southbound traffic also shifted from the old Tappan Zee Bridge to the north span of the new bridge, operating with four lanes of traffic per direction. In September 2018, the south span of The Governor Mario M. Cuomo Bridge opened, and the four lanes of southbound traffic were shifted from the north to the south span. In addition, by the end of 2018 all remaining toll barriers were converted to cashless tolling.

Table 7: The Thruway System's Actual 2008-2018 Tolled Traffic (millions of trips)

Year	Passenger Cars			Commercial Vehicles			Total	Growth
	Controlled System	TZB/ Cuomo Br.	Other Barriers	Controlled System	TZB/ Cuomo Br.	Other Barriers		
2008 [1]	125.5	22.9	73.5	16.9	1.4	8.3	248.5	
2009 [1]	128.2	22.7	71.5	15.4	1.3	7.5	246.7	-0.7%
2010 [1]	129.0	23.1	70.7	15.7	1.4	7.7	247.6	0.4%
2011	126.6	22.6	70.9	15.8	1.4	7.9	245.2	-1.0%
2012	127.3	22.9	71.1	15.9	1.5	7.9	246.5	0.5%
2013	128.2	23.3	71.1	16.0	1.7	8.1	248.4	0.7%
2014	129.5	23.4	71.4	16.5	1.9	8.3	250.8	1.0%
2015	134.2	23.6	72.7	17.0	2.0	8.8	258.2	3.0%
2016 [2]	137.8	24.4	73.5	17.4	2.2	9.0	264.2	2.3%
2017	139.6	24.6	73.3	17.6	2.4	9.1	266.6	0.9%
2018 [3]	139.5	24.8	72.5	18.0	2.4	9.3	266.4	-0.1%

Notes: Totals may not add due to rounding. Traffic classified as non-revenue is not included.

(1) Toll Adjustments were implemented in 2008, 2009, and 2010.
(2) Cashless tolling began at The Governor Mario M. Cuomo Bridge (formerly Tappan Zee Bridge barrier) April 23, 2016.
(3) Cashless tolling began on Grand Island Bridges in March 2018, at the Harriman Barrier in September 2018, Yonkers Barrier in November 2018, and Spring Valley and New Rochelle Barriers in December 2018.

3.4.2 Toll Revenues

Table 8 presents a recent history of toll revenue on the Thruway System. Revenue from cars and trucks are shown separately for the Controlled System, The Governor Mario M. Cuomo Bridge, and the remaining toll barriers. Adjustments for commercial vehicle volume discounts are also included. There is a slight reduction in revenue at The Governor Mario M. Cuomo Bridge in 2016; this is due to its conversion to cashless tolling and the inability to bill or collect revenue from some Tolls by Mail customers, due to factors such bad or missing license plate images, invalid DMV records, invalid addresses, nonpayment of toll invoices, or dismissals. Additionally, there was a $6.2M adjustment to cash basis which relates to the lag in invoicing and collection of Tolls by Mail revenues (i.e., some Tolls by Mail tolls for trips made in 2016 were not collected until 2017). Note that in January 2017 the *E-ZPass* discount for customers with non-NY *E-ZPass* was discontinued, which is why the revenue growth for 2017 (3.3 percent) was noticeably higher than the traffic growth (0.9 percent) shown previously in Table 7. All of the remaining toll barriers were converted to cashless tolling in 2018: Grand Island Bridges in March 2018, Harriman Barrier in September 2018, Yonkers Barrier in November 2018, and Spring Valley and New Rochelle Barriers in December 2018, which, due to some uncollectable Tolls by Mail revenue, led to a small reduction in revenue at these barriers in 2018. Even with the conversion, 2018 saw positive system-wide toll revenue growth over 2017.

Table 8: The Thruway System's Actual 2008-2018 Toll Revenues (millions)

Year	Passenger Cars			Commercial Vehicles				Total	Growth	Adj. to Cash Basis for Tolls by Mail
	Controlled System	TZB/ Cuomo Br.	Other Barriers	Controlled System	TZB/ Cuomo Br.	Other Barriers	CV Disc			
2008 (1)	$193.8	$85.4	$67.9	$187.0	$21.2	$29.1	$(21.7)	$562.7	4.1%	
2009 (1)	215.0	103.5	82.4	180.7	21.3	30.0	(21.2)	611.6	8.7%	
2010 (1)	226.6	104.7	81.8	194.9	24.6	31.4	(22.8)	641.2	4.8%	
2011	220.2	102.4	81.3	196.3	24.1	32.4	(22.7)	634.1	-1.1%	
2012	220.7	103.4	81.2	196.9	26.2	32.1	(22.8)	637.7	0.6%	
2013	225.6	105.1	81.3	199.1	28.8	32.8	(23.8)	648.9	1.8%	
2014	226.5	105.1	81.6	209.6	32.2	33.6	(24.6)	664.1	2.3%	
2015	237.8	106.5	83.5	219.3	34.4	35.6	(25.5)	691.7	4.2%	
2016 (2)	245.2	103.4	84.0	227.6	38.2	36.4	(26.6)	708.3	2.4%	$(6.2)
2017 (3)	251.6	103.4	84.1	233.3	47.8	38.7	(27.4)	731.5	3.3%	
2018 (4)	250.3	104.2	81.3	242.0	47.8	39.1	(28.0)	736.5	0.7%	($0.7)

Notes: Totals may not add due to rounding.
(1) Toll Adjustments were implemented in 2008, 2009, and 2010.
(2) Cashless tolling began at The Governor Mario M. Cuomo Bridge April 23, 2016.
(3) Removal of discounts for vehicles with non-NY E-ZPass began on 1/1/17.
(4) Cashless tolling began on Grand Island Bridges in March 2018, at the Harriman Barrier in September 2018, Yonkers Barrier in November 2018, and Spring Valley and New Rochelle Barriers in December 2018.

3.4.3 Other Revenues

In addition to toll revenues, the Authority collects a variety of non-toll revenues derived from payments received from concessionaires at the Thruway service areas' restaurant and gasoline stations, sales of surplus property, revenues from special hauling permits, *E-ZPass* violations and other *E-ZPass* fees, fiber optic agreements, interest on various invested funds, and other miscellaneous sources. In addition, after the start of cashless tolling at The Governor Mario M. Cuomo Bridge in April 2016, "other revenues" also include fines and late fees collected from Tolls by Mail customers who do not pay their toll bills on time. One of these fees is a $5 per bill late fee which is charged on the second bill sent to Tolls by Mail customers if payment has not been received for the first toll bill. This fee is split among all the New York *E-ZPass* agencies whose transactions appear on a single late toll bill. In addition, on the third bill – a violation notice – a fine is charged *per transaction*. Violations also continue to be charged to *E-ZPass* customers who travel through a toll location without sufficient funds in their accounts, and cash customers who evade the toll. Some changes were made in recent years to violation fees charged on the Thruway System:

- On January 20, 2016 an enforcement measure was enacted whereby drivers of New York State registered vehicles with toll violations on five days over an 18-month period would have their registration suspended. In 2017 this was changed to three violations over a five-year period. This enforcement measure was applied to all past unpaid tolls and violations from prior years.

- Starting January 1, 2017, violations for system-wide *E-ZPass* vehicles and Governor Mario M. Cuomo Bridge Tolls by Mail customers that did not pay their toll bills increased from $25 to $50.

- On January 17, 2017, this Tolls by Mail violation fee increased again to $100 at The Governor Mario M. Cuomo Bridge.

- On January 9, 2018, the Authority announced a short-term amnesty program that allowed Tolls by Mail customers with open toll violations to pay their outstanding tolls and have all violations and late fees waved. This program ran from January 22, 2018 through February 26, 2018 and resulted in $1.1 million in additional toll revenue for The Governor Mario M. Cuomo Bridge.

- Starting May 15, 2018, the Tolls by Mail violation fee was reduced to $50 per transaction at The Gov. Mario M. Cuomo Bridge. This Tolls by Mail $50 violation fee applies to all the other barriers that have converted to cashless tolling.

In 2016, the first year with cashless tolling, $5.3 million was collected in *E-ZPass* violation fees, which was about $1.5 million more than the amount collected in 2015. This grew to $7.7 million in 2017 and $10.6 million in 2018. The increases can be attributed to enforcement measures and included a significant amount of delayed violation payments (i.e., violations from trips made in prior years). In addition, all E-ZPass violation trips made in 2017 and after were charged the increased *E-ZPass* violation fee of $50.

Also in 2016, $0.3 million was collected in $5 per bill late fee charges which appear on the second bill sent to Tolls by Mail customers, and $2.2 million was collected in Tolls by Mail violation fees which are charged per transaction on the third bill sent to Tolls by Mail customers. These collected revenues grew significantly to $1.0 million and $14.6 million in Tolls by Mail late fees and violations, respectively, in 2017. This growth is because 2017 was the first full year with Tolls by Mail at The Governor Mario M. Cuomo Bridge, and because the Tolls by Mail violation fee increased from $25 to $50 to $100. In 2018, the amnesty program and the reduction in Tolls by Mail violation fees to $50 at the Bridge resulted in a reduction of late fees from Tolls by Mail customers: the Authority collected $0.9 million in second bill late fees plus $10.6 million in violations.

Historical gross total revenues, including both toll revenues and other revenues between 2008 and 2018, are summarized in Table 9.

Table 9: Summary of 2008 – 2018 Actual Thruway System Gross Total Revenues (millions)

Year	Toll Revenues	Other Revenues	Total Revenues
2008 (1)	$562.7	$33.5	$596.2
2009 (1)	611.6	26.7	638.3
2010 (1)	641.2	31.3	672.5
2011	634.1	31.4	665.5
2012	637.7	31.5	669.2
2013	648.9	31.8	680.7
2014	664.1	32.4	696.4
2015	691.7	34.6	726.3
2016 (2)	708.3	41.0 (3)	749.4
2017 (4)	731.5	60.6 (3)	792.1
2018 (5)	736.5	62.3 (3)	798.8

Note: Totals may not add due to rounding
(1) Toll Adjustments were implemented in 2005, 2008, 2009, and 2010.
(2) Cashless tolling began at The Governor Mario M. Cuomo Bridge April 23, 2016.
(3) Includes fines and late fees collected from Tolls by Mail customers who do not pay their toll bills on time.
(4) E-ZPass discount discontinued for vehicles with non-NY E-ZPass accounts.
(5) Cashless tolling began on Grand Island Bridges in March 2018, at the Harriman Barrier in September 2018, Yonkers Barrier in November 2018, and Spring Valley and New Rochelle Barriers in December 2018.

3.5 HISTORICAL FLOW OF FUNDS ANALYSIS

Table 10 presents total revenue and expenses for 2010 through 2018 in a format that is consistent with the flow of funds required by the Authority's Bond Resolution. As noted in this table, from 2010 through 2018 the Authority was able to maintain fiscal stability and a debt service coverage ratio that warranted its current favorable credit investment grade credit rating. This was accomplished by the capital program reductions, operational cost containment efforts and toll rate adjustments. However, these actions were insufficient to fully maintain net revenues at a level that would result in good coverage and fiscal balance. As a result the Authority relied on the issuance of short term notes to bridge financing gaps in lieu of taking other actions. The combination of these measures allowed the Authority to maintain a balanced flow of funds and achieve budget surpluses that were used to enhance its working capital reserves.

Table 10: Historical Thruway Flow of Funds and Debt Service Coverage (millions)

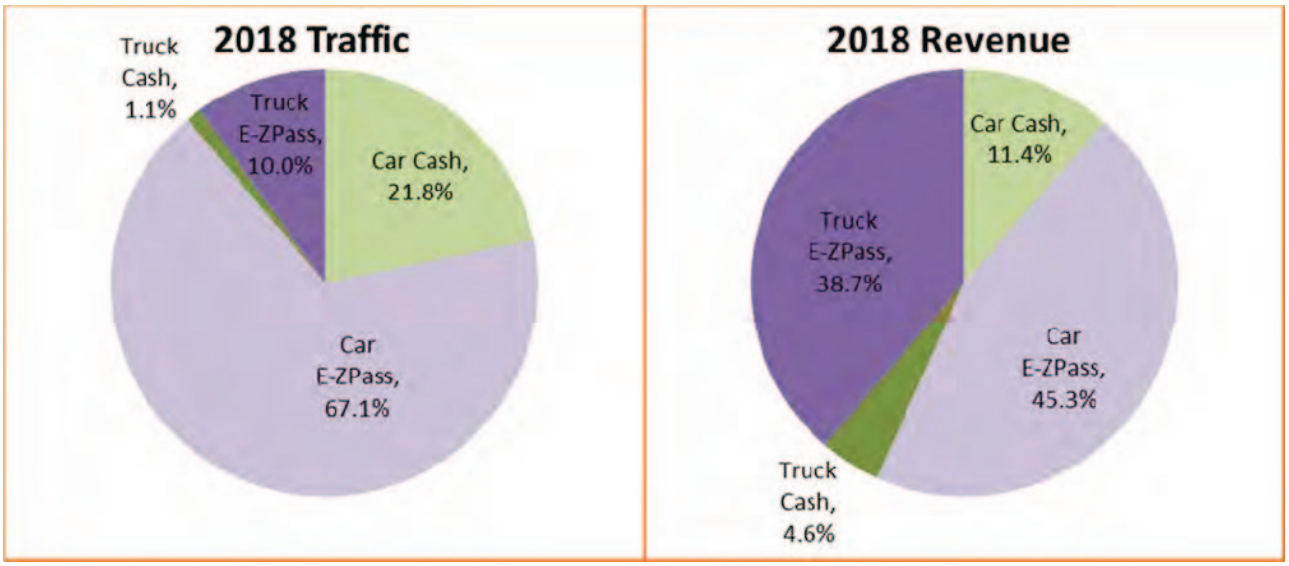
	ACTUAL								
	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total Revenues	$ 672.5	$ 665.5	$ 669.2	$ 680.7	$ 696.4	$ 726.3	$ 749.4	$ 792.1	$ 798.8
Less:									
Operating Expenses	358.2	365.4	357.0	279.6	286.1	287.4	311.6	329.7	339.9
Operating Reserves	6.0	4.6	2.0	3.5	5.9	1.8	1.8	2.7	5.0
Total	364.2	370.0	359.0	283.1	292.0	289.2	313.3	332.4	345.0
Net Revenues	308.3	295.5	310.2	397.6	404.40	437.1	436.0	459.7	453.8
Less: Sr. Debt Service	167.3	167.4	198.5	239.8	250.9	235.4	227.3	234.6	220.3
Net Revenues After Debt Service	141.0	128.1	111.7	157.8	153.5	201.7	208.7	225.1	233.5
Less: Reserve Maintenance Provisions	31.0	10.0	36.2	79.8	35.7	97.1	68.8	103.2	74.1
Less: Junior Bond Debt Service							29.2	43.7	79.2
Less: Retained for Operating Reserves/AETC Lag/ Working Capital provision	(18.8)	(4.3)	(5.3)	10.8	(15.2)	(18.1)	(8.5)	(19.3)	(24.6)
Less: Facil Cap Imp Fund	-	-	8.0	25.0	10.0	20.5	14.0	5.0	12.0
Other Authority Projects	46.0	51.3	51.9	47.7	46.8	52.0	13.8	-	-
General Reserve Fund	45.1	62.6	10.1	16.1	45.6	14.0	74.0	54.0	43.6
Adj to cash basis	0.1	(0.1)	0.2		0.2		0.4	-	-
Balance After Reserve Maintenance Provisions, Other Authority Projects	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Senior Debt Service Coverage	1.84	1.77	1.56	1.66	1.61	1.86	1.92	1.96	2.06
Junior & Senior Coverage	1.84	1.77	1.56	1.66	1.61	1.86	1.70	1.65	1.52

Note: Totals may not add due to rounding.

4.0 THRUWAY TRIPS AND CUSTOMERS

To better understand Thruway revenue trends and the impact toll policy may have on its patrons, it is important to appreciate the traffic make-up on the Thruway System and its customer base. As shown in Figure 3, in 2018 roughly 89 percent of traffic on the Thruway System was composed of passenger cars, with the remaining 11 percent of traffic coming from variety of commercial vehicle types. In 2018, more than 77 percent of total vehicles paid tolls with an *E-ZPass* transponder (approximately 76 percent of passenger vehicles and 90 percent of commercial vehicles). It should be noted that while commercial vehicle traffic made up only 11 percent of system-wide traffic, it accounted for about 43 percent of all Thruway toll revenues.

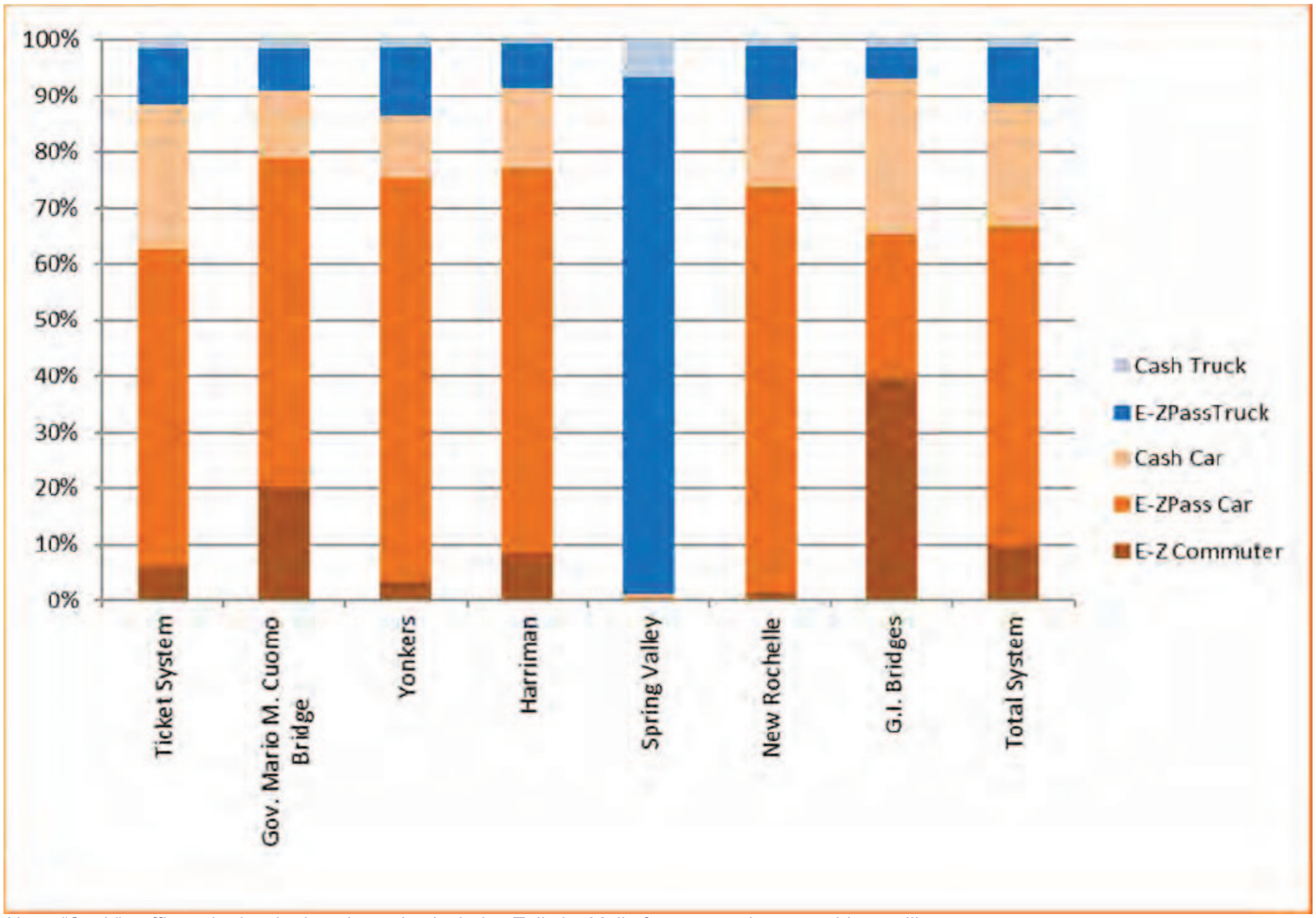
Figure 3: 2018 System Wide Traffic and Revenue Distribution



Note: "Cash" also includes Tolls by Mail Traffic and Revenue at the barrier locations after they were converted to cashless tolling.

The distributions of vehicle class and payment types vary by facility, as shown in Figure 17. The highest passenger car participation in *E-ZPass* is seen at the Yonkers Barrier and Governor Mario M. Cuomo Bridge, while the highest truck participation rate in *E-ZPass* payment is seen at the Harriman and Spring Valley Barriers. It should be noted that although *E-ZPass* transactions account for about 77 percent of annual transactions on the Thruway, the majority of actual individual customers using the Thruway over the course of a year travel infrequently and do not have *E-ZPass*.

Figure 4: 2018 Passenger Car and Commercial Vehicle Traffic Distribution by Facility



Note: "Cash" traffic at the barrier locations also includes Tolls by Mail after conversion to cashless tolling

As noted in Figure 5, the controlled system and The Governor Mario M. Cuomo Bridge generate the most significant portions of the Thruway's traffic and revenue. In 2018, the controlled system generated a total of $492.3 million or about 64 percent of all Thruway toll revenues and The Governor Mario M. Cuomo Bridge generated $151.9 million or about 20 percent of total toll revenues. The New York City metropolitan area barrier tolls generated about $102.5 million or a combined 13 percent of 2018 revenues, while the Grand Island Bridges generated about $17.8 million or some 2 percent of revenues. 2018 total toll revenues were $764.5 million collected in toll transactions minus $28.0 million in commercial vehicle volume discounts (discussed on page 35), for a net amount of $736.5 million.

Specific regions within the controlled (ticket) system that see the most traffic volume include the Albany area, the Buffalo mainline plazas, and the Woodbury mainline plaza. The top six plaza volumes for the controlled system in 2018 are shown in Table 11.

Figure 5: Distribution of 2018 Toll Revenues by Thruway Facility

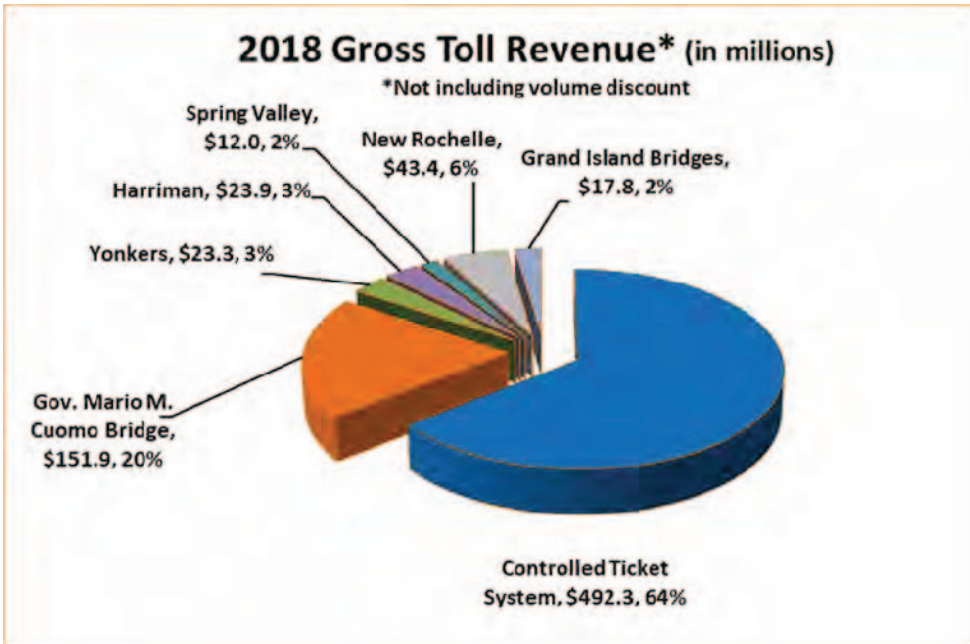


Table 11: Controlled System Toll Plazas with the Highest Volumes, 2018

Plaza / Interchange	Millions of Transactions
Exit 24: Albany, Montreal, I-90 East, I-87 North	14.1
Exit 50: Williamsville (Buffalo)	10.2
Exit 55: Lackawanna (Buffalo)	9.3
Exit 15: Woodbury	7.9
Exit 25: Schenectady, I-890, NY Routes 7 & 146	7.3
Exit 45: Rochester, Victor, I-490	6.9

Finally, in 2018, customers that had a transponder issued by a New York State toll agency (the Thruway Authority, Port Authority of NY & NJ or the Metropolitan Transportation Authority) accounted for about 77 percent of total *E-ZPass* toll revenues. As a result, 23 percent of *E-ZPass* toll revenues were collected from customers that had a non-New York issued transponder, underscoring the importance of the Thruway System in the regional and national economy.

5.0 CAPITAL PROGRAM

In order to better understand the Authority's current and future financial condition, consideration must be given to the size, complexity and capital needs of its highway and bridge infrastructure. The Authority's Thruway System is extensive and aging and requires considerable investments to remain reliable. This section summarizes the Authority's 2019-2024 Capital Program, the infrastructure investments and program changes that are to be made therein, and the impact that these investments will likely have on facility condition ratings. Table 4 on page 11 and Table 12 on page 26 summarize the actual annual capital expenditures from 2008 through 2018, and planned expenditures through 2024. These are followed by Table 5 and Table 13 which provide detail on the funding sources for the recent capital program and projections for future capital programs.

5.1 2019-2024 CAPITAL PROGRAM DETAILS

The Authority's 2019-2024 Capital Program will provide about $2.78 billion for Authority capital projects. This includes approximately $537.4 million for the remaining elements of the New NY Bridge Project, and $497.5 million for the implementation of system-wide cashless tolling. The Capital Program includes reconstruction and rehabilitation of roadway, bridges, facilities, equipment and support systems. From 2019 through 2024, the Authority believes that the planned investments made in this program will preserve overall highway and bridge conditions in the "good" category, allowing for the continued reliability of the Thruway System and to accomplish full completion of the New NY Bridge Project and Thruway System-wide cashless tolling.

The New NY Bridge Project / Governor Mario M. Cuomo Bridge is discussed in Section 5.2. Other than the New NY Bridge Project and Thruway System-wide cashless tolling conversion, major Thruway projects included in the 2019-2024 program include:

- Pavement Replacement from Electronics Parkway (Exit 37, MP 284.1) to I-690 (Exit 39, MP 289.3) and Replacement of the (MP 288.13) Thruway Bridge over CSX Railroad (Geddes) and Rehabilitation of (MP 287.11) Bridge over Onondaga Pkwy and (MP 287.25) Bridge over Onondaga Lake Outlet (2021 letting)
- I-95, New England Thruway north of Exit 17 to north of Exit 18B Northbound Only and north of Exit 19 to north of Exit 21: Pavement Resurfacing (2021 letting)
- Castleton Bridge (MP 801.08): Rehabilitation (2020 letting)
- I-287/Route 17S (Exit 15, MP 29.4) to north of Suffern (MP 38.7): Pavement Resurfacing (2021 letting)
- Major Deegan Expressway (MP 0.00) to Cross Westchester Expressway (Exit 8, MP 11.3): Pavement Resurfacing (2021 letting)
- North and South Grand Island Bridges: Retrofit / Repair Roller Bearings, Pins and Hangers and North Grand Island Bridges: Steel Repairs (2020 letting)
- East of Westfield (MP 483.0) to Pennsylvania State Line (MP 496.0) Eastbound: Pavement Resurfacing (2020 letting)
- North Avenue Bridge over I-95 (New England Thruway MP NE5.76): Replacement (2021 letting)
- South of Nyack (MP 16.2) to south of Spring Valley Toll Barrier: Pavement Resurfacing (2021 letting)

The Authority adopts its Capital Program on a rolling 5-year basis, amending it each year to include the next year. As the Authority progresses through the current Capital Program, it will continue to modernize and enhance its asset management and capital program management systems to ensure that changes to the program maintain the proper project mix, maximize investment value, and maintain good condition ratings as the economy and pricing environments change.

5.2 THE NEW NY BRIDGE PROJECT / GOVERNOR MARIO M. CUOMO BRIDGE

The Authority is nearing completion of a massive transportation project: the replacement of the Tappan Zee Bridge with the new Governor Mario M. Cuomo Bridge. In December 2012, the Authority selected Tappan Zee Constructors (TZC) as the winning team for the project with a bid of $3.142 billion. The major TZC team members include Fluor Enterprises, Inc.; Granite Construction Northeast, Inc.; American Bridge Company and Traylor Brothers, Inc. TZC members both individually and together as a team have a proven track record of successfully delivering complex, high profile mega projects. Construction on the new bridge began in 2013.

The major features and design elements for The Governor Mario M. Cuomo Bridge consist of: twin bridge spans approximately three miles in total length with a 100-year design life; multi steel girder/composite deck approach spans at each end, with cable-stayed spans over the main Hudson River shipping channels and chamfered towers supporting the cables; four lanes of vehicle traffic per direction with cashless tolling on the south span, continuing to collect tolls from southbound traffic only; bus rapid transit lanes; and a shared-use bike and pedestrian path with viewing areas on the north span.

Cashless tolling began on the Tappan Zee Bridge on April 23, 2016 and continues today on The Governor Mario M. Cuomo Bridge. Implementing this tolling technology has offered motorists many advantages, including reduced travel times, enhanced safety and improved traffic flow, and provides environmental benefits by limiting idling and reducing delays, as vehicles no longer have to stop at a toll plaza. Cashless tolling utilizes overhead gantries with readers to detect *E-ZPass* transponders and cameras to read license plates of non-*E-ZPass* customers who are later billed by mail. The implementation of cashless tolling ensured uninterrupted toll collection during construction and through the completion of The Governor Mario M. Cuomo Bridge.

The north span of the new Governor Mario M. Cuomo Bridge opened in late August 2017, at which point all northbound/westbound traffic was moved off of the old Tappan Zee Bridge and onto the new span. Southbound/eastbound traffic was temporarily moved to the north span in early October 2017. The south span of the new bridge opened in September 2018, at which point the southbound/eastbound traffic was shifted to this span. Toll collection was uninterrupted throughout the entire construction period. The new bridge has a larger deck capacity than the old Tappan Zee Bridge, so full traffic-carrying capacity has been assured.

The total budget for the New NY Bridge Project is nearly $4.0 billion, financed through (i) toll revenue bonds constituting Junior Indebtedness Obligations, as well as with (ii) pay-as-you-go funding, and (iii) proceeds of State Infrastructure Grant Contributions. As of July 2019, the project cost paid out to TZC was $3.357 billion or 97.7 percent of the $3.435 billion contract value. Remaining elements of the project include the completion of demolition activities on the old bridge, and the completion of a bicycle/pedestrian pathway with viewing areas.

Figure 6 is a photograph depicting the status of the bridge project as of early July 2019, showing that both spans of The Governor Mario M. Cuomo bridge are open to traffic, with a bicycle and pedestrian path currently under construction on the northbound span. Demolition activities continue on the old Tappan Zee Bridge foundations.

Figure 6: New NY Bridge Project

Source: http://www.newnybridge.com

Additional information on the project can be found at: http://www.newnybridge.com.

5.3 PLANNED CAPITAL EXPENDITURES

Table 12 presents the 2019-2024 planned expenditures. Capital costs for system-wide cashless tolling conversion are included in these numbers. With these planned capital expenditures, the Authority can continue to provide good service to its customers, meet the demands of future traffic growth, and ensure that the system is not adversely affected by deteriorating bridge and pavement conditions.

Table 12: Projected 2019-2024 Total Capital Expenditures (millions)

Year	Thruway Highway and Bridges Capital Expenditures	Equipment Replacement and Other Facility Capital Needs (1)	Canal System and Other Authority Projects	Subtotal Capital Program Expenditures	New NY Bridge Project Capital Costs	Total Capital Program Expenditures
2019	$222.1	$187.6	$0.0	$409.7	$220.0	$629.7
2020	219.7	314.0	0.0	533.7	72.4	606.1
2021	231.1	129.4	0.0	360.5	245.0	605.5
2022	243.9	64.9	0.0	308.9	0.0	308.9
2023	259.7	50.3	0.0	310.0	0.0	310.0
2024	265.7	50.5	0.0	316.2	0.0	316.2
Total 2019-2024	**$1,442.3**	**$796.7**	**$0.0**	**$2,239.0**	**$537.4**	**$2,776.4**

Note: Numbers may not add due to rounding.
(1) *Includes capital costs for system-wide cashless tolling conversion*

Table 13 summarizes planned funding sources for the 2019-2024 Capital Program.

Table 13: Projected 2019-2024 Funding Sources, Thruway Authority (millions)

Year	Funding Sources						
	Federal Aid	State Stabilization (1)	Other	Bond / Note Proceeds	Subtotal Exclusive of Thruway Revenues on Pay-As-You-Go Basis	Revenues Required from Tolls, etc.	Pay-As-You-Go %
2019	$0.0	$397.6	$10.3	$0.0	$407.9	$221.8	100.0%
2020	-	61.2	1.3	481.1	543.6	62.4	20.6%
2021	-		2.4	535.4	537.8	67.8	11.6%
2022	-		0.8	257.8	258.6	50.3	16.5%
2023	-		0.2	238.0	238.2	71.8	23.2%
2024	-		0.2	239.0	239.3	76.9	24.4%
Total 2019-2024	**$0.0**	**$458.8**	**$15.2**	**$1,751.3**	**$2,225.2**	**$551.1**	**36.9%**

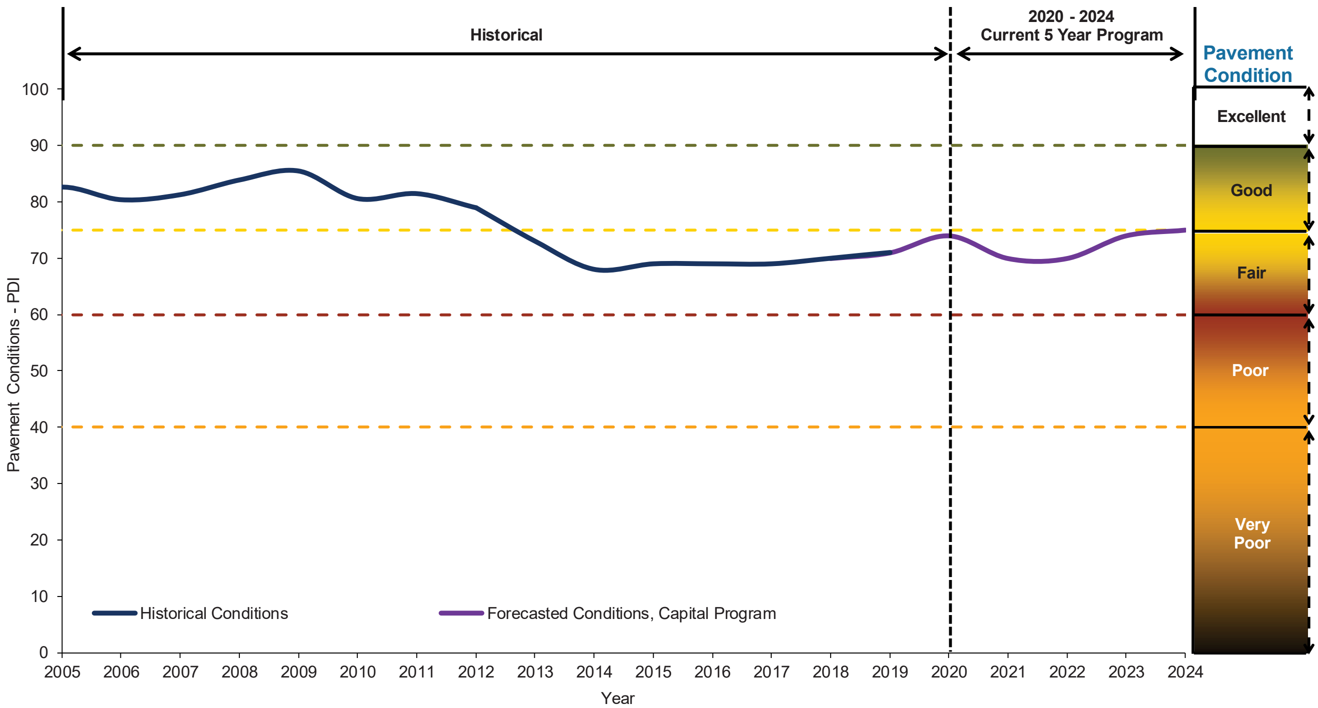
Note: Numbers may not add due to rounding.
(1) *The remaining State grant funds have been or are expected to be drawn down in the period from 2019-2020.*

5.4 THE IMPACT OF THE CAPITAL PROGRAM ON CONDITIONS

As previously noted, the main goals of the Authority's capital and maintenance program are to preserve a high level of patron safety and service, maintain facilities in a state of good repair and ensure the overall reliability of the highway system. One measure of the effectiveness of these maintenance and capital programs is the condition ratings of highway and bridge facilities.

Figure 7 displays the historic average rating of Thruway pavement surface conditions since 2005 and the projected ratings as a result of the current capital program. During the life of the current capital program, it is projected that the pavement ratings for the Thruway facilities will range from "fair" to "good", slightly better than recent years.

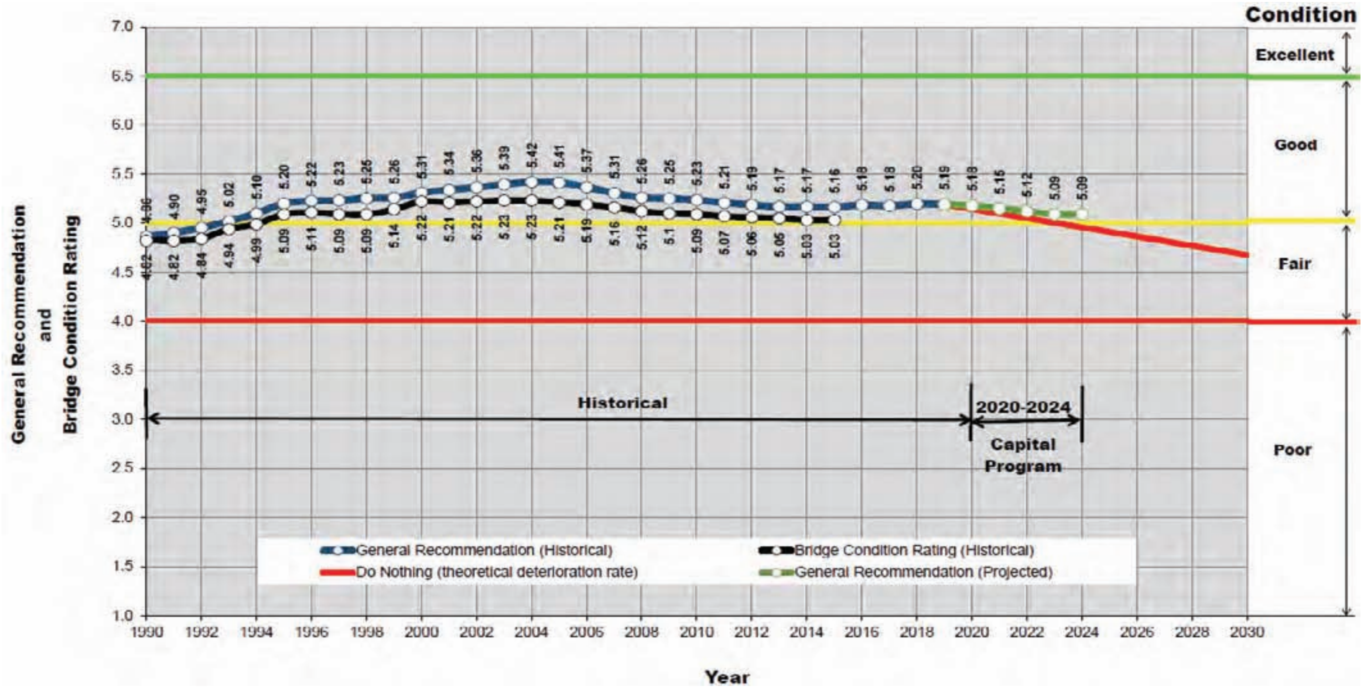
Figure 7: Historical and Forecasted Thruway Pavement Distress Indices (PDI), 2005-2024



Similarly, the Authority maintains ratings for the 814 bridge structures for which it has maintenance responsibility. The Authority strictly complies with all State and federal bridge inspection requirements and the assessments in this report reflect the outcomes of such inspections. Figure 8 shows actual and projected bridge condition ratings from 1990 through 2024 and include a change in the bridge inspection methodology in 2016, which was mandated by the Federal Highway Administration (FHWA). As noted, the current capital program will maintain the average rating of all bridges in the "good" category.

Prior to 2016, the bridge condition rating was calculated by a specific formula containing separate components for each of the bridge elements. For a multi-span structure, the lowest rated pier, deck span, bearing, etc., are used to calculate the condition rating. For example, if a bridge has eight bearings, seven of which are rated "good" and one of which is rated "fair," the rating of "fair" would be applied as the rating for bearings in the calculation of the overall bridge condition. The new inspection methodology represents the condition of each element in terms of how much of the element is in a specific condition, called "condition state."

Figure 8: Historical and Forecasted Thruway Bridge Condition Ratings, 1990-2024



Note: Due to changes in the New York State Bridge Inspection System in 2016, the Bridge Condition Rating in 2016 through 2024 was projected based upon the 2015 data.

Table 14 presents a summary of the general recommendation rating for bridges on the Thruway as of December 2018 compared to 2017. The general recommendation is the inspector's assessment of the overall bridge condition. This rating was not affected by the inspection methodology change. The general recommendation ranges from 7 (bridge is in new condition) to 1 (bridge deterioration is so extensive that partial or total collapse is imminent). The lowest general recommendation for a Thruway bridge is 3 (considerable deterioration of some or all bridge components). There was overall a slight improvement in the Authority's bridge rating between December 2017 and December 2018. Three of the nine bridges with a recommendation of 3 are currently being replaced. An additional four bridges with a general recommendation of 3 will be replaced in the 2019-2024 Capital Program.

Table 14: Bridge Conditions, December 2018 and December 2017

BRIDGE RATINGS		
CONDITION	NO. OF BRIDGES	
	Dec. 2017	Dec. 2018[1]
GENERAL RECOMMENDATION 5-7 Bridges in generally good condition with only minor to moderate repairs required.	679	689
GENERAL RECOMMENDATION 4 Bridges in good to fair condition requiring reconditioning of some structural elements.	122	115
GENERAL RECOMMENDATION 2-3 Bridges in poor condition requiring major repairs or replacement.	8	9

[1]In December 2018, the Authority had maintenance and inspection responsibility for 813 bridges. One new bridge was added in 2019 - the south span of The Gov. Mario M. Cuomo Bridge.

6.0 EXPENSES AND REVENUES WITH THE CURRENT TOLL SCHEDULE

The following section summarizes the important components of the Authority's current long-term financial plan based on the current toll structure, the 2019-2024 Capital Program and projected operating expenses.

6.1 PROJECTED OPERATING AND MAINTENANCE EXPENSES

Table 15 shows the 2019 through 2024 projected O&M costs. The cost impacts (new costs related to the Tolls by Mail program, plus reductions in toll plaza staffing and plaza maintenance costs) have been included as facilities are converted to cashless tolling.

Table 15: The Thruway System's Projected 2019-2024 Operating and Maintenance Expenses (millions)

Year	Thruway Operations	Reserves[1]	Total Operating Expenses, 2019 Budget Forecast
2019	$358.3	$4.6	$ 362.9
2020 [2]	370.7	1.0	371.7
2021	374.8	1.0	375.8
2022	380.4	1.0	381.4
2023	386.1	1.0	387.1
2024	391.9	1.0	392.9
Total 2019-2024	**$2,262.2**	**$9.6**	**$2,271.8**

[1] Includes provisions for legal claims and indemnities and reserves for environmental remediation.
[2] It is assumed that cashless tolling will begin on the entire controlled system in October 2020.

6.2 PROJECTED DEBT SERVICE EXPENSES

Table 16 shows debt service expenses on general revenue bonds and notes issued under the Bond Resolution to support the Authority's current and future capital needs, as manifested in the Capital Program, and based on the current toll schedule. As noted, debt service expenses are expected to increase as the Authority issues additional bonds to refinance outstanding notes and finance the future infrastructure needs of the Thruway System. Debt service expenses are projected to reach a maximum of $425.5 million in 2024.

Table 16: Projected 2019-2024 Debt Service with Current Toll Schedule, Thruway System (millions)

Year	Senior Debt Service	Bond Anticipation Note (BAN) or Line of Credit Interest	Junior Debt Service	Total Debt Service
2019	$229.5	$13.3	$53.4	$296.3
2020	233.6	0.0	47.0	280.6
2021	229.5	0.0	49.1	278.6
2022	265.6	0.0	75.9	341.5
2023	286.1	0.0	120.7	406.8
2024	303.1	0.0	122.5	425.5
Total 2019-2024	**$1,547.3**	**$13.3**	**$468.6**	**$2,029.2**

Note: Numbers may not add due to rounding. Projected debt service numbers are net of Debt Service Reserve Fund interest.

6.3 PROJECTED TRAFFIC AND REVENUES

6.3.1 Projected Traffic with Current Toll Schedule

Table 17 shows Stantec's forecast of traffic through 2024 with the current toll schedule. As in previous forecasts, moderate traffic growth is projected.

Table 17: Projected 2019-2024 Tolled Traffic with Current Toll Schedule (millions of trips)

	Passenger Cars			Commercial Vehicles				
Year	Controlled System	Gov. Mario M. Cuomo Br.	Other Barriers	Controlled System	Gov. Mario M. Cuomo Br.	Other Barriers	Total	Growth
2019	140.2	25.6	71.5	18.2	2.4	9.4	267.2	0.3%
2020 (1)	141.6	25.9	71.8	18.3	2.5	9.5	269.6	0.9%
2021	143.0	26.3	72.4	18.4	2.5	9.6	272.2	1.0%
2022	144.4	26.7	73.2	18.5	2.5	9.7	275.0	1.0%
2023	145.8	27.0	73.6	18.6	2.6	9.8	277.4	0.8%
2024	147.1	27.4	74.0	18.7	2.6	9.8	279.6	0.8%

Notes: Totals may not add due to rounding. Traffic classified as non-revenue is not included. No future toll rate adjustments are assumed in the forecasts.
(1) Cashless tolling assumed to begin on the entire controlled system in October 2020.

6.3.2 Projected Toll Revenue with Current Toll Schedule

Table 18 presents the gross toll revenue forecasts for the Thruway System through 2024 with the current toll schedule. Implementation of cashless tolling is assumed to begin on the entire controlled system in October 2020. In the forecasts, Tolls by Mail revenue collectability and lag adjustments similar to what has been experienced on The Governor Mario M. Cuomo Bridge and the other barriers were applied to the Controlled System as it is converted to cashless tolling. In general, moderate growth in toll revenue is expected, with some small losses in toll revenue estimated when cashless tolling begins on the controlled system, due to uncollectable tolls from some Tolls by Mail customers.

Table 18: Projected 2019-2024 Toll Revenues with Current Toll Schedule (millions)

	Passenger Cars			Commercial Vehicles						
Year	Controlled System	Gov. Mario M. Cuomo Br.	Other Barriers	Controlled System	Gov. Mario M. Cuomo Br.	Other Barriers	CV Disc	Total	Growth	Adj. to Cash Basis for Tolls by Mail
2019	$251.8	$108.8	$75.7	$244.5	$49.1	$38.4	$(28.6)	$739.6		$(1.1)
2020 (1)	246.2	110.8	75.5	243.6	49.8	38.9	(29.0)	735.8	-0.5%	(12.7)
2021	225.9	113.0	76.6	238.0	50.4	39.3	(29.3)	713.8	-3.0%	
2022	229.2	115.0	77.9	239.9	51.0	39.6	(29.6)	722.9	1.3%	
2023	232.1	116.7	78.4	241.6	51.5	39.9	(29.9)	730.4	1.0%	
2024	234.8	118.3	78.9	243.2	51.9	40.2	(30.2)	737.1	0.9%	

Notes: Totals may not add due to rounding. No toll rate adjustments are assumed in the forecasts.
(1) Cashless tolling assumed to begin on the entire controlled system in October 2020.

6.3.3 Other Revenues/Total Revenues with Current Toll Schedule

Table 19 presents the forecasts of 2019-2024 total gross revenues with the current toll schedule. An estimated three-month lag in collection of the $5 per bill late fees and five-month lag in collection of violation fees has been built into the forecasts, as it takes time after a trip is made to bill and collect any fees that are charged. The current Tolls by Mail violation fee of $50 has been assumed at all facilities throughout the forecast period. As the cashless tolling implementation progresses on the Thruway System, these schedules of fees and penalties, as well as enforcement capabilities may change, which could have an impact on the currently projected levels of “other revenues”. Note that there is the need for additional revenues starting in 2022.

Table 19: Projected 2019-2024 Thruway System Total Gross Revenues with Current Toll Schedule (millions)

Year	Toll Revenues	Other Revenues (1)	Additional Revenue Need	Total Revenues
2019	$739.6	$61.3		$800.9
2020 (2)	735.8	58.2		793.9
2021	713.8	76.2		790.0
2022	722.9	91.8	$27.7	842.4
2023	730.4	88.1	117.8	936.3
2024	737.1	88.3	142.0	967.4

Note: Totals may not add due to rounding. No toll rate adjustments are assumed in the forecasts.
(1) Includes fines and late fees collected from Tolls by Mail customers who do not pay their toll bills on time.
(2) Cashless tolling assumed to begin on the entire controlled system in October 2020.

6.4 FLOW OF FUNDS

The Authority and its independent financial advisors determined that there will be additional revenues needed for the Authority to successfully complete the New NY Bridge project and fulfill its system-wide operating, debt service, and capital needs through the forecast period. Future funding needs through 2024 were established by the Authority at amounts necessary to continue its high levels of safety and service, maintain good infrastructure conditions, support Thruway operations, and maintain debt service coverage levels appropriate for its current high “A” credit rating.

The projected flow of funds included in Table 20 shows the future revenue needs and debt service coverage ratios through 2024. The funding for the Capital Program and estimated debt to be refunded are also displayed in the table. In determining future funding needs, it is important to note that the Authority has a management commitment to a future minimum debt service coverage ratio of 1.55x for the Senior Lien, above the Board-adopted guideline of 1.50x. Additionally, the Authority has a management commitment to a minimum debt service coverage ratio for combined Senior Bonds and Junior Indebtedness Obligations of 1.35x, higher than the Junior Indebtedness Resolution requirement of 1.2x coverage for the combined annual Senior Bond debt service and annual Junior Indebtedness Obligation debt service. These Board-adopted minimum coverage ratio guidelines are met or exceeded every year of the forecast through 2021; to meet minimum coverage requirements in 2022, 2023, and 2024, an additional $27.7 million, $117.8 million, and $142.0 million, respectively, are needed. In the absence of any proposed additional funding amounts, the Authority has the power, without approval by the Legislature or the Governor, to increase toll rates to maintain its high level of operating safety and services on the Thruway System, to maintain and rehabilitate the Thruway System, to pay debt service, to meet toll covenants and to maintain the balance of revenues and expenses. Based on our experience and knowledge of the Thruway System, it is our opinion that the essentiality of the Thruway System, its currently low relative toll rates, and the size of future rate adjustments that may be needed to produce these additional revenues can be achieved. Those adjustments would likely result in only small adverse changes to traffic patterns.

Table 20: Historical and Projected Thruway Flow of Funds and Debt Service Coverage with Current Toll Schedule (millions)

	ACTUAL			FORECAST						2019-2024
	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Total Revenues	$749.4	$792.1	$798.8	$800.9	$793.9	$790.0	$814.7	$818.5	$825.4	$4,843.4
Gap Closing Revenues [1]	0.0	0.0	0.0	0.0	0.0	0.0	27.7	117.8	142.0	287.5
Available Revenues	749.4	792.1	798.8	800.9	793.9	790.0	842.4	936.3	967.4	5,130.9
Less:										
Operating Expenses	311.6	329.7	339.9	358.3	370.7	374.8	380.4	386.1	391.9	2,262.3
Operating Reserves	1.8	2.7	5.0	4.6	1.0	1.0	1.0	1.0	1.0	9.6
Total	313.3	332.4	345.0	362.9	371.7	375.8	381.4	387.1	392.9	2,271.9
Net Revenues	436.0	459.7	453.8	437.9	422.3	414.1	461.0	549.2	574.5	2,859.0
Less: Sr. Debt Service	227.3	234.6	220.3	229.5	233.6	229.5	265.6	286.1	303.1	1,547.3
Net Revenues After Debt Service	208.7	225.1	233.5	208.4	188.7	184.7	195.4	263.1	271.4	1,311.7
Less: Retained for Operating Reserves/AETC Lag/ Working Capital provision	-8.5	-19.3	-24.6	12.2	-12.7	0.0	0.0	0.0	0.0	-0.5
Remaining Revenues	200.2	205.9	209.0	220.7	176.0	184.7	195.4	263.1	271.4	1,311.2
Less: Reserve Maintenance Provisions	68.8	103.2	74.1	103.7	62.4	67.8	50.3	71.8	76.9	433.0
Less: Junior Bond Debt Service	29.2	43.7	79.2	53.4	47.0	49.1	75.9	120.7	122.5	468.6
Less: Facil Cap Imp Fund	14.0	5.0	12.0	8.0						8.0
Other Authority Projects	13.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
General Reserve Fund [2]	74.0	54.0	43.6	42.2	66.5	67.8	69.2	70.6	72.0	388.3
Gen Res Fund - JIAN	0.4	0.0	0.0	13.3	0.0	0.0	0.0	0.0	0.0	13.3
Balance After Reserve Maintenance Provisions, Other Authority Projects	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Senior Debt Service Coverage	1.92	1.96	2.06	1.91	1.81	1.80	1.74	1.92	1.90	
Junior & Senior Coverage	1.70	1.65	1.52	1.55	1.50	1.49	1.35	1.35	1.35	
Pay go % ROS Capital	60.7%	34.5%	99.5%	100.0%	20.6%	11.6%	16.5%	23.2%	24.4%	

Notes: Totals may not add due to rounding.
Numbers incorporate a total of $1.985 billion in State capital assistance provided in the 2015-2016 and 2016-2017 Enacted State Budgets. No toll rate adjustments are assumed in these forecasts. Total Revenues include Tolls by Mail revenues that are earned in a fiscal year but not collected until later fiscal years. The amounts earned but not collected until later years are projected to be $1.1 million in 2019 and $12.7 million in 2020. The 2018 Retained for Operating Reserves/cashless tolling Lag figure of ($24.6 million) is comprised of the following: ($683,167) associated with an Adjustment to Cash Basis due to Tolls by Mail revenues that are earned in 2018 but not collected until later fiscal years; $20.5 million in revenues retained from 2017; ($15 million) retained for Working Capital; and ($29.4 million) retained for 2019 Operating Reserves.
(1) In 2022 through 2024 additional revenues are needed to meet the minimum coverage requirements for both the Senior Lien and combined Senior Bonds and Junior Indebtedness Obligations. The Authority has a management commitment to a future minimum debt service coverage ratio of 1.55x for the Senior Lien, above the Board-adopted guideline of 1.50x. The Authority has a management commitment to a minimum debt service coverage ratio for combined Senior Bonds and Junior Indebtedness Obligations of 1.35x, higher than the Junior Indebtedness Resolution requirement of 1.2x coverage for the combined annual Senior Bond debt service and annual Junior Indebtedness Obligation debt service.
(2) The General Reserve Fund figures from April 2016 through 2024 reflect Thruway revenues required to reimburse the State of New York for costs associated with the New York State Police Troop T patrolling of the Thruway system.

7.0 PROPOSED MODIFICATIONS TO CURRENT TOLL RATES AND THE IMPACT TO THE AUTHORITY'S FINANCIALS

As concluded in the previous section of this report, funding shortages, inadequate debt service coverage ratios and low Pay-As-You-Go financing generated from the current toll scheduled will require the Authority to pursue new revenue sources to complement its program of enhancing operational efficiency. This section proposes a specific toll adjustment that will provide fiscal stability and healthy financial metrics through the year 2024.

With the exception of a small amount of federal aid and other funds, tolls collected on the controlled system and through toll barriers support an overwhelming majority of the Authority's budget. The following provides a brief history of toll adjustments on the Thruway System and compares Thruway toll rates – both current and proposed - to those on other facilities in the northeast.

7.1 RECENT HISTORY OF TOLL ADJUSTMENTS ON THE THRUWAY SYSTEM

In 2005, a two-stage toll adjustment was implemented by the Authority that generally increased toll rates by 25 percent for all passenger vehicles and 35 percent for all commercial vehicles, and increased cash tolls in 2008 for both passenger and commercial vehicles by 10 percent. Additionally, in 2005 the Authority also implemented a new vehicle classification system (reducing the number of classifications from 43 to 9), created a new *E-ZPass* discount program, continued a graduated volume discount program for commercial customers and expanded the availability of commuter plans to bridges and barriers on the Thruway System.

In response to the financial pressures brought on by high and volatile fuel prices and the state of the national economy, the Authority implemented another series of staged, smaller adjustments to toll rates in 2008. These adjustments were designed to provide additional funding to assist the Authority in financing operational, maintenance and capital commitments made in the 2005-2011 Capital Program period. The 2008 toll adjustments maintained a 5 percent *E-ZPass* discount for all patrons, but added two five-percent across-the-board increases, which took effect in 2009 and 2010. There have been no changes to toll rates on the Thruway System in the past nine years, with the exception of the recent discontinuation of discounts for vehicles with non-NY *E-ZPass*: both the 5 percent system-wide discount and the discounts for non-peak commercial vehicles (of up to 50 percent) at the Spring Valley Barrier and The Governor Mario M. Cuomo Bridge ceased as of January 1, 2017.

7.2 CURRENT TOLL RATES ON THE THRUWAY SYSTEM

The Authority's current toll rate structure, in effect since 2010, is presented in Table 21.

Table 21: Current Thruway Toll Structure ($)

Vehicle Class [1]	Controlled (Cents/Mile)		Yonkers		Harriman		Spring Valley		New Rochelle		Gov. Mario M. Cuomo Bridge		Grand Island Bridges	
	Cash	E-Z Pass	TBM[2]	E-Z Pass	TBM[2]	E-Z Pass	TBM[2]	E-Z Pass[3]	TBM[2]	E-Z Pass	TBM[2]	E-Z Pass[3]	TBM[2]	E-Z Pass
Commuter	-	[4]	-	0.55	-	0.55	-	-	-	1.10	-	3.00	-	0.28
Motor-Cycle	-	0.0235	-	0.63	-	0.63	-	-	-	0.88	-	2.50	-	0.50
2L	0.0470	0.0447	1.25	1.19	1.25	1.19	-	-	1.75	1.66	5.00	4.75 / 4.75	1.00	0.95
3L	0.0728	0.0691	1.50	1.43	1.50	1.43	3.00	3.00 / 1.50	2.50	2.38	11.50	11.50 / 5.75	1.50	1.43
4L	0.0864	0.0821	1.75	1.66	1.75	1.66	4.50	4.50 / 2.25	3.00	2.85	13.75	13.75 / 6.88	1.75	1.66
2H	0.0933	0.0886	2.00	1.90	2.00	1.90	5.25	5.25 / 2.63	3.50	3.33	14.75	14.75 / 7.38	2.00	1.90
3H	0.1604	0.1524	2.25	2.14	2.75	2.61	8.25	8.25 / 4.13	4.25	4.04	20.75	20.75 / 10.38	2.25	2.14
4H	0.1768	0.1680	2.75	2.61	3.00	2.85	8.25	8.25 / 4.13	5.00	4.75	24.75	24.75 / 12.38	2.75	2.61
5H	0.2390	0.2271	4.25	4.04	4.25	4.04	13.50	13.50 / 6.75	8.00	7.60	32.75	32.75 / 16.38	4.25	4.04
6H	0.2963	0.2815	4.50	4.28	5.00	4.75	14.75	14.75 / 7.38	8.75	8.31	41.00	41.00 / 20.50	4.50	4.28
7H	0.3536	0.3359	5.00	4.75	5.75	5.46	16.50	16.50 / 8.25	9.75	9.26	49.25	49.25 / 24.63	5.00	4.75

(1) Classes are generally denoted by the number of axles (2 through 7) and the vehicle height. "L" represents vehicles under 7.5' and "H" represents vehicles over 7.5' in height. Customers in the commuter program pay $60 a month, covering up to 20 passenger car trips, and $3.00 for each additional trip.
(2) TBM=Tolls by Mail, a payment type offered at cashless facilities only
(3) Peak/off peak E-ZPass rates
(4) Controlled system permit plan customers pay $88/year which covers the toll for the first 30 miles or less of a passenger car trip.
NOTE: E-ZPass customers with a non-NY Customer Service Center E-ZPass charged the cash rate starting January 1, 2017.

In order to receive *E-ZPass* discounts, a driver must have a transponder issued by a New York State toll agency (the Thruway Authority, Port Authority of NY & NJ or the Metropolitan Transportation Authority). In addition to the standard 5 percent discount with a NY-issued *E-ZPass*, the Authority offers several specialized *E-ZPass* discount programs. Among these are a series of commuter plans designed specifically for frequent users of the Thruway that use one or more of the barrier toll stations. *E-ZPass* customers can pre-pay a monthly minimum for each facility that they choose and then receive discounted travel for each trip taken in excess of the minimum charge. In addition to the barrier commuter discounts, the controlled system offers an annual permit that when purchased allows for the first 30 miles of each trip to be free of tolls.

Other specialized passenger car plans include a special resident discount for residents of Grand Island when crossing through either of the Grand Island toll barriers, and a system-wide green discount that is available to certain high mileage vehicles that both achieve MPG ratings greater than 45 MPG and meet certain emission standards. Motorcycles, motor homes and "5th wheel" or "gooseneck" vehicles or vehicle combinations are also eligible for discounts. These discounts are administered through the *E-ZPass* program and proof of residency or registration for the various plans and vehicle combinations must also be provided.

For commercial vehicles, there are currently two types of discount programs offered. The S-Discount is for non-tandem commercial vehicles less than or equal to 48 feet in length and requires an *E-ZPass* transponder issued by a New York Customer Service Center. The second discount program is a commercial volume discount for Thruway Charge Account customers that offers progressively higher discounts based on the monthly toll charges on an account basis:

- $1,001 to $2,000 - 10%
- $2,001 to $3,000 - 15%
- Over $3,000 - 20%

7.3 PROPOSED TOLL MODIFICATIONS

The proposed toll modifications are described in Table 22.

Table 22: Proposed Toll Modifications

GOVERNOR MARIO M. CUOMO BRIDGE RATES	
Toll Modification Element	**Description**
Increase NY E-ZPass by $0.50 per year in 2021 and 2022	On January 1, 2021 the NY E-ZPass toll rates on the Bridge will be increased by the amount of 50 cents to $5.25. On January 1, 2022 the NY E-ZPass toll rates on the Bridge will be increased another 50 cents to $5.75.
40% Commuter Discount Program*	Beginning on January 1, 2021, the commuter discounted rate will be 40 percent off the NY E-ZPass rate for passenger vehicles that opt in to the program. Similar to today, the rates assume that a minimum of 20 trips are made in that month; if fewer than 20 trips are taken per month, customers are charged for each trip not taken. This program is offered to class 2L vehicles only, with a New York E-ZPass.
Resident Discount Program*	A new resident E-ZPass Plan will be offered for Westchester and Rockland residents that will keep their rate frozen at the current $4.75 rate. This program is offered only to class 2L vehicles with a New York E-ZPass who opt in to the plan and provide proof of residency (e.g., having a vehicle registered in one of these counties).
Commercial Rates	Class 2H through 4H and S class tolls will be increased proportionate to the car toll increases for each payment type. Class 5H through 7H truck tolls will be increased 20% more than the car toll increases for each payment type
CHANGES TO SUPPORT SYSTEM-WIDE CONVERSION TO CASHLESS TOLLING	
Incentivize NY E-ZPass Usage	Establish that with the conversion to system-wide cashless tolling in 2020, NY E-ZPass toll rates would be based on the current toll rates first established in 2010, and beginning on January 1, 2021 a 30 percent rate differential (a toll rate 30 percent above the NY E-ZPass rate) would be established for Tolls By Mail toll rates.
Non-NY E-ZPass Rates	Beginning on January 1, 2021, establish a 15 percent rate differential (a toll rate 15 percent above the NY E-ZPass rate for Non-NY E-ZPass tolls).
Image Tolls Policy	Clarify Board Policy that beginning on January 1, 2021, all transactions that are processed as image tolls will pay the Tolls By Mail toll rate. This clarification would apply to customers who have an E-ZPass account yet their toll transaction must be processed via the Tolls by Mail process (e.g., due to failure to mount the E-ZPass transponder properly and a toll transaction is processed through a license plate image review).
Impose a $2 Administrative Surcharge on Tolls by Mail Bills	Beginning on January 1, 2021, implement a $2 administrative surcharge per billing statement for non-E-ZPass statements to support the administrative costs associated with processing transactions through the Tolls by Mail program and to incentivize more customers to sign up for an E-ZPass account.

**It should be noted that 89 percent of passenger trips will pay a discounted rate compared to the Tolls by Mail rate and that 45 percent of this traffic will be paying the discounted rates for the commuter and resident plans.*

Table 23 presents the proposed toll schedule between now and 2024 for passenger cars (Class 2L) and five-axle trucks (Class 5H). The full proposed toll schedule is included in the Appendix. Table 24 presents the proposed year-over-year toll increase amounts.

Table 23: Proposed Toll Schedule for Passenger Cars and 5-Axle Trucks

Governor Mario M. Cuomo Bridge Class 2L Car Tolls

	Commuter E-ZPass	Resident E-ZPass*	Std. NY E-ZPass	Out of State E-ZPass	Tolls by Mail
Current	$ 3.00	$ 4.75	$ 4.75	$ 5.00	$ 5.00
2021	**$ 3.15**	$ 4.75	**$ 5.25**	**$ 6.04**	**$ 6.83**
2022	**$ 3.45**	$ 4.75	**$ 5.75**	**$ 6.61**	**$ 7.48**
2023	$ 3.45	$ 4.75	$ 5.75	$ 6.61	$ 7.48
2024	$ 3.45	$ 4.75	$ 5.75	$ 6.61	$ 7.48

Governor Mario M. Cuomo Bridge Class 5H Truck Tolls

	HOME EZ (PK)	HOME EZ (OP)	AWAY EZ	Cash/ TBM
Current	$ 32.75	$ 16.38	$ 32.75	$ 32.75
2021	**$ 42.90**	**$ 21.45**	**$ 49.34**	**$ 55.77**
2022	**$ 55.77**	**$ 27.89**	**$ 64.14**	**$ 72.51**
2023	$ 55.77	$ 27.89	$ 64.14	$ 72.51
2024	$ 55.77	$ 27.89	$ 64.14	$ 72.51

Westchester/Rockland Co. Residents who apply for the plan and provide proof of residency

Rest of System Class 2L Car Tolls

	Mainline (per mi)			Grand Island Bridges					Yonkers Barrier				Harriman Barrier				New Rochelle Barrier			
	Std. NY E-ZPass	Out of State E-ZPass	Cash/ Tolls by Mail	GIB Resident E-ZPass	Commuter E-ZPass	Std. NY E-ZPass	Out of State E-ZPass	Tolls by Mail	Commuter E-ZPass	Std. NY E-ZPass	Out of State E-ZPass	Tolls by Mail	Commuter E-ZPass	Std. NY E-ZPass	Out of State E-ZPass	Tolls by Mail	Commuter E-ZPass	Std. NY E-ZPass	Out of State E-ZPass	Tolls by Mail
Current	$ 0.0447	$ 0.0470	$ 0.0470	$ 0.09	$ 0.28	$ 0.95	$ 1.00	$ 1.00	$ 0.55	$ 1.19	$ 1.25	$ 1.25	$ 0.55	$ 1.19	$ 1.25	$ 1.25	$ 1.10	$ 1.66	$ 1.75	$ 1.75
2021	$ 0.0447	**$ 0.0514**	**$ 0.0581**	$ 0.09	$ 0.28	$ 0.95	**$ 1.09**	**$ 1.24**	$ 0.55	$ 1.19	**$ 1.37**	**$ 1.54**	$ 0.55	$ 1.19	**$ 1.37**	**$ 1.54**	$ 1.10	$ 1.66	**$ 1.91**	**$ 2.16**
2022	$ 0.0447	$ 0.0514	$ 0.0581	$ 0.09	$ 0.28	$ 0.95	$ 1.09	$ 1.24	$ 0.55	$ 1.19	$ 1.37	$ 1.54	$ 0.55	$ 1.19	$ 1.37	$ 1.54	$ 1.10	$ 1.66	$ 1.91	$ 2.16
2023	$ 0.0447	$ 0.0514	$ 0.0581	$ 0.09	$ 0.28	$ 0.95	$ 1.09	$ 1.24	$ 0.55	$ 1.19	$ 1.37	$ 1.54	$ 0.55	$ 1.19	$ 1.37	$ 1.54	$ 1.10	$ 1.66	$ 1.91	$ 2.16
2024	$ 0.0447	$ 0.0514	$ 0.0581	$ 0.09	$ 0.28	$ 0.95	$ 1.09	$ 1.24	$ 0.55	$ 1.19	$ 1.37	$ 1.54	$ 0.55	$ 1.19	$ 1.37	$ 1.54	$ 1.10	$ 1.66	$ 1.91	$ 2.16

Rest of System Class 5H Truck Tolls

	Mainline (per mi)			Grand Island Bridges			Yonkers Barrier			Harriman Barrier			New Rochelle Barrier			Spring Valley Barrier			
	Std. NY E-ZPass	Out of State E-ZPass	Cash/ Tolls by Mail	Std. NY E-ZPass	Out of State E-ZPass	Tolls by Mail	Std. NY E-ZPass	Out of State E-ZPass	Tolls by Mail	Std. NY E-ZPass	Out of State E-ZPass	Tolls by Mail	Std. NY E-ZPass	Out of State E-ZPass	Tolls by Mail	HOME EZ (PK)	HOME EZ (OP)	AWAY EZ	Tolls by Mail
Current	$ 0.2271	$ 0.2390	$ 0.2390	$ 4.04	$ 4.25	$ 4.25	$ 4.04	$ 4.25	$ 4.25	$ 4.04	$ 4.25	$ 4.25	$ 7.60	$ 8.00	$ 8.00	$ 13.50	$ 6.75	$ 13.50	$ 13.50
2021	$ 0.2271	**$ 0.2612**	**$ 0.2952**	$ 4.04	**$ 4.64**	**$ 5.25**	$ 4.04	**$ 4.64**	**$ 5.25**	$ 4.04	**$ 4.64**	**$ 5.25**	$ 7.60	**$ 8.74**	**$ 9.88**	$ 13.50	$ 6.75	**$ 15.53**	**$ 17.55**
2022	$ 0.2271	$ 0.2612	$ 0.2952	$ 4.04	$ 4.64	$ 5.25	$ 4.04	$ 4.64	$ 5.25	$ 4.04	$ 4.64	$ 5.25	$ 7.60	$ 8.74	$ 9.88	$ 13.50	$ 6.75	$ 15.53	$ 17.55
2023	$ 0.2271	$ 0.2612	$ 0.2952	$ 4.04	$ 4.64	$ 5.25	$ 4.04	$ 4.64	$ 5.25	$ 4.04	$ 4.64	$ 5.25	$ 7.60	$ 8.74	$ 9.88	$ 13.50	$ 6.75	$ 15.53	$ 17.55
2024	$ 0.2271	$ 0.2612	$ 0.2952	$ 4.04	$ 4.64	$ 5.25	$ 4.04	$ 4.64	$ 5.25	$ 4.04	$ 4.64	$ 5.25	$ 7.60	$ 8.74	$ 9.88	$ 13.50	$ 6.75	$ 15.53	$ 17.55

Note: Full toll schedule for all classes is included in the Appendix

Table 24: Proposed Annual Toll Increase Amounts for Passenger Cars and 5-Axle Trucks

Governor Mario M. Cuomo Bridge Class 2L Car Tolls

	Commuter E-ZPass	Resident E-ZPass*	Std. NY E-ZPass	Out of State E-ZPass	Tolls by Mail
Current					
2021	$ 0.15		$ 0.50	$ 1.04	$ 1.83
2022	$ 0.30		$ 0.50	$ 0.58	$ 0.65
2023					
2024					

Westchester/Rockland Co. Residents who apply for the plan and provide proof of residency

Governor Mario M. Cuomo Bridge Class 5H Truck Tolls

	HOME EZ (PK)	HOME EZ (OP)	AWAY EZ	Cash/ TBM
Current				
2021	$ 10.15	$ 5.08	$ 16.59	$ 23.02
2022	$ 12.87	$ 6.44	$ 14.80	$ 16.73
2023				
2024				

Rest of System Class 2L Car Tolls

	Mainline (per mi)			Grand Island Bridges					Yonkers Barrier				Harriman Barrier				New Rochelle Barrier			
	Std. NY E-ZPass	Out of State E-ZPass	Cash/ Tolls by Mail	GIB Resident E-ZPass	Commuter E-ZPass	Std. NY E-ZPass	Out of State E-ZPass	Tolls by Mail	Commuter E-ZPass	Std. NY E-ZPass	Out of State E-ZPass	Tolls by Mail	Commuter E-ZPass	Std. NY E-ZPass	Out of State E-ZPass	Tolls by Mail	Commuter E-ZPass	Std. NY E-ZPass	Out of State E-ZPass	Tolls by Mail
Current																				
2021		$ 0.0044	$ 0.0111				$ 0.09	$ 0.24			$ 0.12	$ 0.29			$ 0.12	$ 0.29			$ 0.16	$ 0.41
2022																				
2023																				
2024																				

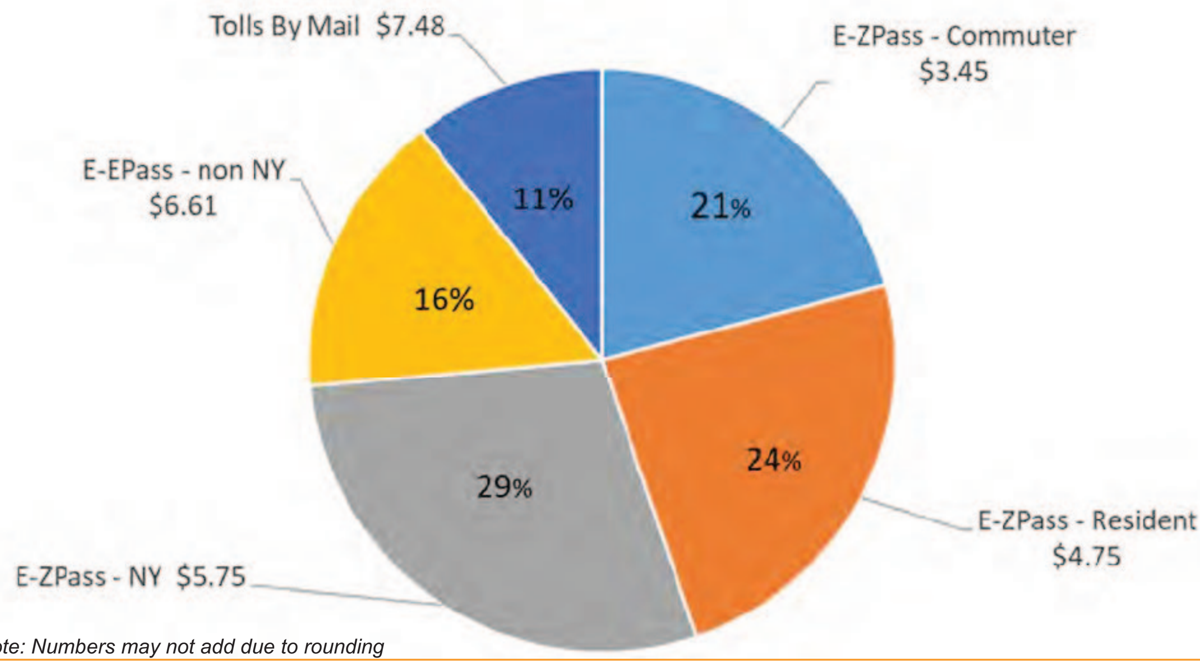
Rest of System Class 5H Truck Tolls

	Mainline (per mi)			Grand Island Bridges			Yonkers Barrier			Harriman Barrier			New Rochelle Barrier			Spring Valley Barrier			
	Std. NY E-ZPass	Out of State E-ZPass	Cash/ Tolls by Mail	Std. NY E-ZPass	Out of State E-ZPass	Tolls by Mail	Std. NY E-ZPass	Out of State E-ZPass	Tolls by Mail	Std. NY E-ZPass	Out of State E-ZPass	Tolls by Mail	Std. NY E-ZPass	Out of State E-ZPass	Tolls by Mail	HOME EZ (PK)	HOME EZ (OP)	AWAY EZ	Tolls by Mail
Current																			
2021		$ 0.0222	$ 0.0562		$ 0.39	$ 1.00		$ 0.39	$ 1.00		$ 0.39	$ 1.00		$ 0.74	$ 1.88			$ 2.03	$ 4.05
2022																			
2023																			
2024																			

Note: Full toll schedule for all classes is included in the Appendix

Figure 9 provides additional information on the Governor Mario M. Cuomo Bridge, in terms of the split of passenger car traffic paying the various proposed 2022 toll rates. 89 percent of car traffic will be discounted compared to the Tolls by Mail Rate, and about 45 percent of car traffic will pay less than the $5.75 proposed NY E-ZPass rate.

Figure 9: Governor Mario M. Cuomo Bridge Proposed 2022 Passenger Car Toll Rates and Share of Traffic in Each Category



Note: Numbers may not add due to rounding

7.4 COMPARISON OF PROPOSED THRUWAY TOLL RATES TO OTHER REGIONAL TOLL FACILITIES

7.4.1 Toll Rate Comparison

Figure 10 and Figure 11 compare toll rates on a number of major toll crossings in the northeast. Of note is that The Governor Mario M. Cuomo Bridge current and proposed 2021 and 2022 car tolls are below current rates on other metro New York crossings and reasonable when compared to other major crossings on the interstate highway system, as shown in Figure 10. Similar to the controlled system, the current and proposed peak 5-axle truck rates are also comparable to that of other regional facilities. A majority of The Governor Mario M. Cuomo Bridge commercial vehicles with a New York *E-ZPass* travel during off-peak periods, paying a reduced rate as low as half of the standard rate. In addition to the lower off-peak rates, many vehicles further reduce the average toll rate paid through participation in the commercial volume discount program. These reductions in the effective rate make the current and proposed Governor Mario M. Cuomo Bridge commercial toll rates considerably lower than those on other metro New York tolled crossings. It is also important to note that some locations shown will likely see a toll increase in the next several years; the Port Authority crossings (NY/NJ) already have a toll increase planned for January 2020.

Figure 10: Round Trip Toll Rates on Major Toll Crossings in the Northeast, Passenger Cars

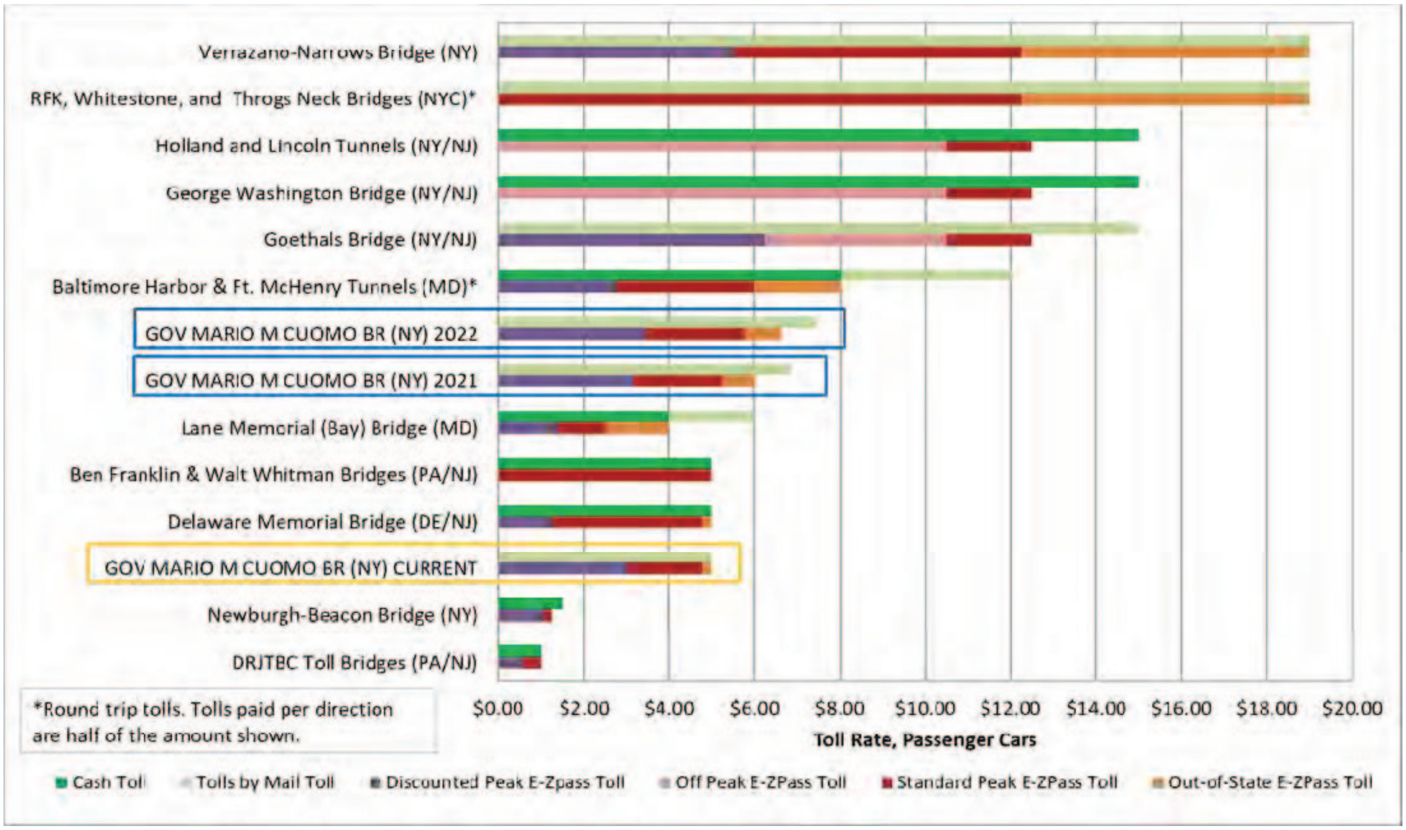


Figure 11: Round Trip Toll Rates on Major Toll Crossings in the Northeast, 5-Axle Trucks

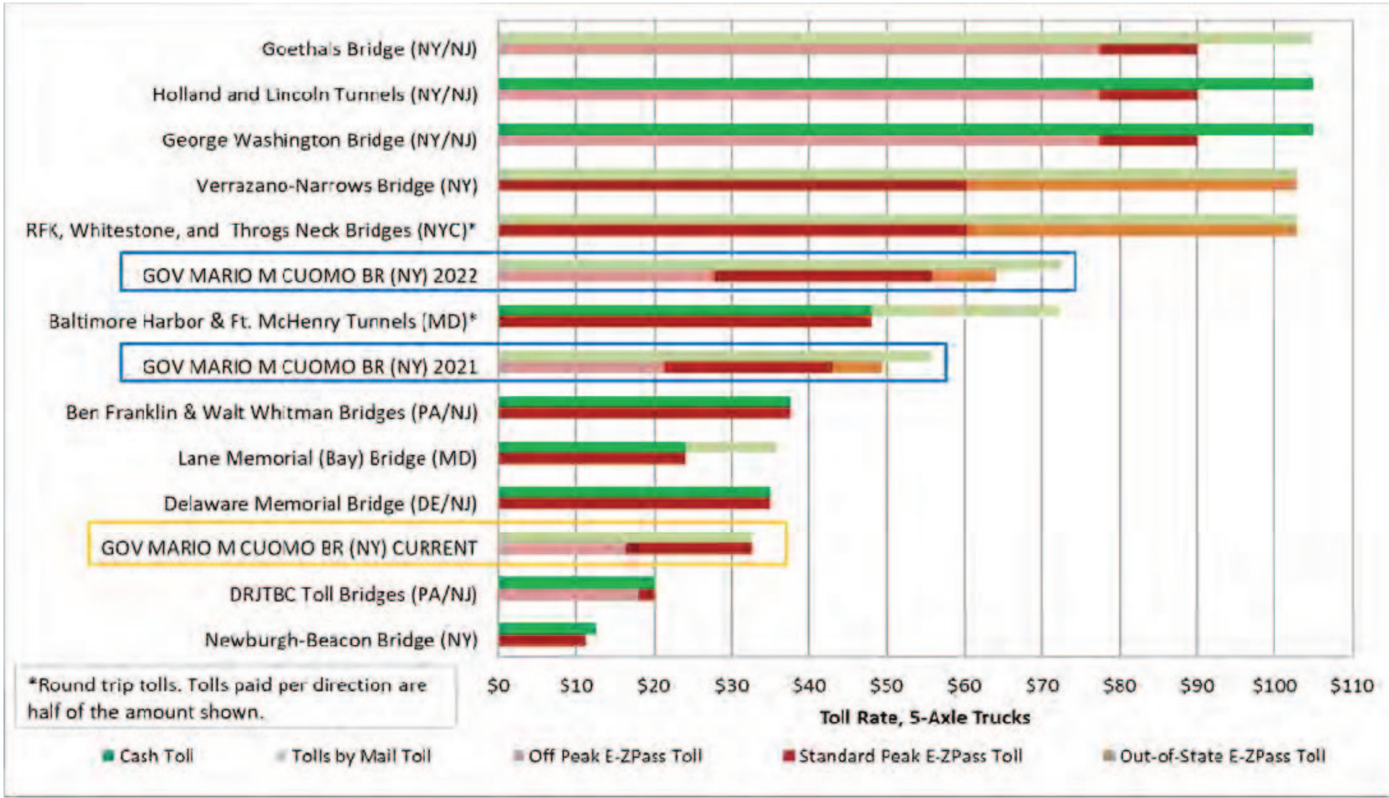


Figure 12 and Figure 13 compare the current and proposed 2021 Thruway toll rates per mile to current rates on a number of major toll roads in the northeastern quadrant of the United States. Rates for cash (or Tolls by Mail), standard *E-ZPass* (including any discounts for drivers with a New York State account), and Non-NY *E-ZPass* are shown. Of note is the comparatively low per-mile passenger car toll rates proposed for the Thruway's controlled system when compared to other toll facilities, as shown in Figure 12.

The current and proposed 5-axle truck rates, as seen in Figure 13, are also comparatively low on the Thruway relative to current rates on other regional facilities and will be effectively lower than the rate shown due to the commercial volume discount program.

Figure 12: Peak Toll Rates Per-Mile on Toll Roads in the Northeastern Quadrant of U.S., Passenger Cars

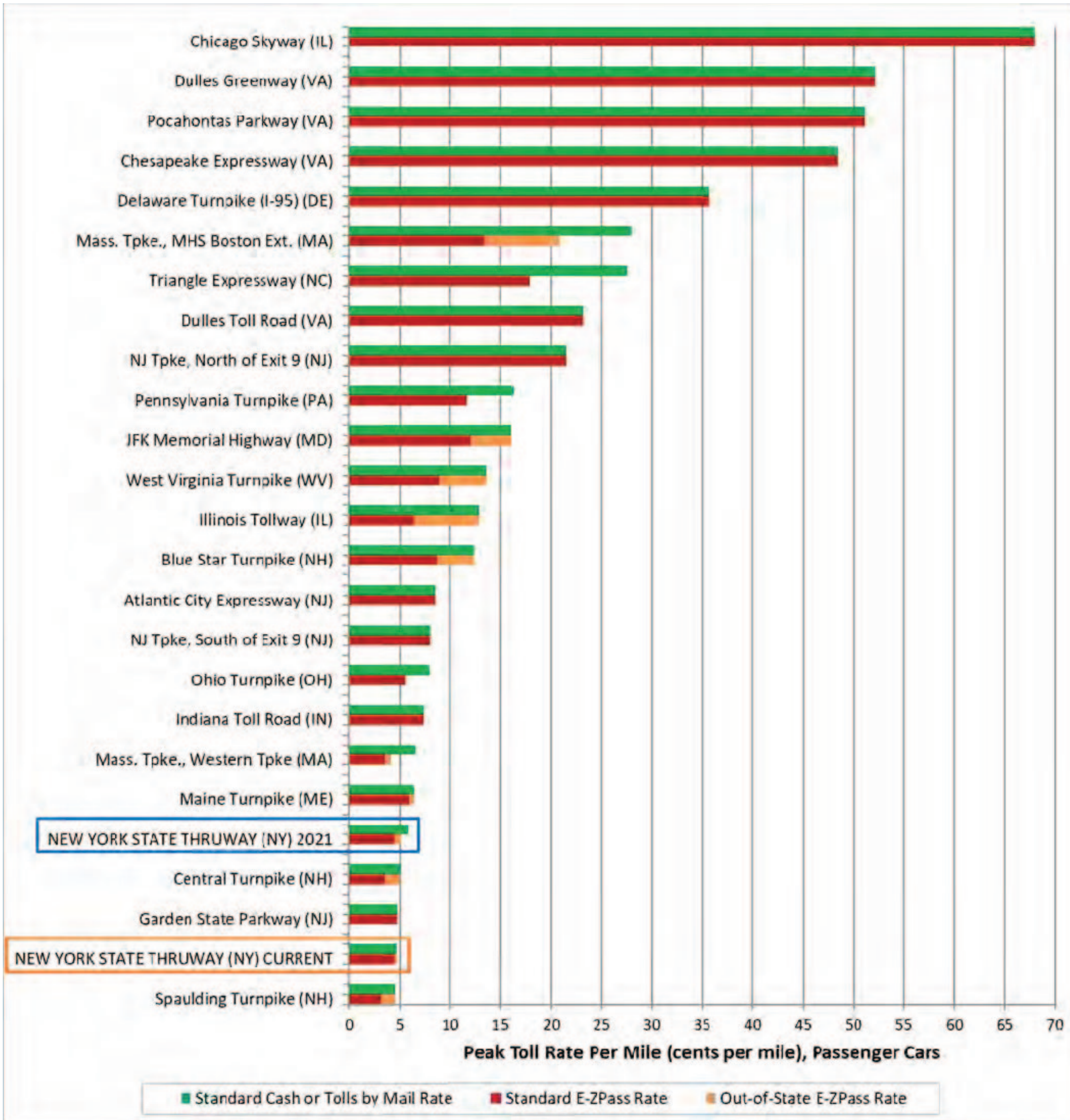
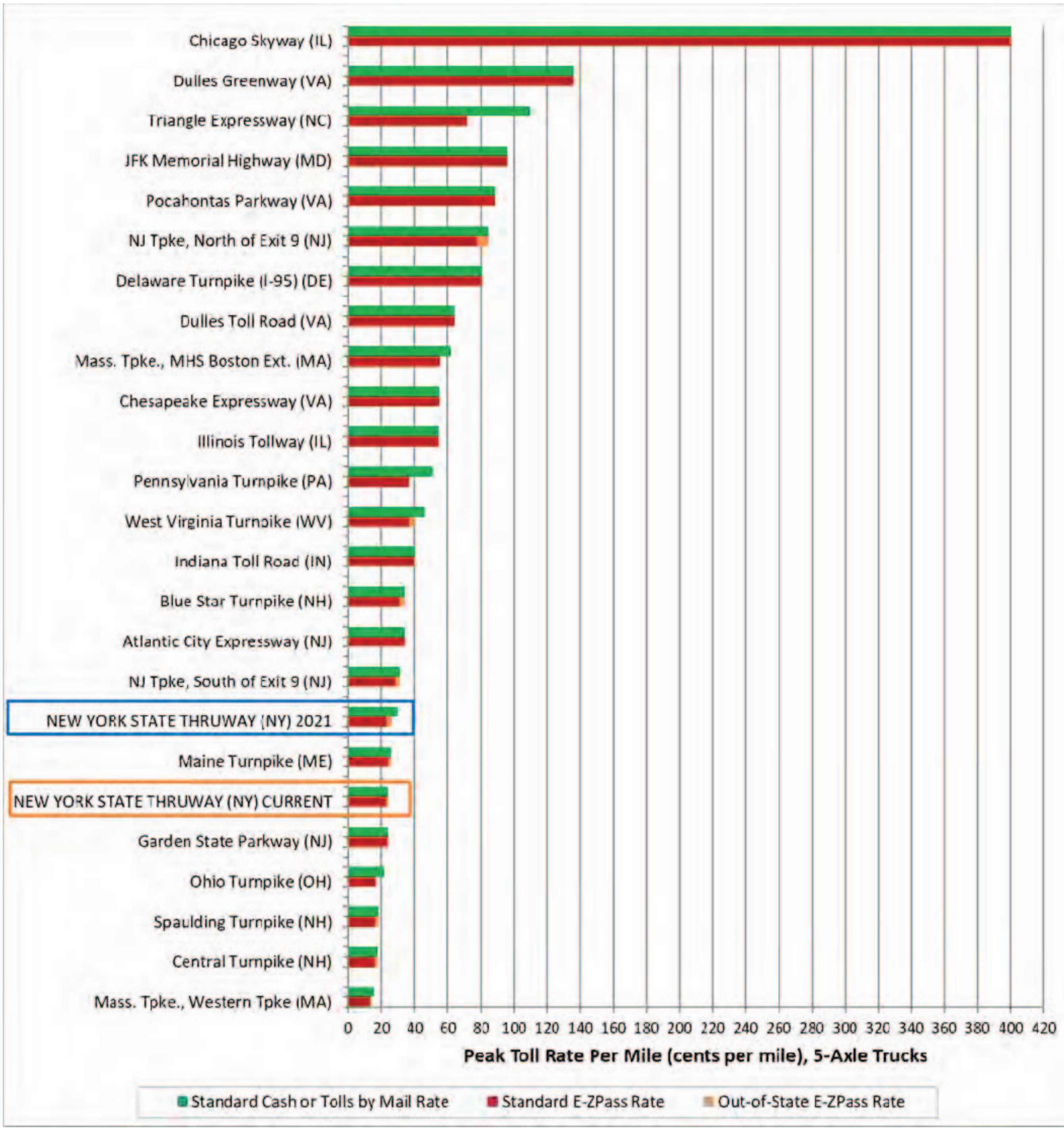


Figure 13: Peak Toll Rates Per-Mile on Toll Roads in the Northeastern Quadrant of U.S, 5-Axle Trucks



7.4.2 Comparison of Tolls by Mail Charges

Table 25 compares premiums charged for Tolls by Mail among cashless tolling facilities nationwide. Current and proposed charges to Thruway facilities are shown. The Authority is currently the only agency that does not charge a premium for Tolls by Mail; a 30% premium on top of the standard NY E-ZPass rate is proposed for TBM customers at Authority facilities, which is still at the lower end of what cashless toll facilities nationwide charge.

Table 25: Comparison of Tolls by Mail Charges on Cashless Tolling Facilities Nationwide

Facility or Agency	TBM Toll Rate Premium ($ and amount)	
CASHLESS TOLL CROSSINGS		
Gov. Mario M. Cuomo Br. - Current	**0%**	**$0.00**
Golden Gate Br.	14%	$1.00
Gov. Mario M. Cuomo Br. -Recommended starting 2021	**30%**	**$1.58-1.73**
MassDOT Crossings (MA)	37%/24%	$0.30
Tacoma Narrows Br. (WA)	40%	$2.00
MTA Verrazzano-Narrows Br (1-way tolls)	55%	$6.76
Other MTA Major Bridges & Tunnels (NY)	55%	$3.38
DRJTBC's Scudder Falls Bridge (PA/NJ)	108%	$1.35
South Norfolk Jordan Br. (VA)	108%	$2.65
MdTA crossings	100-140%	$3.00-$6.00
MTA Henry Hudson Br. (NY)	150%	$4.20
SR 520 Br. (WA)	47%-160%	$2.00
Elizabeth Rvr Tun (VA)	199%/162%	$3.56/$3.56
CASHLESS TOLL ROADS		
NYS THRUWAY Mainline (full length) - Current	**0%**	**$0.00**
Tampa-Hillsborough Expwy Auth (FL) (full length)	17%	$0.50
Northwest Parkway(CO) (mainline)	24%	$1.00
Florida Turnpike - cashless facilities	25-30%	
NYS THRUWAY Mainline (full length) - Recommended starting 2021	**30%**	**varies**
Central Texas Turnpike System Facilities (TX)	33%	
Transportation Corridor Agencies (CA)	0-36%	$0-$2.31 per gantry
Pennsylvania Tpke (PA)	36%	$1.90
Central TX Regional Mobility Auth (TX)	~50%	$0.22-$0.77 per gantry
Intercounty Connector (MD) (full length)	50%	$1.92 (peak)
North TX Toll Authority NTTA (TX)	50-93%	$.27-$1.12 per gantry
Triangle Expy (NC) (full length)	53%	$1.80
E-470 (CO) (full length)	58%	$8.30
Western Turnpike (MA) (full length)	87%	$3.00 ($0.30 per gantry)
Miami-Dade Expressway	100%	$0.23-$0.66 per gantry
Boston Extension (MA) (full length)	109%	$0.90 ($0.30 per gantry)

7.5 TRAFFIC AND REVENUE WITH PROPOSED TOLL MODIFICATIONS

Table 26 presents the projected toll traffic based on the proposed toll modifications. Traffic data from previous toll increases indicates that Thruway traffic is relatively insensitive to increases in the toll rates. This is due in part to the fact that there are few effective competitive routes, and that the physical condition of the Thruway is generally better than that of alternative routes. The safety and security related services, such as snow plowing and police patrols, are better on the Thruway than on alternative routes. Additionally, travel plazas along the length of the Thruway provide 24-hour fuel, rest stop, and food services without the need to exit the system. As a result of any toll increase, slight declines in traffic volumes are expected. The decline in volumes includes drivers that choose an alternative route, combine trips or choose not to travel at all. The amount of diverted traffic is not expected to be significant as a result of the proposed toll modifications.

Table 26: Projected 2019-2024 Traffic with Proposed Toll Schedule (millions of trips)

	Passenger Cars			Commercial Vehicles				
Year	Controlled System	Gov. Mario M. Cuomo Br.	Other Barriers	Controlled System	Gov. Mario M. Cuomo Br.	Other Barriers	Total	Growth
2019	140.2	25.5	71.5	18.2	2.4	9.4	267.2	0.3%
2020 (1)	141.6	25.9	71.8	18.3	2.5	9.5	269.6	0.9%
2021	139.9	26.1	71.1	18.3	2.5	9.5	267.4	-0.8%
2022	141.4	26.4	72.0	18.4	2.5	9.6	270.2	1.1%
2023	142.8	26.7	72.3	18.5	2.5	9.7	272.6	0.9%
2024	144.2	27.1	72.7	18.6	2.5	9.8	274.9	0.8%

Notes: Totals may not add due to rounding. Traffic classified as non-revenue is not included. No future toll rate adjustments are assumed in the forecasts.
(1) Cashless tolling assumed to begin on the entire controlled system in October 2020.

Table 27 presents the projected toll revenues based on the proposed toll modifications. Note that the share of toll revenue from the Governor Mario M. Cuomo Bridge, which has historically been 20 percent of total Thruway System toll revenue, is forecasted to gradually grow to nearly 26 percent of total System toll revenue by 2022 with the proposed toll modifications.

Table 27: Projected 2019-2024 Revenues with Proposed Toll Schedule (millions)

	Passenger Cars			Commercial Vehicles						
Year	Controlled System	Gov. Mario M. Cuomo Br.	Other Barriers	Controlled System	Gov. Mario M. Cuomo Br.	Other Barriers	CV Disc	Total	Growth	Adj. to Cash Basis for Tolls by Mail
2019	$251.8	$108.8	$75.7	$244.5	$49.1	$38.4	$(28.6)	$739.6		$(1.1)
2020 (1)	246.2	110.8	75.5	243.6	49.8	38.9	(29.0)	735.8	-0.5%	(12.7)
2021	237.2	124.8	80.2	248.0	69.2	41.3	(29.9)	770.7	4.8%	
2022	240.5	135.8	81.5	249.9	85.5	41.7	(30.9)	804.0	4.3%	
2023	243.5	137.8	82.0	251.7	86.3	42.0	(31.2)	812.1	1.0%	
2024	246.1	139.7	82.5	253.3	87.1	42.3	(31.5)	819.6	0.9%	

Notes: Totals may not add due to rounding. No toll rate adjustments are assumed in the forecasts.
(1) Cashless tolling assumed to begin on the entire controlled system in October 2020.

Table 28 shows projected total gross revenues including the proposed $2.00 administrative surcharge for Tolls by Mail invoices.

Table 28: Projected 2019-2024 Total Gross Revenues with Proposed Toll Schedule (millions)

Year	Toll Revenues	Other Revenues [1]	Total Revenues
2019	$739.6	$61.3	$800.9
2020 [2]	735.8	58.2	793.9
2021	770.7	93.2	863.9
2022	804.0	106.2	910.2
2023	812.1	99.7	911.9
2024	819.6	99.8	919.4

Note: Totals may not add due to rounding. No toll rate adjustments are assumed in the forecasts.
[1] Includes fines and late fees collected from Tolls by Mail customers who do not pay their toll bills on time. Also includes revenues collected from invoice processing fees charged to Tolls by Mail customers.
[2] Cashless tolling assumed to begin on the entire controlled system in October 2020.

7.6 FUNDING REQUIREMENT AND SOURCES

Table 29 through Table 31 show the estimated projected expenses and revenues for the Authority, based on the proposed toll adjustments. The proposed toll adjustments will provide the revenues required to meet expenses and meet the requirements of the Bond Resolution, as summarized in the following section of this report.

Table 29: Projected 2019-2024 Debt Service with Proposed Toll Schedule, Thruway System (millions)

Year	Senior Debt Service	Bond Anticipation Note (BAN) or Line of Credit Interest or Note Int.	Junior Debt Service	Total Debt Service
2019	$229.5	$13.3	$53.4	$296.3
2020	233.6	0.0	46.4	279.9
2021	246.2	0.0	48.4	294.6
2022	281.3	0.0	75.6	356.9
2023	250.5	0.0	120.7	371.2
2024	255.3	0.0	122.5	377.7
Total 2019-2024	**$1,496.4**	**$13.3**	**$467.0**	**$1,976.7**

Note: Numbers may not add due to rounding. Projected debt service numbers are net of Debt Service Reserve Fund interest.

Table 30: Total Projected Annual Requirements with Proposed Toll Schedule (millions)

Year	Capital Program	Operating and Maintenance	Debt Service	Total Requirements
2019	$629.7	$362.9	$296.3	$1,288.9
2020	606.1	371.7	279.9	1,257.7
2021	605.5	375.8	294.6	1,275.9
2022	308.9	381.4	356.9	1,047.2
2023	310.0	387.1	371.2	1,068.3
2024	316.2	392.9	377.7	1,086.9
Total 2019-2024	**$2,776.4**	**$2,271.8**	**$1,976.7**	**$7,024.9**

Table 31: Projected Funding Sources with Proposed Toll Schedule (millions)

Year	Funding Sources						
	Federal Aid	State Stabiliza-tion (1)	Other	Bond / Note Proceeds	Subtotal Exclusive of Thruway Revenues on Pay-As-You-Go Basis	Revenues Required from Tolls, etc.	Pay-As-You-Go %
2019	$0.0	$397.6	$10.3	$0.0	$407.9	$221.8	100.0%
2020	-	61.2	$1.3	$480.5	$543.0	$63.1	20.7%
2021	-		$2.4	$477.6	$479.9	$125.6	21.1%
2022	-		$0.8	$205.4	$206.2	$102.7	33.5%
2023	-		$0.2	$226.8	$227.0	$82.9	26.8%
2024	-		$0.2	$239.2	$239.4	$76.7	24.3%
Total 2019-2024	**$0.0**	**$458.8**	**$15.2**	**$1,629.5**	**$2,103.4**	**$672.9**	41.3%

(1) *The remaining State grant funds have been or are expected to be drawn down in the period from 2019-2020.*

8.0 SUMMARY OF FINDINGS

Table 32 shows the projected Flow of Funds, as defined by the Authority's Bond Resolution, inclusive of the proposed toll adjustments. In determining future funding needs, the Authority has a management commitment to a future minimum debt service coverage ratio of 1.55x for the Senior Lien, above the Board-adopted guideline of 1.50x, which is met for all years of the forecast with the proposed toll increase.

Additionally, the Authority has a management commitment to a minimum debt service coverage ratio for combined Senior Bonds and Junior Indebtedness Obligations of 1.35x, higher than the Junior Indebtedness Resolution requirement of 1.2x coverage for the combined annual Senior Bond debt service and annual Junior Indebtedness Obligation debt service. With the proposed toll adjustments these Board-adopted minimum coverage ratio guidelines are met or exceeded every year of the forecast through 2024.

Table 32: Historical and Projected Thruway Flow of Funds and Debt Service Coverage with Proposed Toll Schedule (millions)

	ACTUAL			FORECAST						2019-2024
	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Total Revenues	$749.4	$792.1	$798.8	$800.9	$793.9	$863.9	$910.2	$911.9	$919.4	$5,200.2
Gap Closing Revenues [1]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Available Revenues	749.4	792.1	798.8	800.9	793.9	863.9	910.2	911.9	919.4	5,200.2
Less:										
Operating Expenses	311.6	329.7	339.9	358.3	370.7	374.8	380.4	386.1	391.9	2,262.3
Operating Reserves	1.8	2.7	5.0	4.6	1.0	1.0	1.0	1.0	1.0	9.6
Total	313.3	332.4	345.0	362.9	371.7	375.8	381.4	387.1	392.9	2,271.9
Net Revenues	436.0	459.7	453.8	437.9	422.3	488.1	528.8	524.8	526.5	2,928.3
Less: Sr. Debt Service	227.3	234.6	220.3	229.5	233.6	246.2	281.3	250.5	255.3	1,496.4
Net Revenues After Debt Service	208.7	225.1	233.5	208.4	188.7	241.9	247.5	274.2	271.2	1,431.9
Less: Retained for Operating Reserves/AETC Lag/ Working Capital provision	-8.5	-19.3	-24.6	12.2	-12.7	0.0	0.0	0.0	0.0	-0.5
Remaining Revenues	200.2	205.9	209.0	220.7	176.0	241.9	247.5	274.2	271.2	1,431.4
Less: Reserve Maintenance Provisions	68.8	103.2	74.1	103.7	63.1	125.6	102.7	82.9	76.7	554.8
Less: Junior Bond Debt Service	29.2	43.7	79.2	53.4	46.4	48.4	75.6	120.7	122.5	467.0
Less: Facil Cap Imp Fund	14.0	5.0	12.0	8.0						8.0
Other Authority Projects	13.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
General Reserve Fund [2]	74.0	54.0	43.6	42.2	66.5	67.8	69.2	70.6	72.0	388.3
Gen Res Fund - JIAN	0.4	0.0	0.0	13.3	0.0	0.0	0.0	0.0	0.0	13.3
Balance After Reserve Maintenance Provisions, Other Authority Projects	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Senior Debt Service Coverage	1.92	1.96	2.06	1.91	1.81	1.98	1.88	2.09	2.06	
Junior & Senior Coverage	1.70	1.65	1.52	1.55	1.51	1.66	1.48	1.41	1.39	
Pay go % ROS Capital	60.7%	34.5%	99.5%	100.0%	20.7%	21.1%	33.5%	26.8%	24.3%	

Notes: Totals may not add due to rounding. Numbers incorporate a total of $1.985 billion in State capital assistance provided in the 2015-2016 and 2016-2017 Enacted State Budgets. Total Revenues include Tolls by Mail revenues that are earned in a fiscal year but not collected until later fiscal years. The amounts earned but not collected until later years are projected to be $1.1 million in 2019 and $12.7 million in 2020. The 2018 Retained for Operating Reserves/cashless tolling Lag figure of ($24.6 million) is comprised of the following: ($683,167) associated with an Adjustment to Cash Basis due to Tolls by Mail revenues that are earned in 2018 but not collected until later years; $20.5 million in revenues retained from 2017; ($15 million) retained for Working Capital; and ($29.4 million) retained for 2019 Operating Reserves.

[1] Through the year 2024, revenues generated with the toll adjustment will be sufficient to meet the minimum coverage requirements for both the Senior Lien and combined Senior Bonds and Junior Indebtedness Obligations. The Authority has a management commitment to a future minimum debt service coverage ratio of 1.55x for the Senior Lien, above the Board-adopted guideline of 1.50x. The Authority has a management commitment to a minimum debt service coverage ratio for combined Senior Bonds and Junior Indebtedness Obligations of 1.35x, higher than the Junior Indebtedness Resolution requirement of 1.2x coverage for the combined annual Senior Bond debt service and annual Junior Indebtedness Obligation debt service.

[2] The General Reserve Fund figures from April 2016 through 2024 reflect Thruway revenues required to reimburse the State of New York for costs associated with the New York State Police Troop T patrol.

9.0 LIMITS AND DISCLAIMERS

It is Stantec's opinion that the traffic and toll revenue estimates provided herein represent reasonable and achievable levels of traffic and toll revenues that can be expected to accrue at the Authority's toll facilities over the forecast period and that they have been prepared in accordance with accepted industry-wide practice. However, as should be expected with any forecast, and given the uncertainties within the current economic climate, it is important to note the following assumptions which, in our opinion, are reasonable:

- This limited synopsis presents the highlighted results of Stantec's consideration of the information available as of the date hereof and the application of our experience and professional judgment to that information. It is not a guarantee of any future events or trends.
- The traffic and toll revenue estimates will be subject to future economic and social conditions, demographic developments and regional transportation construction activities that cannot be predicted with certainty.
- The estimates contained in this document, while presented with numeric specificity, are based on a number of estimates and assumptions which, though considered reasonable to us, are inherently subject to economic and competitive uncertainties and contingencies, most of which are beyond the control of the Authority and cannot be predicted with certainty. In many instances, a broad range of alternative assumptions could be considered reasonable with the availability of alternative toll schedules, and any changes in the assumptions used could result in material differences in estimated outcomes.
- The standards of operation and maintenance on all of the Thruway System will be maintained as planned within the business rules and practices.
- The general configuration and location of the Thruway System and its interchanges will remain as discussed in the report.
- Access to and from the Thruway System will remain as discussed in the report.
- No other new competing highway projects are assumed to be constructed or significantly improved in the project corridor during the project period, except those identified within the report.
- Major highway improvements that are currently underway or fully funded will be completed as planned.
- The Thruway System will be well maintained, efficiently operated, and effectively signed to encourage usage.
- No reduced growth initiatives or related controls that would significantly inhibit normal development patterns will be introduced during the forecast period.
- There will be no future serious protracted recession during the forecast period.
- There will be no protracted fuel shortage during the forecast period.
- No local, regional, or national emergency will arise that will abnormally restrict the use of motor vehicles.

In Stantec's opinion, the assumptions underlying the study provide a reasonable basis for the analysis. However, any financial projection is subject to uncertainties. Inevitably, some assumptions used to develop the projections will not be realized, and unanticipated events and circumstances may occur. There are likely to be differences between the projections and actual results, and those differences may be material. Because of these uncertainties, Stantec makes no guaranty or warranty with respect to the projections in this study.

This document, and the opinions, analysis, evaluations, or recommendations contained herein are for the sole use and benefit of the contracting parties. There are no intended third-party beneficiaries, and Stantec Consulting Services Inc. (and its affiliates) shall have no liability whatsoever to any third parties for any defect, deficiency, error, omission in any statement contained in or in any way related to this document or the services provided.

Neither this document nor any information contained therein or otherwise supplied by Stantec Consulting Services Inc. in connection with the study and the services provided to our client shall be used in connection with any financing solicitation, proxy, and proxy statement, proxy soliciting materials, prospectus, Securities Registration Statement or similar document without the express written consent of Stantec Consulting Services Inc.

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We would like to thank the Authority staff for their assistance in the preparation of this report.

Sincerely,

Richard J. Gobeille, P.E.
Senior Principal
Stantec Consulting, Inc.

APPENDIX: PROPOSED TOLL RATE SCHEDULES

CURRENT AND PROPOSED RATES, GOVERNOR MARIO M. CUOMO BRIDGE

Current Rates 1/3/10

	NY E-ZPass Peak	NY E-ZPass OFF PEAK	Non-NY E-ZPass	Toll By Mail
Commuter	$3.00			
2L	$4.75	$4.75	$5.00	$5.00
3L	$11.50	$5.75	$11.50	$11.50
4L	$13.75	$6.88	$13.75	$13.75
2H	$14.75	$7.38	$14.75	$14.75
3H	$20.75	$10.38	$20.75	$20.75
4H	$24.75	$12.38	$24.75	$24.75
5H	$32.75	$16.38	$32.75	$32.75
6H	$41.00	$20.50	$41.00	$41.00
7H	$49.25	$24.63	$49.25	$49.25

Proposed Toll Rates 2021

	NY E-ZPass Peak	NY E-ZPass OFF PEAK	Non-NY E-ZPass	Toll By Mail
Commuter	$3.15	$3.15		
Resident	$4.75	$4.75		
2L	$5.25	$5.25	$6.04	$6.83
3L	$12.71	$6.36	$14.62	$16.52
4L	$15.20	$7.60	$17.48	$19.76
2H	$16.30	$8.15	$18.75	$21.19
3H	$22.93	$11.47	$26.38	$29.82
4H	$27.36	$13.68	$31.46	$35.56
5H	$42.90	$21.45	$49.34	$55.77
6H	$53.71	$26.86	$61.77	$69.82
7H	$64.52	$32.26	$74.20	$83.87

Proposed Toll Rates 2022

	NY E-ZPass Peak	NY E-ZPass OFF PEAK	Non-NY E-ZPass	Toll By Mail
Commuter	$3.45	$3.45		
Resident	$4.75	$4.75		
2L	$5.75	$5.75	$6.61	$7.48
3L	$13.92	$6.96	$16.01	$18.10
4L	$16.64	$8.32	$19.14	$21.64
2H	$17.86	$8.93	$20.53	$23.21
3H	$25.12	$12.56	$28.89	$32.65
4H	$29.96	$14.98	$34.45	$38.95
5H	$55.77	$27.89	$64.14	$72.51
6H	$69.82	$34.91	$80.30	$90.77
7H	$83.87	$41.94	$96.45	$109.03

CURRENT AND PROPOSED RATES, REMAINDER OF SYSTEM

Current Cash/Non-NY E-ZPass Rates

	MAINLINE (PER MILE)	Castleton Bridge Surcharge	GRAND ISLAND BRIDGES	HARRIMAN	YONKERS	NEW ROCHELLE	SPRING VALLEY
2L	$0.0470	$0.65	$1.00	$1.25	$1.25	$1.75	$0.00
3L	$0.0728	$0.90	$1.50	$1.50	$1.50	$2.50	$3.00
4L	$0.0864	$1.05	$1.75	$1.75	$1.75	$3.00	$4.50
2H	$0.0933	$1.10	$2.00	$2.00	$2.00	$3.50	$5.25
3H	$0.1604	$1.55	$2.25	$2.75	$2.25	$4.25	$8.25
4H	$0.1768	$2.00	$2.75	$3.00	$2.75	$5.00	$8.25
5H	$0.2390	$2.70	$4.25	$4.25	$4.25	$8.00	$13.50
6H	$0.2963	$3.25	$4.50	$5.00	$4.50	$8.75	$14.75
7H	$0.3536	$3.85	$5.00	$5.75	$5.00	$9.75	$16.50

Current rates New York E-ZPass customers

	MAINLINE (PER MILE)	Castleton Bridge	GRAND ISLAND BRIDGES	HARRIMAN	YONKERS	NEW ROCHELLE	SPRING VALLEY	
							PEAK	OFF PEAK
2L	$0.0447	$0.62	$0.95	$1.19	$1.19	$1.66	$0.00	$0.00
3L	$0.0692	$0.86	$1.43	$1.43	$1.43	$2.38	$3.00	$1.50
4L	$0.0821	$1.00	$1.66	$1.66	$1.66	$2.85	$4.50	$2.25
2H	$0.0886	$1.05	$1.90	$1.90	$1.90	$3.33	$5.25	$2.63
3H	$0.1524	$1.47	$2.14	$2.61	$2.14	$4.04	$8.25	$4.13
4H	$0.1680	$1.90	$2.61	$2.85	$2.61	$4.75	$8.25	$4.13
5H	$0.2271	$2.57	$4.04	$4.04	$4.04	$7.60	$13.50	$6.75
6H	$0.2815	$3.09	$4.28	$4.75	$4.28	$8.31	$14.75	$7.38
7H	$0.3359	$3.66	$4.75	$5.46	$4.75	$9.26	$16.50	$8.25

New: Non New York E-ZPass customers - Rates January 2021

	MAINLINE (PER MILE)	Castleton Bridge Surcharge	GRAND ISLAND BRIDGES	HARRIMAN	YONKERS	NEW ROCHELLE	SPRING VALLEY
2L	$0.0514	$0.71	$1.09	$1.37	$1.37	$1.91	$0.00
3L	$0.0796	$0.99	$1.64	$1.64	$1.64	$2.73	$3.45
4L	$0.0944	$1.15	$1.91	$1.91	$1.91	$3.28	$5.18
2H	$0.1019	$1.21	$2.19	$2.19	$2.19	$3.82	$6.04
3H	$0.1753	$1.69	$2.46	$3.00	$2.46	$4.64	$9.49
4H	$0.1932	$2.19	$3.00	$3.28	$3.00	$5.46	$9.49
5H	$0.2612	$2.96	$4.64	$4.64	$4.64	$8.74	$15.53
6H	$0.3237	$3.55	$4.92	$5.46	$4.92	$9.56	$16.96
7H	$0.3863	$4.21	$5.46	$6.28	$5.46	$10.65	$18.98

New Toll By Mail customers - Rates January 2021

	MAINLINE (PER MILE)	Castleton Bridge Surcharge	GRAND ISLAND BRIDGES	HARRIMAN	YONKERS	NEW ROCHELLE	SPRING VALLEY
2L	$0.0581	$0.81	$1.24	$1.54	$1.54	$2.16	$0.00
3L	$0.0900	$1.12	$1.85	$1.85	$1.85	$3.09	$3.90
4L	$0.1067	$1.30	$2.16	$2.16	$2.16	$3.71	$5.85
2H	$0.1152	$1.37	$2.47	$2.47	$2.47	$4.32	$6.83
3H	$0.1981	$1.91	$2.78	$3.40	$2.78	$5.25	$10.73
4H	$0.2184	$2.47	$3.40	$3.71	$3.40	$6.18	$10.73
5H	$0.2952	$3.34	$5.25	$5.25	$5.25	$9.88	$17.55
6H	$0.3660	$4.02	$5.56	$6.18	$5.56	$10.81	$19.18
7H	$0.4367	$4.76	$6.18	$7.10	$6.18	$12.04	$21.45

APPENDIX A-2

BRING-DOWN LETTER OF TRAFFIC ENGINEER

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Stantec Consulting Services Inc.
475 Fifth Avenue 12th Fl., New York, NY 10017-7239

February 12, 2020
File: 193410435

Mr. Matthew Howard, Chief Financial Officer
New York State Thruway Authority
200 Southern Boulevard
P.O. Box 189
Albany, New York 12201-0189

Subject: Bring-Down Letter to Supplement Traffic Engineer's Report

Dear Mr. Howard,

The Authority recently began the process required under Public Authorities Law Section 2804 to implement a toll adjustment, and In accordance with Section 609(1)(b) of the Bond Resolution, Stantec was retained to produce forecasts and recommend a schedule of toll rates designed to allow the Authority to sustain healthy financial metrics through the end of 2024, as detailed in our December 18, 2019 report entitled "New York State Thruway Financial Requirements and Proposed Toll Adjustments" (also known as the "December 2019 Financial Requirements Report"). At your request, we have reviewed our projections of traffic and toll revenue that were provided to you in this study. Projected Revenues with both the current and proposed tolls are included in this Bring-Down Letter.

Now that data is available for most of 2019, we compared our baseline forecasts of growth to actual traffic and revenue growth. As shown in Table 1, actual traffic growth is the same as what we had projected, and actual toll revenue growth is slightly higher than projected for the year 2019. Actual growth in late fee and violation revenue has also outperformed our forecast for 2019.

Table 1: 2019 Actual vs. Forecasted Growth

	Traffic Comparison*		Toll Revenue Comparison		Late Fee/Violation Revenue Comparison	
	Actual, 11 Months (millions)	Stantec's 2019 Forecasted Traffic Growth	Actual, 11 Months (millions)**	Stantec's 2019 Forecasted Toll Revenue Growth	Actual, 11 Months (millions)	Stantec's 2019 Forecasted Fee Revenue Growth
Jan-Nov 2018	245.5		$678.4		$20.4	
Jan-Nov 2019	246.3		$684.5		$22.9	
2019 over 2018 Growth	**0.3%**	**0.3%**	**0.9%**	**0.4%**	**12.6%**	**9.5%**

** Actual and forecasted traffic numbers do not include qualified Non-Revenue vehicles, which are not charged tolls.*

*** October and November revenue data are preliminary for 2019*

Additionally, we have reviewed recent socioeconomic trends and short-term forecasts and have found no material changes that would warrant any revision to our future year traffic and revenue forecasts.

Additional revenues will be needed for the Authority to successfully complete remaining elements of the New NY Bridge Project and fulfill its future system-wide operating, debt service, and capital needs. As noted in the attached flow of funds Table 2, having the additional revenues to meet these needs will allow the Authority to maintain a balanced budget and debt service coverage levels appropriate for its current "A" credit rating throughout the forecast period. These additional revenues could be generated through the proposed toll modification, as shown in Table 3.

It should also be noted that to comply with Section 619 of the General Revenue Bond Resolution, a physical inspection by the Traffic Engineer is required once every three years. Stantec, with assistance from Popli Design Group, performed a "drive-through" physical inspection of the entire Thruway system during the period of August 8, 2019 through September 5, 2019. A summary of this physical inspection is contained in Stantec's October 2019 Traffic Engineer's Report, which can be found on the Authority's website www.thruway.ny.gov. This report, dated October 7, 2019 was included in the Preliminary and final Official Statements relating to the issuance of the Authority's Series M General Revenue Bonds and Series 2019B Junior Indebtedness Obligations.

Table 2: Historical and Projected Thruway Flow of Funds and Debt Service Coverage with Current Toll Schedule (millions)

	ACTUAL			FORECAST						2019-2024
	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Total Revenues	$749.4	$792.1	$798.8	$800.9	$793.9	$790.0	$814.7	$818.5	$825.4	$4,843.4
Gap Closing Revenues [1]	0.0	0.0	0.0	0.0	0.0	0.0	27.7	117.8	142.0	287.5
Available Revenues	749.4	792.1	798.8	800.9	793.9	790.0	842.4	936.3	967.4	5,130.9
Less:										
Operating Expenses	311.6	329.7	339.9	358.3	370.7	374.8	380.4	386.1	391.9	2,262.3
Operating Reserves	1.8	2.7	5.0	4.6	1.0	1.0	1.0	1.0	1.0	9.6
Total	313.3	332.4	345.0	362.9	371.7	375.8	381.4	387.1	392.9	2,271.9
Net Revenues	436.0	459.7	453.8	437.9	422.3	414.1	461.0	549.2	574.5	2,859.0
Less: Gen. Rev. Bonds Debt Service	227.3	234.6	220.3	229.5	233.6	229.5	265.6	286.1	303.1	1,547.3
Net Revenues After Debt Service	208.7	225.1	233.5	208.4	188.7	184.7	195.4	263.1	271.4	1,311.7
Less: Retained for Operating Reserves/AETC Lag/ Working Capital provision	-8.5	-19.3	-24.6	12.2	-12.7	0.0	0.0	0.0	0.0	-0.5
Remaining Revenues	200.2	205.9	209.0	220.7	176.0	184.7	195.4	263.1	271.4	1,311.2
Less: Reserve Maintenance Provisions	68.8	103.2	74.1	103.7	62.4	67.8	50.3	71.8	76.9	433.0
Less: Junior Indebtedness Debt Service	29.2	43.7	79.2	53.4	47.0	49.1	75.9	120.7	122.5	468.6
Less: Facil Cap Imp Fund	14.0	5.0	12.0	8.0						8.0
Other Authority Projects	13.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
General Reserve Fund [2]	74.0	54.0	43.6	42.2	66.5	67.8	69.2	70.6	72.0	388.3
Gen Res Fund - JIAN [3]	0.4	0.0	0.0	13.3	0.0	0.0	0.0	0.0	0.0	13.3
Balance After Reserve Maintenance Provisions, Other Authority Projects	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Gen. Rev. Bonds Debt Service Coverage	1.92	1.96	2.06	1.91	1.81	1.80	1.74	1.92	1.90	
Gen. Rev. Bonds & Junior Indebtedness Coverage	1.70	1.65	1.52	1.55	1.50	1.49	1.35	1.35	1.35	
Pay go % ROS Capital	60.7%	34.5%	99.5%	100.0%	20.6%	11.6%	16.5%	23.2%	24.4%	

Notes: Totals may not add due to rounding.

Numbers incorporate a total of $1.985 billion in State capital assistance provided in the 2015-2016 and 2016-2017 Enacted State Budgets. No toll rate adjustments are assumed in these forecasts. Total Revenues include Tolls by Mail revenues that are earned in a fiscal year but not collected until later fiscal years. The amounts earned but not collected until later years are projected to be $1.1 million in 2019 and $12.7 million in 2020. The 2018 Retained for Operating Reserves/AETC Lag figure of ($24.6 million) is comprised of the following: ($683,167) associated with an Adjustment to Cash Basis due to Tolls by Mail revenues that are earned in 2018 but not collected until later fiscal years; $20.5 million in revenues retained from 2017; ($15 million) retained for Working Capital; and ($29.4 million) retained for 2019 Operating Reserves.

[1] *In 2022 through 2024 additional revenues are needed to meet the minimum coverage requirements for both the Gen. Rev. Bonds and combined Gen. Rev. Bonds and Junior Indebtedness Obligations. The Authority has a management commitment to a future minimum debt service coverage ratio of 1.55x for the Gen. Rev. Bonds, above the Board-adopted guideline of 1.50x. The Authority has a management commitment to a minimum debt service coverage ratio for combined Gen. Rev. Bonds and Junior Indebtedness Obligations of 1.35x, higher than the Junior Indebtedness Resolution requirement of 1.2x coverage for the combined annual Gen. Rev. Bond debt service and annual Junior Indebtedness Obligations debt service.*

[2] *The General Reserve Fund figures from April 2016 through 2024 reflect Thruway revenues required to reimburse the State of New York for costs associated with the New York State Police Troop T patrolling of the Thruway system.*

[3] *Junior Indebtedness Obligation Anticipation Notes*

Table 3: Historical and Projected Thruway Flow of Funds and Debt Service Coverage with Proposed Toll Schedule (millions)

	ACTUAL			FORECAST						2019-2024
	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Total Revenues	$749.4	$792.1	$798.8	$800.9	$793.9	$863.9	$910.2	$911.9	$919.4	$5,200.2
Gap Closing Revenues [1]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Available Revenues	749.4	792.1	798.8	800.9	793.9	863.9	910.2	911.9	919.4	5,200.2
Less:										
Operating Expenses	311.6	329.7	339.9	358.3	370.7	374.8	380.4	386.1	391.9	2,262.3
Operating Reserves	1.8	2.7	5.0	4.6	1.0	1.0	1.0	1.0	1.0	9.6
Total	313.3	332.4	345.0	362.9	371.7	375.8	381.4	387.1	392.9	2,271.9
Net Revenues	436.0	459.7	453.8	437.9	422.3	488.1	528.8	524.8	526.5	2,928.3
Less: Gen. Rev. Bonds Debt Service	227.3	234.6	220.3	229.5	233.6	246.2	281.3	250.5	255.3	1,496.4
Net Revenues After Debt Service	208.7	225.1	233.5	208.4	188.7	241.9	247.5	274.2	271.2	1,431.9
Less: Retained for Operating Reserves/AETC Lag/ Working Capital provision	-8.5	-19.3	-24.6	12.2	-12.7	0.0	0.0	0.0	0.0	-0.5
Remaining Revenues	200.2	205.9	209.0	220.7	176.0	241.9	247.5	274.2	271.2	1,431.4
Less: Reserve Maintenance Provisions	68.8	103.2	74.1	103.7	63.1	125.6	102.7	82.9	76.7	554.8
Less: Junior Indebtedness Debt Service	29.2	43.7	79.2	53.4	46.4	48.4	75.6	120.7	122.5	467.0
Less: Facil Cap Imp Fund	14.0	5.0	12.0	8.0						8.0
Other Authority Projects	13.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
General Reserve Fund [2]	74.0	54.0	43.6	42.2	66.5	67.8	69.2	70.6	72.0	388.3
Gen Res Fund - JIAN [3]	0.4	0.0	0.0	13.3	0.0	0.0	0.0	0.0	0.0	13.3
Balance After Reserve Maintenance Provisions, Other Authority Projects	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Gen. Rev. Bonds Debt Service Coverage	1.92	1.96	2.06	1.91	1.81	1.98	1.88	2.09	2.06	
Gen. Rev. Bonds & Junior Indebtedness Coverage	1.70	1.65	1.52	1.55	1.51	1.66	1.48	1.41	1.39	
Pay go % ROS Capital	60.7%	34.5%	99.5%	100.0%	20.7%	21.1%	33.5%	26.8%	24.3%	

Notes: Totals may not add due to rounding. Numbers incorporate a total of $1.985 billion in State capital assistance provided in the 2015-2016 and 2016-2017 Enacted State Budgets. Forecasts assume the implementation of the toll rate initiative approved by the Authority's Board in December 2019. Total Revenues include Tolls by Mail revenues that are earned in a fiscal year but not collected until later fiscal years. The amounts earned but not collected until later years are projected to be $1.1 million in 2019 and $12.7 million in 2020. The 2018 Retained for Operating Reserves/AETC lag figure of ($24.6 million) is comprised of the following: ($683,167) associated with an Adjustment to Cash Basis due to Tolls by Mail revenues that are earned in 2018 but not collected until later years; $20.5 million in revenues retained from 2017; ($15 million) retained for Working Capital; and ($29.4 million) retained for 2019 Operating Reserves.

(1) Through the year 2024, revenues generated with the proposed toll adjustment will be sufficient to meet the minimum coverage requirements for both the Gen. Rev. Bonds and combined Gen. Rev. Bonds and Junior Indebtedness Obligations. The Authority has a management commitment to a future minimum debt service coverage ratio of 1.55x for the Gen. Rev. Bonds, above the Board-adopted guideline of 1.50x. The Authority has a management commitment to a minimum debt service coverage ratio for combined Gen. Rev. Bonds and Junior Indebtedness Obligations of 1.35x, higher than the Junior Indebtedness Resolution requirement of 1.2x coverage for the combined annual Gen. Rev. Bond debt service and annual Junior Indebtedness Obligations debt service.

(2) The General Reserve Fund figures from April 2016 through 2024 reflect Thruway revenues required to reimburse the State of New York for costs associated with the New York State Police Troop T patrolling of the Thruway system.

(3) Junior Indebtedness Obligation Anticipation Notes

LIMITS AND DISCLAIMERS

It is Stantec's opinion that the traffic and toll revenue estimates provided in Table 3 of this Bring-Down Letter represent reasonable and achievable levels of traffic and toll revenues that can be expected to accrue at the Authority's toll facilities over the forecast period and that they have been prepared in accordance with accepted industry-wide practice.

In Stantec's opinion, the assumptions underlying the study provide a reasonable basis for the analysis. However, any financial projection is subject to uncertainties. Inevitably, some assumptions used to develop the projections will not be realized, and unanticipated events and circumstances may occur. There are likely to be differences between the projections and actual results, and those differences may be material. Because of these uncertainties, Stantec makes no guaranty or warranty with respect to the projections in this study.

This document, and the opinions, analysis, evaluations, or recommendations contained herein are for the sole use and benefit of the contracting parties. There are no intended third-party beneficiaries, and Stantec Consulting Services Inc. (and its affiliates) shall have no liability whatsoever to any third parties for any defect, deficiency, error, omission in any statement contained in or in any way related to this document or the services provided. Stantec acknowledges that the December 2019 Financial Requirements Report and this Bring-Down Letter will be included in the Authority's Preliminary and final Official Statements relating to the issuance of the Authority's General Revenue Bonds, Series N.

Neither this document nor any information contained therein or otherwise supplied by Stantec Consulting Services Inc. in connection with the study and the services provided to our client shall be used in connection with any financing solicitation, proxy, and proxy statement, proxy soliciting materials, prospectus, Securities Registration Statement or similar document without the express written consent of Stantec Consulting Services Inc.

This letter reaffirms the conclusions made in the December 2019 Financial Requirements Report. We believe the Authority has the ability to continue to meet its financial obligations, provide good service to its customers, and fulfill its critical role in supporting the State's economy. The Thruway System also has the capacity to generate additional revenues if required. Thank you for the opportunity to provide this letter and please feel free to contact us should you have any questions or comments.

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Regards,

STANTEC CONSULTING SERVICES INC.

Rick Gobeille, PE, Senior Principal
Phone: (212) 366-5625
rick.gobeille@stantec.com

APPENDIX B

AUDITED FINANCIAL STATEMENTS OF THE AUTHORITY FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

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New York State Thruway Authority

(A Component Unit of the State of New York)

Financial Statements

December 31, 2018 and 2017

New York State Thruway Authority

(A Component Unit of the State of New York)

Financial Statements

December 31, 2018 and 2017

CONTENTS

	Page
Independent Auditor's Report	1-2
Management's Discussion and Analysis	3-13
Financial Statements	
Statements of Net Position	14
Statements of Revenues, Expenses, and Changes in Net Position	15
Statements of Cash Flows	16
Notes to Financial Statements	17-45
Required Supplementary Information	
Schedule of Other Postemployment Benefits Liability and OPEB as a Percentage of Covered Payroll	46
Schedule of the Proportionate Share of the Net Pension Liability	47
Schedule of Pension Contributions	48

Independent Auditor's Report

Members of the Board
New York State Thruway Authority
Albany, New York

Report on the Financial Statements

We have audited the accompanying financial statements of the New York State Thruway Authority (the Authority), a component unit of the State of New York, as of and for the years ended December 31, 2018 and 2017, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards,* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Authority as of December 31, 2018 and 2017, and the changes in its financial position and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matters

General Revenue Junior Indebtedness Obligations - Series 2013A

As disclosed in Note 5, the Authority's 2013A Junior Indebtedness Obligations (JIO) mature on May 1, 2019. The Authority's plans to satisfy this obligation are described in Note 12.

Adoption of GASB Statement No. 75

As disclosed in Note 1u, in 2018 the Authority adopted Governmental Accounting Standards Board (GASB) Statement No. 75, *Accounting and Reporting for Postemployment Benefits Other Than Pensions*.

Our opinion is not modified with respect to these matters.

Other Matter

Accounting principles generally accepted in the United States of America require that management's discussion and analysis on pages 3 through 13 and the schedules of other postemployment benefits liability and OPEB as a percentage of covered payroll, proportionate share of the net pension liability, and pension contributions on pages 45 through 47 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated April 4, 2019, on our consideration of the Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Authority's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control over financial reporting and compliance.

BST & Co. CPAs, LLP

Albany, New York
April 4, 2019

BST
ACCOUNTING / TAX / ADVISORY

The following discussion and analysis of the New York State Thruway Authority's (Authority) financial performance provides an overview of the Authority's activities for the years ended December 31, 2018 and 2017. Please read it in conjunction with the Authority's financial statements that follow this section. This discussion and analysis is intended to serve as an introduction to the Authority's financial statements which are comprised of the basic financial statements and the notes to the financial statements.

2018 Financial Highlights

- Total operating revenue was $799.4 million, an increase of $7.2 million, or 0.9% compared to 2017. Toll revenue for the year was $736.5 million, an increase of $5.0 million, or 0.7% compared to 2017.
- Total operating expenses, excluding depreciation and amortization, were $457.4 million, an increase of $14.7 million, or 3.3% compared to 2017.
- Net position as of December 31, 2018 was $1.11 billion, an increase of $316.7 million, or 39.9% compared to December 31, 2017.
- Total capital assets (net of depreciation) as of December 31, 2018 were $7.31 billion, an increase of $267.8 million, or 3.8% compared to December 31, 2017.
- Construction of the Governor Mario M. Cuomo Bridge continued into 2018 with the second span being opened to traffic in September of 2018. A total of $3.84 billion has been invested in the project through December 31, 2018, of which $275.7 million was invested during 2018.
- The State of New York has committed $1.99 billion to fund the Governor Mario M. Cuomo Bridge and other Thruway capital projects via the Thruway Stabilization Program. Since the inception of the program in 2015, the State of New York has contributed $1.62 billion to the Authority, including $441.8 million in 2018.

2017 Financial Highlights

- Total operating revenue was $792.2 million, an increase of $40.2 million, or 5.3% compared to 2016. Toll revenue for the year was $731.5 million, an increase of $23.2 million, or 3.3% compared to 2016.
- Total operating expenses, excluding depreciation and amortization, were $442.8 million, a decrease of $36.5 million, or 7.6% compared to 2016.
- Net position as of December 31, 2017 was $794.1 million, a decrease of $1.00 billion, or 55.9% compared to December 31, 2016.
- Total capital assets (net of depreciation) as of December 31, 2017 were $7.04 billion, a decrease of $295.6 million, or 4% compared to December 31, 2016.
- Construction of the Governor Mario M. Cuomo Bridge continued through 2017 with the first span opened to traffic in August of 2017. $539.7 million was invested in the project during 2017.

2017 Financial Highlights - Continued

- The State of New York has committed $1.99 billion to fund the Governor Mario M. Cuomo Bridge and other Thruway capital projects via the Thruway Stabilization Program. Since the inception of the program in 2015, the State of New York has contributed $1.18 billion to the Authority.

- On January 1, 2017, control of the Canal Corporation and Canal System was transferred to the New York State Power Authority (Power Authority) pursuant to enacted legislation of the State of New York. On this date, Canal Corporation assets of $653.7 million and liabilities of $114.2 million were transferred to the Power Authority. The Authority's Statement of Revenue, Expenses and Changes in Net Position includes a special item of $539.5 million representing the net position of the Canal Corporation transferred to the Power Authority.

Overview of the Financial Statements

This report consists of three parts: management's discussion and analysis, the basic financial statements, and the notes to the financial statements.

The financial statements provide summary information about the Authority's overall financial condition, including the Authority's net position and related changes. The notes provide explanation and additional disclosures about the financial statements.

The Authority is considered a special-purpose government engaged in business-type activities and follows financial reporting for enterprise funds. The Authority's financial statements are prepared in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP). Revenues are recognized in the period in which they are earned, and expenses are recognized in the period in which they are incurred.

On January 1, 2017, the New York State Canal Corporation was transferred from the Authority to the New York State Power Authority (Note 13). Additionally, during 2017, the Authority adopted Governmental Accounting Standards Board (GASB) Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* (Note 1u). The effect of the transfer of the New York State Canal Corporation to the New York State Power Authority and adoption of GASB Statement No. 75 must be considered when comparing the Authority's financial results as of and for the years ended December 31, 2018, 2017 and 2016.

Financial Analysis of the Authority

<u>Net Position</u>

The Authority's net position at December 31, 2018 was approximately $1.11 billion, a 39.9% increase compared to December 31, 2017 (see Table A-1). In 2018, total assets increased 2.8% to $8.51 billion and total liabilities decreased 0.9% to $7.47 billion. The Authority's net position at December 31, 2017 was approximately $794.1 million, a 55.9% decrease compared to December 31, 2016. In 2017, total assets decreased 7.8% to $8.28 billion, and total liabilities increased 3.4% to $7.54 billion.

Financial Analysis of the Authority - Continued

Net Position - Continued

Table A-1

Net Position
December 31, 2018, 2017, and 2016
(In millions of dollars)

	2018	2017 (Restated)	2016	Percentage Change 2018-2017
Unrestricted current assets	$ 480.3	$ 453.0	$ 458.2	6.0
Restricted assets	719.7	782.5	1,178.8	(8.0)
Capital assets	7,311.2	7,043.4	7,339.0	3.8
Total assets	8,511.2	8,278.9	8,976.0	2.8
Deferred outflows	144.7	61.6	125.0	134.9
Current liabilities	2,204.6	628.1	639.1	251.0
Noncurrent liabilities	5,264.1	6,909.7	6,650.8	(23.8)
Total liabilities	7,468.7	7,537.8	7,289.9	(0.9)
Deferred inflows	76.4	8.6	12.4	788.4
Total net position	$ 1,110.8	$ 794.1	$ 1,798.7	39.9

Restricted assets decreased $62.8 million, or 8.0% compared to 2017. The decrease is primarily due to the use of debt proceeds to pay interest costs. In 2018, proceeds generated from the issuance of General Revenue Junior Indebtedness Obligations, Series 2013A were used to pay $39.8 million of interest and proceeds generated from the issuance of General Revenue Junior Indebtedness Obligations, Series 2016A were used to pay $20.5 million of interest. Additional information regarding restricted assets and General Revenue Junior Indebtedness Obligations, Series 2013A and Series 2016A is presented in Notes 4 and 5, respectively.

Capital assets increased $267.8 million, or 3.8% compared to 2017. This increase is primarily due to the Authority's continued investment in the Governor Mario M. Cuomo Bridge, as well as ongoing investments to preserve existing infrastructure across the Thruway System. Additional information regarding capital assets is presented in Notes 3.

Current liabilities increased $1.58 billion, or 251.0%, and noncurrent liabilities decreased $1.65 billion, or 23.8% compared to 2017. General Revenue Junior Indebtedness Obligations - Series 2013A in the amount of $1.6 billion mature on May 1, 2019 and are reflected as a current liability as of December 31, 2018. Additional information regarding the Authority's debt and repayment of the General Revenue Junior Indebtedness Obligations - Series 2013A is presented in Notes 5 and 12, respectively.

Financial Analysis of the Authority - Continued

<u>Net Position</u> - Continued

The Authority's Statement of Net Position as of December 31, 2017 was restated for the adoption of GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other than Pensions.* This statement establishes new financial reporting standards for other postemployment benefits (OPEB) plans for state and local governments. Non-current liabilities were restated from $6,401.5 million to $6,909.7 million, an increase of $508.2 million and net position was restated from $1,302.3 million to $794.1 million, a corresponding decrease of $508.2 million. Additional information regarding the adoption of GASB Statement No. 75 and other postemployment benefit obligations can be found in Notes 1u and 9, respectively.

<u>Changes in Net Position</u>

Net position increased by $316.7 million in 2018 (see Table A-2). The Authority's total operating revenues for 2018 were $799.4 million, an increase of $7.2 million, or 0.9% compared to 2017. Total operating expenses, including depreciation and amortization for 2018 were $811.2 million, a decrease of $70.6 million, or 8.0% compared to 2017. Net position decreased by $1.00 billion in 2017 compared to 2016. The Authority's total operating revenues for 2017 were $792.2 million, an increase of $40.2 million, or 5.3% compared to 2016. Total operating expenses including depreciation and amortization for 2017 were $881.8 million, a decrease of $142.2 million, or 13.9% compared to 2016.

Table A-2

Changes in Net Position
Years ended December 31, 2018, 2017, and 2016
(In millions of dollars)

	2018	2017	2016	Percentage Change 2018-2017
OPERATING REVENUE				
Tolls	$ 736.5	$ 731.5	$ 708.3	0.7
Concessions	14.9	14.9	14.8	-
Other	48.0	45.8	28.9	4.8
Total operating revenue	799.4	792.2	752.0	0.9
OPERATING EXPENSES				
Salaries	146.0	140.8	158.3	3.7
Post employment obligations	83.3	69.3	89.7	20.2
Employee benefits	64.6	67.4	82.1	(4.2)
State Police - Troop T services	58.1	60.6	45.8	(4.1)
Professional and other services	51.1	45.5	43.6	12.3
Supplies, materials and rentals	25.1	21.6	19.8	16.2
Maintenance and repairs	17.6	18.7	23.1	(5.9)
Utilities	6.3	5.6	6.1	12.5
Insurance and claims	4.3	5.0	5.5	(14.0)
Equipment	1.0	1.2	0.8	(16.7)
Other	0.1	7.1	4.5	(98.6)
Depreciation and amortization	353.7	439.0	544.7	(19.4)
Total operating expenses	811.2	881.8	1,024.0	(8.0)
Operating loss	(11.8)	(89.6)	(272.0)	(86.8)

Financial Analysis of the Authority - Continued

Changes in Net Position - Continued

	2018	2017	2016	Percentage Change 2018-2017
NON-OPERATING ITEMS				
Interest expense	(178.9)	(161.4)	(155.3)	10.8
Debt issuance expense	(2.9)	-	(5.1)	-
Non-operating revenue	13.9	6.7	44.8	107.5
Gain (loss) on disposals and other	(0.5)	(0.3)	(10.3)	66.7
Net non-operating items	(168.4)	(155.0)	(125.9)	8.6
Loss before capital contributions and special item	(180.2)	(244.6)	(397.9)	(26.3)
Capital contributions	496.9	287.7	388.9	72.7
Special item - Transfer of Canal Corporation	-	(539.5)	-	(100.0)
CHANGE IN NET POSITION	**316.7**	**(496.4)**	**(9.0)**	(163.8)
NET POSITION, *beginning of year*	794.1	1,798.7	1,807.7	(55.9)
NET POSITION, *end of year prior to restatement*	1,110.8	1,302.3	1,807.7	(14.7)
Effect of adoption of GASB 75	-	(508.2)	-	(100.0)
NET POSITION, *end of year*, as restated	**$ 1,110.8**	**$ 794.1**	**$ 1,798.7**	**39.9**

Toll revenue increased $5.0 million, or 0.7% compared to 2017. This increase is primarily due to a system wide increase in commercial truck traffic.

Salary costs increased $5.2 million, or 3.7% compared to 2017. This increase is primarily due to incentives aimed at retaining toll collection employees during the Authority's transition to cashless tolling. Additional information regarding the Authority's transition to cashless tolling is presented in the Other Significant Matters section of the Management's Discussion and Analysis.

Postemployment obligations consist primarily of health insurance benefits provided to retirees. In 2018, the Authority adopted the provisions of a new accounting standard related to postemployment obligations - GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pension.* Additional information regarding GASB Statement No. 75 and Postemployment Benefits Other Than Pension can be found in Notes 1u and 9, respectively.

Professional and other services increased $5.6 million, or 12.3% compared to 2017. This increase is primarily due to the Authority's ongoing shift from cash based toll collection to cashless tolling. The Authority's cashless tolling programs, E-ZPass and Tolls by Mail, are administered by a third-party vendor. Additional information regarding the Authority's transition to cashless tolling is presented in the Other Significant Matters section of the Management's Discussion and Analysis.

Other costs decreased $7.0 million, or 98.3% compared to 2017. In 2017, the Authority incurred costs of $6.5 million for an administrative cost recovery fee charged by the State of New York. In 2018, the State of New York waived this fee.

Financial Analysis of the Authority - Continued

Changes in Net Position - Continued

Depreciation and amortization decreased $85.3 million, or 19.4% compared to 2017. The removal of the Tappan Zee Bridge from service and the opening Governor Mario M. Cuomo Bridge are the primary factors contributing to this decrease.

In December 2015, the useful life of the Tappan Zee Bridge was adjusted to align with the anticipated date it would be taken out of service (August 2017). From December 2015 through August 2017, the Authority recognized the remaining book value of the Tappan Zee Bridge through depreciation expense approximating $22 million per month. As a result, 2017 depreciation expense on the Tappan Zee Bridge was $176 million. In August 2017, the westbound span of the Governor Mario M. Cuomo Bridge, with a cost to date of approximately $1.8 billion, was placed in service carrying both eastbound and westbound traffic. Based on a 100-year useful life, 2017 and 2018 depreciation expense on the westbound span were $6.9 million and $19.2 million, respectively. In September 2018, the eastbound span of the Governor Mario M. Cuomo Bridge, with a cost to date of approximately $1.6 billion, was put into service. 2018 depreciation expense on the eastbound span was $5.6 million. The replacement of the Tappan Zee Bridge with the Governor Mario M. Cuomo Bridge resulted in a year-to-date decrease of $158.1 million.

Effective January 1, 2018, the Authority changed its estimated useful life for pavement resurfacing projects on the mainline of the Thruway System. This change is based on evidence indicating that the average life for this type of project has diminished. In 2018, the Authority recognized $59 million of additional depreciation expense related to reducing the estimated useful life for this type of project.

The increased depreciation expense due to changing the estimated useful life of certain pavement resurfacing projects partially offset the decrease related to the removal of the Tappan Zee Bridge and the opening of the Governor Mario M. Cuomo Bridge.

Interest expense increased $17.5 million, or 10.8% compared to 2017. This increase is primarily due to a reduction in the amount of interest costs capitalized on the Governor Mario M. Cuomo Bridge project. Financing costs associated with a project are only allowed to be capitalized while assets are being constructed. Based on the westbound and eastbound spans of the Governor Mario M. Cuomo Bridge being placed into service in August 2017 and September 2018, respectively, the amount of interest cost the Authority was allowed to capitalize in 2018 decreased $29.9 million, or 55.6% compared to 2017, which increased 2018 interest expense. The increase due to the change in interest costs capitalized was partially offset by lower overall interest costs on the Authority's General Revenue Bonds.

Capital contributions increased $209.2 million, or 72.7% compared to 2017. This increase is primarily due to the timing of when the Authority used Thruway Stabilization Program contributions from the State of New York to fund capital projects including the Governor Mario M. Cuomo Bridge project. Additional information regarding the Thruway Stabilization Program can be found in Note 10. Reimbursements from the State of New York for construction of Welcome Centers in New Baltimore and Grand Island also contributed to this increase.

In 2017, the Authority recognized a special expense of $539.5 million related to the January 1, 2017 transfer of the Canal Corporation and Canal System to the Power Authority. Additional information regarding the Power Authority assuming financial and operational responsibility for the Canal Corporation and Canal System can be found in Note 13.

Capital Assets and Debt Administration

Capital Assets

As of December 31, 2018, the Authority had invested approximately $12.31 billion in capital assets, including roads, bridges, buildings, land and equipment. Net of accumulated depreciation, the Authority's capital assets totaled approximately $7.31 billion (see Table A-3) representing a net increase (including additions, disposals and depreciation) of approximately $267.8 million, or 3.8% compared to December 31, 2017.

As of December 31, 2017, the Authority had invested approximately $12.74 billion in capital assets, including roads, bridges, buildings, land and equipment. Net of accumulated depreciation, the Authority's capital assets totaled approximately $7.04 billion (see Table A-3) representing a net decrease (including additions, disposals and depreciation) of approximately $295.6 million or 4.0% compared to December 31, 2016.

Table A-3

Capital Assets
December 31, 2018, 2017, and 2016
(In millions of dollars)

	2018	2017	2016	Percentage Change 2018-2017
Land and land improvements	$ 806.1	$ 801.8	$ 830.0	0.5
Construction work in progress	363.3	2,102.0	3,267.7	(82.7)
Thruway System	10,900.0	9,603.7	8,112.4	13.5
Canal System	-	-	655.4	-
Equipment	241.2	233.5	259.1	3.3
Less accumulated depreciation	(4,999.4)	(5,697.6)	(5,785.6)	(12.3)
Total net capital assets	$ 7,311.2	$ 7,043.4	$ 7,339.0	3.8

In 2018, construction work in progress decreased $1.74 billion, or 82.7%. This decrease is primarily due to the eastbound span of the Governor Mario M. Cuomo Bridge being placed in service. Significant projects in progress as of December 31, 2018 include the ongoing construction of new maintenance and police buildings at the Governor Mario M. Cuomo Bridge and a project south of Buffalo to replace one bridge, rehabilitate several other bridges and repave the highway in the same area.

Net additions to the Thruway System during 2018 were $1.3 billion. This increase was primarily due to the eastbound span of the Governor Mario M. Cuomo Bridge being placed in service, the completion of the Capital Region and Western New York Welcome Centers, the implementation of cashless tolling at the New Rochelle, Harriman, Spring Valley and Yonkers barriers in the lower Hudson Valley region and at the Grand Island Bridges in western New York, pavement rehabilitations completed between Exits 31 and 38 and Exits 42 and 44, as well as the replacement of the Route 32 bridge over the Thruway mainline near milepost 68. These increases were partially offset by the retirement of the Tappan Zee Bridge.

Capital Assets and Debt Administration - Continued

Capital Assets - Continued

On January 1, 2017, the following Canal Corporation capital assets were transferred to the Power Authority (in millions).

Land	$ 29.2
Construction work in progress	44.1
Canal System	655.4
Equipment	42.1
Accumulated Depreciation	(140.9)
Total	$ 629.9

In 2017, construction work in progress decreased $1.17 billion, or 35.7%. This decrease is primarily due to the westbound span of the Governor Mario M. Cuomo Bridge being placed in service, as well as the Canal Corporation transfer noted above. Significant projects in progress as of December 31, 2017 include the eastbound span of the Governor Mario M. Cuomo Bridge; pavement resurfacing between Exits 31-33, Exits 34-35 and Exits 42-44; and bridge rehabilitations over Vine Street and over the CSX railroad near mileposts 285 and 288.

Net additions to the Thruway System during 2017 were $1.49 billion. This increase was primarily due to the westbound span of the Governor Mario M. Cuomo Bridge being placed in service, completion of Interstate 95 pavement rehabilitation, pavement resurfacing from Exits 24-25, Exits 26-27 and Exits 45-47, and bridge rehabilitations at Pascack Road, Scotland Hill Road, and Saddle River Road.

Debt Administration

Bond and note sales must be approved by the Authority's Board, members of which are appointed by the Governor with the advice and consent of the New York State Senate. These sales must comply with rules and regulations of the United States Treasury Department and the United States Securities and Exchange Commission. Authority bond and note sales may be negotiated or sold competitively. The terms and conditions of Authority negotiated bond and note sales must also be approved by the New York State Office of the State Comptroller.

General revenue bonds are issued pursuant to the Authority's General Revenue Bond Resolution, adopted August 3, 1992, as amended on January 5, 2007. General revenue bonds may be issued for the purposes described in the General Revenue Bond Resolution, as amended, including funding the Authority's Multi-Year Capital Plan, exclusive of the New NY Bridge project. Junior indebtedness obligations are issued pursuant to the Authority's Resolution Authorizing General Revenue Junior Indebtedness Obligations, adopted November 7, 2013, as amended August 6, 2014. Junior indebtedness obligations are subordinate to the senior general revenue bonds and are special obligations of the Authority secured by a pledge of certain funds and accounts established in the Junior Indebtedness Fund. Proceeds from junior indebtedness obligations issued, and to be issued, will be used solely to fund New NY Bridge project costs incurred through project completion.

Capital Assets and Debt Administration - Continued

Debt Administration - Continued

Long-term debt includes general revenue bonds and junior indebtedness obligations of varying rates and maturities issued primarily to fund a portion of the Authority's Multi-Year Capital Plan and New NY Bridge Project costs for construction of the Governor Mario M. Cuomo Bridge. At December 31, 2018, the Authority had approximately $5.86 billion in general revenue bonds and junior indebtedness obligations outstanding, a decrease of $178.9 million or approximately 2.96% compared to the amount of general revenue bonds and junior indebtedness obligations outstanding as of December 31, 2017 (see Table A-4).

In March 2018, the Authority issued General Revenue Bonds, Series L which generated proceeds of $667.3 million. These proceeds were used to refund outstanding General Revenue Bonds, Series H. General Revenue Bonds, Series L mature in various amounts through January 1, 2037.

Of the $3.27 billion in general revenue bonds outstanding, approximately $25.1 million are insured by Assured Guaranty Municipal (formerly Financial Security Assurance Inc.) and are rated A1 by Moody's and AA by Standard and Poor's (S&P). The Authority's remaining general revenue bonds are rated A1 by Moody's and A by S&P. Of the $2.58 billion in junior indebtedness obligations outstanding, approximately $45.7 million are insured by Assured Guaranty Municipal Corp and are rated A2 by Moody's and AA by S&P. The remaining junior indebtedness obligations are rated A2 by Moody's and A- by S&P.

In December 2013, the Authority entered into a $1.6 billion loan agreement (TIFIA Loan) with the United States Department of Transportation, acting through the Federal Highway Administration. The conditions of the TIFIA Loan preclude the use of General Revenue Bond proceeds for New NY Bridge Project costs; as a result, the Authority created the General Revenue Junior Resolution to provide for the issuance of junior indebtedness obligations to fund these costs. The TIFIA Loan was secured by a junior indebtedness obligation issued under the Junior Resolution. The proceeds of the TIFIA Loan are required to be drawn no later than one year after substantial completion of the New NY Bridge Project (defined as the date on which both spans of the bridge were open to vehicular traffic), which occurred on September 12, 2018.

Also in December 2013, and in conjunction with the TIFIA loan, the Authority issued $1.6 billion of Junior Indebtedness Obligations, Series 2013A, to fund initial costs of the New NY Bridge Project. The Series 2013A JIO's are term bonds, payable in a single bullet maturity of May 1, 2019, with varying interest rates from 3% to 5%.

At December 31, 2017, the Authority had approximately $6,037.0 billion in general revenue bonds and junior indebtedness obligations, a decrease of $130.9 million, or 2.1% from December 31, 2016.

Table A-4

Outstanding Debt
Years ended December 31, 2018 and 2017
(In millions of dollars)

	Year Ended December 31, 2018			
	Beginning Balance	Additions	Reductions	Ending Balance
General Revenue Bonds	$ 3,408.2	$ 667.3	$ (801.3)	$ 3,274.2
Junior Indebtedness Obligations	2,628.8	-	(44.9)	2,583.9
Total bonds and notes	$ 6,037.0	$ 667.3	(846.2)	$ 5,858.1

Capital Assets and Debt Administration - Continued

Debt Administration - Continued

	Year Ended December 31, 2017			
	Beginning Balance	Additions	Reductions	Ending Balance
General Revenue Bonds	$ 3,494.2	$ -	$ (86.0)	$ 3,408.2
Junior Indebtedness Obligations	2,673.7	-	(44.9)	2,628.8
Total bonds and notes	$ 6,167.9	$ -	$ (130.9)	$ 6,037.0

More detailed information regarding the Authority's debt and repayment of the General Revenue Junior Indebtedness Obligations - Series 2013A is presented in Notes 5 and 12, respectively.

Other Significant Matters

Governor Mario M. Cuomo Bridge

In January 2013, the Authority entered into a design-build agreement to construct what was then known as the New NY Bridge to replace the existing Tappan Zee Bridge. The New NY Bridge, now known as the Governor Mario M. Cuomo Bridge, is a twin-span structure crossing the Hudson River between Rockland and Westchester counties. The bridge has a 100-year design life and consists of eight general purpose lanes, as well as emergency access lanes. The bridge conforms to current seismic, safety, and geometric requirements; has adequate shoulders to manage traffic incidents and emergencies; and will soon be able to accommodate bicycle and pedestrian use. The westbound span of the Governor Mario M. Cuomo Bridge was placed in service in August of 2017 and the eastbound span was placed in service in September of 2018. Through December 31, 2018, costs of $3.84 billion have been incurred on the project, $275.7 million of which was spent in 2018.

Additional information regarding the Governor Mario M. Cuomo Bridge is available at www.newnybridge.com.

Thruway Stabilization Program

In 2015, the State of New York created the $1.285 billion Thruway Stabilization Program to partially fund the Governor Mario M. Cuomo Bridge, as well as other Thruway capital projects. In 2016, the State committed an additional $700 million to the program bringing the total commitment to $1.985 billion. The Authority intends to use $1.2 billion from this program on the Governor Mario M. Cuomo Bridge and $785 million on other Thruway capital projects and needs. Through December 31, 2018, the program has provided $1.62 billion to the Authority, consisting of $1.09 billion related to the Governor Mario M. Cuomo Bridge and $527.9 million related to other Thruway capital projects.

Other Significant Matters - Continued

Cashless Tolling

The Authority has committed to implementing cashless tolling system-wide by the end of 2020 and made significant progress toward this goal in 2018. Cashless tolling allows customers to pay their tolls without stopping at a toll booth. Customers with an E-ZPass account have their toll information collected via an E-ZPass tag installed in their vehicles. Customers without E-ZPass have an image of their license plate captured and the registered owner of the vehicle is sent an invoice for their tolls (Tolls by Mail). In 2018, the Authority implemented cashless tolling at the North and South Grand Island Bridges, and at tolling stations in Harriman, Yonkers, New Rochelle and Spring Valley. Cashless tolling at the Governor Mario M. Cuomo Bridge was previously implemented in 2016.

Postemployment Benefit Obligations

Effective December 31, 2017, the Authority implemented the provisions of GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other than Pensions.* This statement establishes new financial reporting standards for other postemployment benefits (OPEB) plans for state and local governments. The adoption of this statement was applied retroactively, requiring a restatement of the Authority's Statement of Net Position as of December 31, 2017. Additional information regarding the adoption of GASB Statement No. 75 and other postemployment benefit obligations can be found in Notes 1u and 9, respectively.

Canal Corporation

In 2016, the State of New York enacted legislation establishing the Canal Corporation as a subsidiary of the Power Authority effective January 1, 2017. On this date, the Power Authority assumed control of the Canal Corporation and Canal System. Canal Corporation assets of $653.7 million and liabilities of $114.2 million were transferred to the Power Authority. A special expense of $539.5 million was included on the Authority's Statement of Revenues, Expense and Changes in Net Position representing the net position of the Canal Corporation transferred to the Power Authority.

Additional information regarding the transfer of the Canal Corporation is available in Note 13.

Contacting the New York State Thruway Authority's Financial Management

This financial report is designed to provide our bondholders, customers, and other interested parties with a general overview of the Authority's finances and to demonstrate its accountability for the money it receives. If you have questions about this report, or need additional information, contact the New York State Thruway Authority's Department of Finance and Accounts, P.O. Box 189, Albany, New York 12201-0189 or visit our website at www.thruway.ny.gov.

New York State Thruway Authority

(A Component Unit of the State of New York)

Statements of Net Position
(in thousands of dollars)

	December 31, 2018	December 31, 2017 (Restated)
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES		
CURRENT ASSETS		
Cash and cash equivalents	$ 377,073	$ 312,157
Investments	6,015	21,366
Receivables, net	76,181	100,574
Material and other supplies	18,982	17,224
Prepaid items	2,057	1,679
Restricted assets	347,227	355,439
Total current assets	827,535	808,439
NON-CURRENT ASSETS		
Restricted assets	372,480	427,028
Capital assets, not being depreciated	1,169,500	2,903,797
Capital assets, net of accumulated depreciation	6,141,732	4,139,562
Total non-current assets	7,683,712	7,470,387
Total assets	8,511,247	8,278,826
DEFERRED OUTFLOWS OF RESOURCES		
Loss on bond refunding	9,165	11,760
OPEB resources	71,093	-
Pension resources	64,480	49,858
Total deferred outflows of resources	144,738	61,618
LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND NET POSITION		
CURRENT LIABILITIES		
Accounts payable and accrued expenses	268,245	265,006
Unearned revenue	97,984	83,357
Accrued interest payable	132,583	137,011
Bonds payable due within one year	1,705,783	142,735
Total current liabilities	2,204,595	628,109
NON-CURRENT LIABILITIES		
Bonds payable	4,152,274	5,894,250
Other long-term liabilities	1,111,855	1,015,419
Total non-current liabilities	5,264,129	6,909,669
Total liabilities	7,468,724	7,537,778
DEFERRED INFLOWS OF RESOURCES		
Gain on bond refunding	25,568	-
Pension resources	50,890	8,604
Total deferred inflows of resources	76,458	8,604
NET POSITION		
Net investment in capital assets	1,694,741	1,319,243
Restricted for		
Debt service	71,759	83,189
Capital	126,713	144,224
Unrestricted (deficit)	(782,410)	(752,594)
Total net position	**$ 1,110,803**	**$ 794,062**

See accompanying Notes to Financial Statements.

New York State Thruway Authority

(A Component Unit of the State of New York)

Statements of Revenues, Expenses, and Changes in Net Position
(in thousands of dollars)

	Years Ended December 31, 2018	2017
OPERATING REVENUES		
Tolls	$ 736,504	$ 731,505
Concessions	14,880	14,883
Other	48,017	45,821
Total operating revenues	799,401	792,209
OPERATING EXPENSES		
Salaries	146,000	140,812
Postemployment obligations	83,251	69,316
Employee benefits	64,602	67,418
State Police - Troop T services	58,143	60,572
Professional and other services	51,062	45,452
Supplies, materials and rentals	25,105	21,615
Maintenance and repairs	17,589	18,709
Utilities	6,317	5,580
Insurance and claims	4,285	4,959
Equipment	943	1,176
Other	120	7,118
Depreciation and amortization	353,732	439,047
Total operating expenses	811,149	881,774
Operating loss	**(11,748)**	**(89,565)**
NON-OPERATING REVENUES AND EXPENSES		
Investment income	5,493	2,866
Interest expense	(178,894)	(161,413)
Debt issuance cost	(2,932)	(9)
Federal, state and other aid	8,393	3,766
Loss on disposal of assets	(469)	(267)
Net non-operating items	(168,409)	(155,057)
Loss before capital contributions and special item	**(180,157)**	**(244,622)**
CAPITAL CONTRIBUTIONS	496,898	287,713
SPECIAL ITEM, transfer of Canal Corporation to NYS Power Authority	-	(539,518)
Total capital contributions and special item	496,898	(251,805)
CHANGE IN NET POSITION	**316,741**	**(496,427)**
NET POSITION, *beginning of year*	794,062	1,798,699
NET POSITION, *end of year prior to restatement*	1,110,803	1,302,272
Effect of adoption of GASB 75	-	(508,210)
NET POSITION, *end of year*, as restated	**$ 1,110,803**	**$ 794,062**

See accompanying Notes to Financial Statements.

New York State Thruway Authority

(A Component Unit of the State of New York)

Statements of Cash Flows
(in thousands of dollars)

	Years Ended December 31, 2018	2017
CASH PROVIDED (USED) BY OPERATING ACTIVITIES		
Cash received from toll collections	$ 746,364	$ 728,778
Cash received from concession sales	15,065	14,848
Other operating cash receipts	44,646	43,057
Personal service payments	(150,486)	(137,208)
Fringe benefits payments	(103,686)	(94,130)
E-ZPass and Tolls by Mail account management payments	(42,454)	(42,034)
Cash payments to vendors and contractors	(133,275)	(128,939)
	376,174	**384,372**
CASH FLOWS PROVIDED BY NON-CAPITAL FINANCING ACTIVITIES		
Federal, state and other aid	**47,988**	**18,554**
CASH FLOWS PROVIDED (USED) FROM CAPITAL AND RELATED FINANCING ACTIVITIES		
Proceeds from issuance of debt	667,293	-
Federal, state and other capital contributions	222,181	167,836
Acquisition/construction of capital assets	(342,785)	(682,085)
Principal paid on debt	(752,735)	(70,990)
Interest and issuance costs paid on debt	(275,427)	(281,507)
Proceeds from sale of capital assets	985	301
	(480,488)	**(866,445)**
CASH FLOWS PROVIDED (USED) BY INVESTING ACTIVITIES		
Purchase of investments	(699,294)	(761,247)
Proceeds from sales and maturities of investments	739,856	1,193,989
Interest and dividends on investments	5,779	5,798
	46,341	**438,540**
Net decrease in cash and cash equivalents	**(9,985)**	**(24,979)**
CASH AND CASH EQUIVALENTS, *beginning of year*	686,308	711,287
CASH AND CASH EQUIVALENTS, *end of year*	**$ 676,323**	**$ 686,308**

See accompanying Notes to Financial Statements.

	Years Ended December 31, 2018	2017
RECONCILIATION OF OPERATING LOSS TO NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES		
Operating loss	$ (11,748)	$ (89,565)
Adjustments to reconcile operating loss to net cash provided by operating activities		
Depreciation and amortization	353,732	439,047
Capitalized interest	1	880
Net changes in assets, liabilities, deferred outflows and deferred inflows		
Receivables	(15,202)	1,982
Material and supplies	(1,758)	124
Other assets	(378)	(834)
Accounts payables and accrued expenses	80,328	(9,513)
Deferred outflows	(85,714)	46,793
Deferred inflows	42,286	(1,920)
Unearned revenue	14,627	(2,622)
	$ 376,174	**$ 384,372**
RECONCILIATION TO STATEMENTS OF NET POSITION		
Cash and cash equivalents	$ 377,073	$ 312,157
Restricted cash and cash equivalents (Note 2)	299,250	374,151
	$ 676,323	**$ 686,308**
NON-CASH CAPITAL ACTIVITIES		
Payments made to vendors by the State of New York under Thruway Stabilization Program	**$ 243,270**	**$ 25,000**

Note 1 - Organization and Summary of Significant Accounting Policies

The accompanying financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP) as applied to governmental units. The Government Accounting Standards Board (GASB) is the accepted standard-setting body for establishing governmental accounting and financial reporting principles. An overview of the more significant accounting policies is described below:

a. Financial Reporting Entity

The New York State Thruway Authority (Authority) is a Public Benefit Corporation created by the New York State Legislature in 1950 to build, operate, and maintain the Thruway System. The Board of the Authority consists of seven members, appointed by the Governor, with the consent of the New York State Senate.

The Authority is responsible for a 570-mile system of highways crossing New York State, the longest toll highway system in the United States. The Authority's 426-mile Thruway mainline connects New York City and Buffalo, the State's two largest cities. Other Thruway sections provide for connections with Connecticut, Massachusetts, Pennsylvania, New Jersey, and to highways that lead to the Midwest and Canada. In accordance with legislation passed by the State Legislature, the Cross-Westchester Expressway (CWE) was added to the Thruway in 1991, and the Authority is prohibited from imposing any tolls or other charges for the use of the CWE.

The State may, from time to time, also authorize the Authority by statute to undertake additional financing activities to finance primarily non-Authority transportation projects in the State. The Authority is responsible for administering these special bond programs as discussed in Note 6.

The Authority is a legally and fiscally separate and distinct organization solely responsible for its finances, and the credit of the State of New York is not pledged to the operation of the Authority. The Authority is empowered to issue revenue bonds backed solely from Authority revenues. However, under the criteria specified in GASB Statement No. 14, as amended by GASB Statement No. 61, the Authority is considered a component unit of the State of New York because the Governor appoints all members of the Authority's Governing Board.

b. Basis of Accounting

The Authority's activities are accounted for similar to those often found in the private sector using the flow of economic resources measurement focus and the accrual basis of accounting. All assets, liabilities, deferred outflows of resources, deferred inflows of resources, net position, revenues, and expenses are accounted for through a single enterprise fund with revenue recorded when earned and expenses recorded at the time liabilities are incurred.

The principal revenue of the Authority is toll revenue received from customers. The Authority also recognizes as operating revenue toll related fees, rent received from concessionaires from operating leases on concession property, special hauling fees charged to overweight or oversize vehicles, and certain revenue collected from the lease of property. Operating expenses include all costs required to operate, maintain, and administer the Thruway. All revenue and expenses not meeting this definition are reported as non-operating items.

Note 1 - Organization and Summary of Significant Accounting Policies - Continued

b. *Basis of Accounting* - Continued

The Authority's bond resolution requires that certain funds and accounts be established and maintained. The Authority consolidates these funds and accounts for the purpose of providing its basic financial statements in accordance with U.S. GAAP.

c. *Cash, Cash Equivalents, and Investments*

Cash includes amounts in demand deposits. Cash equivalents include all highly liquid investments with original maturities of three months or less when purchased. All cash deposits and repurchase agreements are fully collateralized or covered by federal deposit insurance.

Investments include financial instruments with original maturities of more than three months and are recorded at amortized cost, which approximates fair value. Fair value is defined as the price that would be received to sell an asset in an orderly transaction between market participants at the measurement date. These investments are not included in cash and cash equivalents in the statements of cash flows.

d. *Estimates*

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, deferred outflows, deferred inflows, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

e. *Receivables*

Receivables consist primarily of receivables from commercial transportation companies and Federal and State governments under various grant programs. All commercial accounts receivable are guaranteed by surety bonds and/or cash deposits. Receivables also include amounts attributable to the Authority's cashless tolling system. Receivables are reported net of an allowance for uncollectible amounts. The allowance for doubtful receivables amounted to $10,284,000 and $11,163,000 at December 31, 2018 and 2017, respectively.

f. *Materials and Other Supplies*

Materials and other supplies are principally valued at weighted average cost. The cost of such items is recognized as an expense when used.

g. *Unearned Revenue*

Unearned revenue consists of prepaid deposits made by private and commercial customers into E-ZPass accounts held by the Authority and annual permit revenues collected in advance. E-ZPass customer accounts with negative balances (amounts due to the Authority) are reported as an offset to unearned revenue. At December 31, 2018 and 2017, E-ZPass accounts with negative balances, net of allowances for doubtful accounts, amount to $1,460,000 and $977,000, respectively.

Note 1 - Organization and Summary of Significant Accounting Policies - Continued

h. Restricted Assets

Certain proceeds of the Thruway revenue bonds and notes are restricted by applicable bond covenants for construction or set aside as reserves to ensure repayment of the Authority's bonds. Certain other assets are accumulated and restricted in accordance with the bond resolutions for the purpose of paying interest and principal debt payments that are due on a semi-annual and annual basis, respectively, and for the purpose of maintaining reserve funds at required levels.

i. Toll Revenues

Toll revenues are stated net of volume and other discounts approximating $28.0 million and $27.4 million in 2018 and 2017, respectively.

j. Pensions

The Authority is a participating employer in the New York State and Local Retirement System (ERS). Employees in permanent positions are required to enroll in ERS, and employees in part-time or seasonal positions have the option of enrolling in ERS. ERS is a cost sharing, multiple employer, public employee defined benefit retirement system. The impact on the Authority's financial position and results of operations due to its participation in ERS is more fully disclosed in Note 7.

k. Other Postemployment Benefits

The Authority recognizes in its financial statements the financial impact of other postemployment benefits, principally employer funded health care costs. The impact on the Authority's financial position and results of operations is more fully disclosed in Note 9.

l. Compensated Absences

Permanent employees of the Authority accrue vacation leave as part of their benefit package. Unused vacation days up to a maximum of 30 days are considered vested and paid upon retirement or termination. The liability for vested vacation leave approximates $8,970,000 and $9,201,000 at December 31, 2018 and 2017, respectively, and is recorded as a long-term liability.

Permanent employees of the Authority also accrue sick leave as part of their benefit package. Upon retirement, unused sick days up to a maximum of 200 days are converted to a monthly credit that is used to offset the employee's share of postemployment benefit costs. The Authority's liability for postemployment benefits is discussed further in Note 9.

m. Bond and Note Premiums

Bond and note premiums are presented as components of bonds payable. The premiums are amortized over the life of the bonds and notes on a method that approximates the effective interest method. Net amortization related to bond and note premiums were approximately $62,003,000 and $59,920,000 for 2018 and 2017, respectively, and are included as an offset to interest expense.

n. Deferred Outflows and Deferred Inflows of Resources

Deferred outflows of resources represent a consumption of net position that applies to a future period and so will not be recognized as an outflow of resources (expense/expenditure) until that time. Likewise, deferred inflows of resources represent an acquisition of net position that applies to a future period and so will not be recognized as an inflow of resources (revenue) until that time.

Note 1 - Organization and Summary of Significant Accounting Policies - Continued

o. Net Position

Net position is classified as follows:

- *Net investment in capital assets* consists of capital assets, net of accumulated depreciation reduced by the net outstanding debt balances attributable to the acquisition of capital assets.

- *Restricted net position* has externally placed constraints on use.

- *Unrestricted net position* consists of assets, liabilities, deferred outflows and deferred inflows that do not meet the definition of "net investment in capital assets" or "restricted net position."

p. Capital Contributions

Capital contributions consist primarily of funds provided by the State of New York (Note 10).

q. Arbitrage

The Tax Reform Act of 1986 imposed additional restrictive regulations, reporting requirements, and an arbitrage rebate liability on issuers of tax-exempt debt. This Act requires the remittance to the IRS of 90% of the cumulative rebatable arbitrage within 60 days of the end of each five-year reporting period following the issuance of governmental bonds. The Authority's policy is to annually record a liability representing the estimated amount owed. The Authority actively manages its invested bond proceeds to minimize any arbitrage liability. The Authority had no cumulative arbitrage rebate liability for the years ended December 31, 2018 and 2017.

r. Income Taxes

The Authority is a public benefit corporation of the State of New York. As such, income earned in the exercise of its essential government functions is exempt from state and federal income taxes.

s. Non-Exchange Transactions

The Authority's non-exchange transactions include fees charged to customers as violation fees, late fees and administrative fees. The distinguishing characteristic of these non-exchange fees charged by the Authority is they are assessed against customers who have failed to pay their toll and/or follow the terms of their E-ZPass account agreement. The Authority's policy for recognizing revenue associated with non-exchange fees is to record the revenue at the time the fee is collected.

Operating revenues include fees of $29.9 million and $31.9 million for the years ended December 31, 2018 and December 31, 2017, respectively.

Other non-exchange transactions of the Authority are disclosed in Note 10.

Note 1 - Organization and Summary of Significant Accounting Policies - Continued

t. Subsequent Events

The Authority has evaluated subsequent events for potential recognition or disclosure through April 4, 2019, the date the financial statements were available to be issued (Note 12).

u. Adoption of Accounting Standard

During 2018, the Authority implemented the provisions of GASB Statement No. 75 (GASB 75), *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions.* GASB 75 establishes financial reporting standards for other postemployment benefits (OPEB) plans for state and local governments. GASB 75 replaces the requirements of GASB Statement 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*, as amended. GASB 75 establishes standards for recognizing and measuring liabilities, deferred inflows and outflows of resources, and expense/expenditures, as well as identifying the methods and assumptions required to project benefit payments, discount projected benefit payments to their actuarial present value, and attribute that present value to periods of employee service. Additionally, GASB 75 lays out requirements for additional note disclosures and required supplementary information.

The adoption of GASB 75 was applied retroactively. As a result of the adoption of GASB 75, the Authority measured and recognized OPEB amounts in accordance with GASB 75, included additional disclosures in Note 9, presented a schedule of other postemployment benefits liability and OPEB as a percentage of covered payroll as required supplementary information, and restated the postemployment benefit obligation and net position by $508,210,000 each to $959,969,000 and $794,062,000 at December 31, 2017, respectively.

Note 2 - Cash and Investments

The Authority's cash and investments as of December 31, 2018 and 2017, were as follows (in thousands):

	Carrying Value	
	2018	2017
Unrestricted		
Cash		
Demand deposits	$ 92,632	$ 96,279
Toll change funds	190	150
Total unrestricted cash	92,822	96,429
Cash equivalents		
U.S. government discount notes	9,573	29,963
U.S. treasury securities	211,577	87,781
Time Deposits	219	
Commercial paper	62,882	97,984
Total unrestricted cash equivalents	284,251	215,728
Total unrestricted cash and cash equivalents	$ 377,073	$ 312,157

Note 2 - Cash and Investments - Continued

	Carrying Value	
	2018	2017
Restricted		
Cash		
Demand deposits	$ 70,152	$ 60,707
Other deposits	2,501	2,630
Total restricted cash	72,653	63,337
Cash equivalents		
U.S. government discount notes	80,138	-
U.S. treasury securities	96,479	130,015
Commercial paper	49,980	180,799
Total restricted cash equivalents	226,597	310,814
Total restricted cash and cash equivalents	$ 299,250	$ 374,151

	Carrying Value	
	2018	2017
Investments		
Unrestricted		
Commercial paper	$ -	$ 4,962
U.S. treasury securities	5,063	15,414
Time deposits	952	990
Total unrestricted investments	$ 6,015	$ 21,366
Restricted		
U.S. government discount notes	$ 26,047	$ -
Commercial paper	100,751	111,298
U.S. treasury securities	171,639	212,201
Total restricted investments	$ 298,437	$ 323,499

At December 31, 2018 and 2017, the fair value of the Authority's cash and investments approximated the carrying value (amortized cost).

The Authority requires collateral, in the form of federal government obligations or agency instruments guaranteed by the federal government, for all investments in repurchase agreements. The Authority also requires delivery to its trustee/custodian of all securities purchased and collateral for repurchase agreements, regardless of the seller institution. All Authority investment securities are classified as securities acquired by a financial institution for the Authority and held by the Authority's trustee/custodian in the Authority's name. Bank balances, which are comprised of demand and other deposits, are fully insured or collateralized as of December 31, 2018 and 2017. Amounts are collateralized with securities transferred to and held by the Authority's trustee/custodian in the Authority's name.

Note 2 - Cash and Investments - Continued

The Authority manages its investments pursuant to the respective bond resolutions, Public Authorities Law, and the Authority's Investment Policy approved annually by the Authority's Board. Permitted investments are defined as obligations in which the State Comptroller may invest pursuant to Section 98(a) of the State Finance Law, including obligations of the United States and its Federal agencies, collateralized time deposits, commercial paper, bankers' acceptances, and repurchase agreements.

The Authority's investment policy has established criteria that mitigate certain credit risks and interest rate risks. The policy has established investment concentration limits for each of the Authority's investment portfolios. The policy also requires that deposits and investments be held by a third-party custodian who may not otherwise be counter-party to the transactions, and that securities are held in the name of the Authority.

Custodial credit risk for deposits is the risk that, in the event of a bank failure, the Authority's deposits may not be returned. The Authority's policy to address this risk requires the custodian or depository bank to provide collateral in an amount equal to or greater than the amount on deposit, with a third-party custodian in the Authority's name.

Interest rate risk is also addressed in the Authority's policy which requires the purchase of securities with the intention of holding them to maturity and does not limit the term of any investment. It is the Authority's practice to invest funds to the date of the anticipated need of the funds. The Authority does not own any investments at December 31, 2018 that mature in 2020 or beyond.

As of December 31, 2018, the Authority had the following concentrations of investments:

Investments	Credit Exposure Security	% of Total
Agency Obligations		
Federal Home Loan Banks	A-1+/P-1/na	14.2%
Commercial Paper		
Koch Resources LLC	A-1+/P-1/na	7.0%
Toronto Dominion HDG USA, INC	A-1+/P-1/na	10.1%
Toyota Motor Credit Corporation	A-1+/P-1/F1	9.1%
U.S. Government Securities		
Treasury Bills	A-1+/P-1/F1+	59.6%

Note 3 - Capital Assets

The Authority's capital assets principally include the Thruway System and equipment. The Thruway System includes infrastructure assets consisting of bridges, highways, buildings, toll equipment, and intelligent transportation systems. Equipment includes vehicles, machinery, software systems, and E-ZPass tags.

Note 3 - Capital Assets - Continued

All capital assets are stated at cost. Capital assets are defined as assets with initial, individual costs exceeding capitalization thresholds of $5,000 to $50,000. Depreciation is computed on the straight-line method over the following estimated useful lives:

Category	Useful Life	Capitalization Threshold
Bridges	45-100 years	$ 50,000
Bridge improvements	15 years	50,000
Highways	30 years	50,000
Highway improvements	8-10 years	50,000
Buildings	30 years	50,000
Fiber optic system	17 years	50,000
Equipment	2-12 years	5,000 - 50,000

The following schedules summarize the capital assets of the Authority and related changes for the years ended December 31, 2018 and 2017 (in thousands):

	December 31, 2017	Additions	Reductions	December 31, 2018
Capital assets, not being depreciated				
Land and land improvements	$ 801,832	$ 5,520	$ (1,187)	$ 806,165
Construction in progress	2,101,965	588,097	(2,326,727)	363,335
Total capital assets, not being depreciated	2,903,797	593,617	(2,327,914)	1,169,500
Capital assets, being depreciated				
Thruway System	9,603,712	2,327,041	(1,030,793)	10,899,960
Equipment	233,538	30,259	(22,586)	241,211
Total capital assets, being depreciated	9,837,250	2,357,300	(1,053,379)	11,141,171
Less accumulated depreciation for				
Thruway System	(5,563,209)	(333,371)	1,030,793	(4,865,787)
Equipment	(134,479)	(20,305)	21,132	(133,652)
Total accumulated depreciation	(5,697,688)	(353,676)	1,051,925	(4,999,439)
Net value of capital assets, being depreciated	4,139,562	2,003,624	(1,454)	6,141,732
Capital assets, net	$ 7,043,359	$ 2,597,241	$ (2,329,368)	$ 7,311,232

Note 3 - Capital Assets - Continued

	December 31, 2016	Additions	Reductions	December 31, 2017
Capital assets, not being depreciated				
Land and land improvements	$ 829,970	$ 1,110	$ (29,248)	$ 801,832
Construction in progress	3,267,671	751,168	(1,916,874)	2,101,965
Total capital assets, not being depreciated	4,097,641	752,278	(1,946,122)	2,903,797
Capital assets, being depreciated				
Thruway System	8,112,437	1,857,872	(366,597)	9,603,712
Canal System (Note 13)	655,418	-	(655,418)	-
Equipment	259,125	36,553	(62,140)	233,538
Total capital assets, being depreciated	9,026,980	1,894,425	(1,084,155)	9,837,250
Less accumulated depreciation for				
Thruway System	(5,510,689)	(419,184)	366,664	(5,563,209)
Canal System (Note 13)	(113,831)	-	113,831	-
Equipment	(161,102)	(19,807)	46,430	(134,479)
Total accumulated depreciation	(5,785,622)	(438,991)	526,925	(5,697,688)
Net value of capital assets, being depreciated	3,241,358	1,455,434	(557,230)	4,139,562
Capital assets, net	$ 7,338,999	$ 2,207,712	$ (2,503,352)	$ 7,043,359

Depreciation expense related to capital assets was $353,676,000 and $438,991,000 for the years ended December 31, 2018 and 2017, respectively. The Authority periodically reviews and, when deemed necessary, adjusts the estimated useful lives of its capital assets. Effective January 1, 2018, the Authority changed its estimated useful life for pavement resurfacing projects on the mainline of the Thruway System from 10 years to 8 years.

The Authority incurred $202.8 million in total interest expense in 2018, of which $23.6 million was capitalized, and an additional $0.3 million was offset against interest earned on the proceeds from various debt issuances. The Authority incurred $215.3 million in total interest expense in 2017, of which $51.4 million was capitalized and an additional $2.5 million was offset against interest earned on the proceeds from various debt issuances.

The Authority monitors events and circumstances that cause significant and unexpected declines to the useful life of capital assets. When required, a loss is recognized to reduce the carrying value of an impaired capital asset. Impairment loss is reflected as a component of depreciation expense.

Note 4 - Restricted Assets

Restricted assets are established pursuant to bond resolutions and other agreements and are classified as current or non-current based upon the underlying restrictions. Restricted assets are comprised of the following as of December 31 (in thousands):

	2018	2017
Restricted current		
Cash and cash equivalents	$ 165,767	$ 226,314
Investments	91,892	46,623
Receivables	89,568	82,502
Total	347,227	355,439
Restricted non-current		
Cash and cash equivalents	133,483	147,837
Investments	206,545	276,876
Interest receivable	-	80
Receivables	24,241	-
Other	8,211	2,235
Total	372,480	427,028
Total restricted assets	$ 719,707	$ 782,467

The related balances at December 31, 2018 and 2017 are as follows:

Senior Debt Service Fund: Established to receive funds from Authority revenues to make periodic payments of interest and principal. Amounts held in this restricted fund at December 31, 2018 and 2017 were $144,110,000 and 159,838,000, respectively.

Senior Debt Service Reserve Fund: Established to retain funds equal to the maximum amount of aggregate debt service for any twelve-month period on all outstanding General Revenue Bonds secured by the Senior Debt Service Reserve Fund. Amounts held in this restricted fund at December 31, 2018 and 2017 were $180,973,000 and $181,093,000, respectively.

Construction Fund: Established to hold moneys paid into it from the sale of bonds and notes to pay for costs of the "Facilities" and "Other Authority Projects" as defined in the bond resolutions. Amounts remaining upon completion or abandonment of such projects is required to be transferred to other funds in accordance with the terms outlined in the bond resolutions. The fund also holds in escrow monies received from the State of New York to fund the Authority's Multi-Year Capital Program. The amounts held in this restricted fund at December 31, 2018 and 2017 were $37,251,000 and $28,887,000, respectively.

Reserve Maintenance Fund: Established to hold funds required to be deposited each year into the Reserve Maintenance Fund. Funds held in the Reserve Maintenance Fund can be disbursed for specific costs relating to the "Facilities," as defined in the bond resolution and certain highway and railroad grade crossings. Amounts held in this restricted fund at December 31, 2018 and 2017 were $113,553,000 and $109,905,000, respectively.

Note 4 - Restricted Assets - Continued

Junior Indebtedness Fund: Established to hold moneys received from the sale of Junior Indebtedness Obligations. Amounts in the Junior Indebtedness Fund are used to: 1) fund the Facilities Capital Improvement Fund for a portion of the cost of the Authority's New NY Bridge Project as defined in the Junior Indebtedness Bond Resolution; 2) fund certain debt service payments on the Series 2013A and Series 2016A Junior Indebtedness Obligations; and 3) satisfy the Junior Indebtedness Debt Service Reserve requirements on the Series 2016A Junior Indebtedness Obligations. The amounts held in this restricted fund at December 31, 2018 and 2017 were $137,560,000 and $180,379,000, respectively.

Facilities Capital Improvement Fund: Established to hold funds determined to be necessary or appropriate by the Authority Board to fund project costs of facilities or to set up reserves to fund such costs. The Authority has elected to use this fund to hold certain revenues, debt proceeds, and other monies dedicated to the Governor Mario M. Cuomo Bridge. The amounts held in this restricted fund at December 31, 2018 and 2017, were $103,758,000 and $119,735,000, respectively.

Commercial Charge Surety Account: Established to receive cash surety deposits from Commercial Charge Account customers which are to be used only if the customer does not meet their obligations under the Commercial Charge Account Credit Agreement. The amounts held in the account at December 31, 2018 and 2017 were $2,502,000 and $2,630,000, respectively.

Note 5 - Long-Term Liabilities

The Authority's bond indebtedness and other long-term liabilities as of December 31, 2018 and 2017, are comprised of the following obligations (in thousands):

	Date of Issuance	December 31, 2017 Balance	Additions	Reductions	December 31, 2018 Balance	Due Within One Year
General revenue bonds						
2007 Series H	10/07	$ 717,025	$ -	$ (717,025)	$ -	$ -
2012 Series I	7/12	1,041,835	-	(22,335)	1,019,500	23,310
2014 Series J	2/14	650,625	-	(13,375)	637,250	14,030
2014 Series K	12/14	743,865	-	-	743,865	4,825
2018 Series L	3/18	-	596,220	-	596,220	29,595
Unamortized bond premiums		254,829	71,073	(48,552)	277,350	17,070
General revenue bonds and unamortized premiums		3,408,179	667,293	(801,287)	3,274,185	88,830
Junior indebtedness obligations						
Series 2013 A	12/13	1,600,000	-	-	1,600,000	1,600,000
Series 2016 A	5/16	850,000	-	-	850,000	-
Unamortized bond premiums		178,806	-	(44,934)	133,872	16,953
Junior indebtedness obligations and unamortized premiums		2,628,806	-	(44,934)	2,583,872	1,616,953
Total bonds and unamortized premiums		$ 6,036,985	$ 667,293	$ (846,221)	$ 5,858,057	$ 1,705,783
Other long-term liabilities						
Postemployment benefit obligation		$ 959,969	$ 154,344	$ (30,553)	$ 1,083,760	$ -
Net pension liability		46,249	-	(30,630)	15,619	-
Compensated absences		9,201	-	(231)	8,970	-
Service based retention-incentive		-	3,506	-	3,506	-
Total other long-term liabilities		$ 1,015,419	$ 157,850	$ (61,414)	$ 1,111,855	$ -

Note 5 - Long-Term Liabilities - Continued

	Date of Issuance	December 31, 2016 Balance	Additions	Reductions	December 31, 2017 Balance	Due Within One Year
General revenue bonds						
2007 Series H	10/07	$ 757,845	$ -	$ (40,820)	$ 717,025	$ 47,105
2012 Series I	7/12	1,059,220	-	(17,385)	1,041,835	22,335
2014 Series J	2/14	663,410	-	(12,785)	650,625	13,375
2014 Series K	12/14	743,865	-	-	743,865	-
Unamortized bond premiums		269,815	-	(14,986)	254,829	14,987
General revenue bonds and unamortized premiums		3,494,155	-	(85,976)	3,408,179	97,802
Junior indebtedness obligations						
Series 2013 A	12/13	1,600,000	-	-	1,600,000	-
Series 2016 A	5/16	850,000	-	-	850,000	-
Unamortized bond premiums		223,739	-	(44,933)	178,806	44,933
Junior indebtedness obligations and unamortized premiums		2,673,739	-	(44,933)	2,628,806	44,933
Total bonds and unamortized premiums		$ 6,167,894	$ -	$ (130,909)	$ 6,036,985	$ 142,735

	December 31, 2016 Balance	Additions	Reductions	GASB 75 Restatement	December 31, 2017 (Restated)
Other long-term liabilities					
Postemployment benefit obligation	$ 504,480	$ 69,316	$ (122,037)	$ 508,210	$ 959,969
Net pension liability	99,135	-	(52,886)	-	46,249
Compensated absences	10,236	-	(1,035)	-	9,201
Total other long-term liabilities	$ 613,851	$ 69,316	$ (175,958)	$ 508,210	$ 1,015,419

The debt service requirements for the Authority's senior bonds as of December 31, 2018 are as follows (in thousands):

Due	Principal	Interest	Total
2019	$ 71,760	$ 143,208	$ 214,968
2020	100,945	139,326	240,271
2021	105,725	134,352	240,077
2022	104,005	129,225	233,230
2023	131,705	123,468	255,173
2024 - 2028	773,120	509,511	1,282,631
2029 - 2033	864,280	296,809	1,161,089
2034 - 2038	468,465	143,886	612,351
2039 - 2043	354,775	42,547	397,322
2044	22,055	510	22,565
Unamortized premiums	277,350	-	277,350
	$ 3,274,185	$ 1,662,842	$ 4,937,027

Note 5 - Long-Term Liabilities - Continued

The debt service requirements for the Authority's junior indebtedness obligations as of December 31, 2018 are as follows (in thousands):

Due	Principal	Interest	Total
2019	$ 1,600,000	$ 107,214	$ 1,707,214
2020	-	40,950	40,950
2021	250	40,946	41,196
2022	250	40,937	41,187
2023	250	40,927	41,177
2024 - 2028	20,250	203,066	223,316
2029 - 2033	69,330	191,828	261,158
2034 - 2038	100,335	170,582	270,917
2039 - 2043	125,900	144,170	270,070
2044 - 2048	160,585	108,719	269,304
2049 - 2053	202,845	65,587	268,432
2054 - 2056	170,005	12,542	182,547
Unamortized premiums	133,872	-	133,872
	$ 2,583,872	$ 1,167,468	$ 3,751,340

General Revenue Bonds - Series H: During October 2007, the Authority issued $1,008,910,000 in General Revenue Bonds - Series H which provided funds to: (1) refund $450,045,000 in then outstanding Series E Bonds (for a net present value savings of $18,429,000); (2) fund a portion of the Authority's Multi-Year Capital Plan; (3) make a deposit to the Reserve Maintenance Fund; (4) make a deposit to the Senior Debt Service Reserve Fund; and (5) pay bond issuance costs.

The Series H Bonds were comprised of both Serial Bonds and Term Bonds, with varying rates and maturities.

Principal payments under the Series H Serial Bonds began in January 2009. The Series H Term Bonds required sinking fund installments, beginning in the year 2031 through the year 2037, of amounts ranging from $25,740,000 to $34,495,000 annually. The Series H Bonds maturing on or after January 1, 2019, were callable at the option of the Authority, in whole or in part, beginning January 1, 2018, at par plus accrued interest.

The Series H Bonds were fully defeased in March 2018 using the proceeds of General Revenue Bonds - Series L. There are no outstanding Series H Bonds as of December 31, 2018.

General Revenue Bonds - Series I: During July 2012, the Authority issued $1,122,560,000 in General Revenue Bonds - Series I which provided funds to: (1) retire $868,045,000 in General Revenue Bond Anticipation Notes - Series 2011A; (2) fund a portion of the Authority's Multi-Year Capital Plan; (3) make a deposit to the Senior Debt Service Reserve Fund; and (4) pay bond issuance costs.

Note 5 - Long-Term Liabilities - Continued

The Series I Bonds are comprised of both Serial Bonds and Term Bonds with varying rates and maturities. The amounts outstanding at December 31, 2018, are as follows:

Type	Rates	Maturity	Amount (in thousands)
Serial Bonds	4.0% to 5.0%	2019 - 2032	$ 453,205
Term Bonds	4.13%	2037	64,570
Term Bonds	5.00%	2037	185,620
Term Bonds	4.13%	2042	70,000
Term Bonds	5.00%	2042	246,105
			$ 1,019,500

Principal payments under the Series I Serial Bonds began in 2014. The Series I Term Bonds require sinking fund installments in 2033 through 2042, in amounts ranging from $11,865,000 to $53,920,000 annually. The Series I Bonds maturing on or after January 1, 2023, are callable at the option of the Authority, in whole or in part, beginning January 1, 2022, at par plus accrued interest.

General Revenue Bonds - Series J: During February 2014, the Authority issued $677,460,000 in General Revenue Bonds - Series J which provided funds to: (1) fund a portion of the Authority's Multi-Year Capital Plan; (2) provide funds to refund a portion of the Authority's General Revenue Bonds, Series F and General Revenue Bonds, Series G (for a net present value savings of $19,184,000) (3) make a deposit to the Senior Debt Service Reserve Fund; and (4) pay bond issuance costs.

The Series J Bonds are comprised of both Serial Bonds and Term Bonds with varying rates and maturities. The amounts outstanding at December 31, 2018, are as follows:

Type	Rates	Maturity	Amount (in thousands)
Serial Bonds	3.0% to 5.0%	2019 - 2036	$ 486,730
Term Bonds	5.00%	2041	87,235
Term Bonds	4.63%	2044	63,285
			$ 637,250

Principal payments under the Series J Serial Bonds began in 2015. The Series J Term Bonds require sinking fund installments in 2037 through 2044, in amounts ranging from $15,790,000 to $22,055,000 annually. The Series J Bonds maturing on or after January 1, 2025, are callable at the option of the Authority, in whole or in part, beginning January 1, 2024, at par plus accrued interest.

General Revenue Bonds - Series K: During December 2014, the Authority issued $743,865,000 in General Revenue Bonds - Series K which provided funds to: (1) refund a portion of the Authority's General Revenue Bonds, Series F, Series G and Series I (for a net present value savings of $101,044,000) and (2) and pay bond issuance costs.

Note 5 - Long-Term Liabilities - Continued

The Series K Bonds are comprised of Serial Bonds with varying rates and maturities. The amounts outstanding at December 31, 2018, are as follows:

Type	Rates	Maturity	Amount (in thousands)
Serial Bonds	3.0% to 5.0%	2019 - 2032	$ 743,865

Principal payments under the Series K Serial Bonds begin in 2019. The Series K Bonds maturing on or after January 1, 2026, are callable at the option of the Authority, in whole or in part, beginning January 1, 2025, at par plus accrued interest.

General Revenue Bonds - Series L: In March 2018, the Authority issued $596,220,000 of Series L General Revenue Refunding Bonds to: (1) refund the Authority's outstanding General Revenue Bonds, Series H (for a net present value savings of $83,145,000) and (2) pay bond issuance costs. Series L Bonds maturing on or after January 1, 2028, are callable at the option of the Authority, in whole or in part, beginning January 1, 2029, at par plus accrued interest.

The Series L Bonds are comprised of Serial Bonds with varying rates and maturities. The amounts outstanding at December 31, 2018 are as follows:

Type	Rates	Maturity	Amount (in thousands)
Serial Bonds	3.0% to 5.0%	2019 - 2037	$ 596,220

General Revenue Senior Bonds - Revenue Pledge and Security: The General Revenue Bonds (Series I through L) are all direct obligations of the Authority, secured by a pledge of tolls and other revenue as established under the Bond Resolution. In accordance with the Bond Resolution, a Senior Debt Service Reserve Fund was established to be funded with cash and/or surety in an amount equal to the maximum aggregate debt service for any 12-month period. At both December 31, 2018 and 2017, the Senior Debt Service Reserve Fund, which may be used should amounts in the Senior Debt Service Fund be insufficient to pay debt service payments, was fully funded.

General Revenue Junior Indebtedness Obligations (JIO) - Series 2013A: During December 2013, the Authority issued $1,600,000,000 of Series 2013A Junior Indebtedness Obligations to: 1) fund a portion of the cost of the Authority's New NY Bridge Project, a twin-span replacement of the Tappan Zee Bridge, (2) provide funds to refinance the principal and interest on the Authority's General Revenue Bond Anticipation Notes, Series 2013B, (3) pay capitalized interest on the Series 2013A Junior Indebtedness Obligations through December 31, 2018, and (4) pay the costs of issuance.

Series 2013A JIO's are term bonds, payable in a single bullet maturity of May 1, 2019, with varying interest rates from 3% to 5% and are not subject to redemption prior to maturity. Additional information regarding the Series 2013A JIO's is presented in Note 12.

General Revenue Junior Indebtedness Obligations (JIO) - Series 2016A: During May 2016, the Authority issued $850,000,000 of Series 2016A Junior Indebtedness Obligations to: 1) fund a portion of the cost of the Authority's New NY Bridge Project, (2) pay capitalized interest on the Series 2016A Junior Indebtedness Obligations (3) make a deposit to the Series 2016A Subaccount of the Junior Indebtedness Debt Service Reserve Account, and (4) pay the costs of issuance.

Note 5 - Long-Term Liabilities - Continued

Series 2016A JIO's are comprised of both Serial and Term Bonds with varying rates and maturities. The amounts outstanding at December 31, 2018 are as follows:

Type	Rates	Maturity	Amount (in thousands)
Serial Bonds	3.0% to 5.0%	2021 - 2038	$ 190,665
Term Bonds	5.0%	2041	71,830
Term Bonds	5.0%	2046	145,745
Term Bonds	4.0% to 5.0%	2051	184,960
Term Bonds	4.0% to 5.25%	2056	256,800
			$ 850,000

The Authority's General Revenue Junior Indebtedness Obligations are subordinate to the Authority's General Revenue Bonds.

Note 6 - Special Bond Programs

The Authority's special bond programs, and the related projects and activities, are entirely separate from the Authority's financing, operation, and maintenance of the Thruway System. As such, these special bond programs are not reflected in the accompanying financial statements. The special bond programs require varying debt service payments which are funded under contractual agreements with the State of New York. The obligation of the State to make such payments is subject to, and dependent upon, annual appropriations by the State Legislature. These bond programs, however, result in no cost to the Authority and provide for no lien on Authority revenues or assets. The Authority is an authorized issuer of the following special bond programs: Local Highway and Bridge Service Contract Bonds, Highway and Bridge Trust Fund Bonds, State Personal Income Tax Revenue Bonds (Transportation) and State Sales Tax Revenue Bonds. The Authority has yet to issue State Sales Tax Revenue Bonds.

The following describes the Authority's outstanding debt under the special bond programs:

Local Highway and Bridge Service Contract Special Bond Program - The Legislature of the State of New York empowered the Authority to issue Local Highway and Bridge Service Contract Bonds, also known as the Consolidated Local Street and Highway Improvement Program (often referred to as the CHIPS Program) to provide funds to reimburse municipalities and other project sponsors throughout the State for qualifying local highway, bridge, and multi-modal capital project expenditures under established State programs. The Authority did not issue Local Highway and Bridge Service Contract Bonds in 2018. The Authority receives funds from New York State for debt service on these bonds and related administrative costs. Bonds outstanding under this program were $121,400,000 and $218,930,000 at December 31, 2018 and 2017, respectively.

Note 6 - Special Bond Programs - Continued

Highway and Bridge Trust Fund Bond Program - The Legislature of the State of New York empowered the Authority to issue Highway and Bridge Trust Fund Bonds to reimburse the State for expenditures made by the State's Department of Transportation in connection with the State's Multi-Year Highway and Bridge Capital Program. The Authority did not issue Highway and Bridge Trust Fund Bonds in 2018. The Authority receives funds from New York State for debt service on these bonds and related administrative costs. Bonds outstanding under this program were $1,389,245,000 and $1,622,115,000 at December 31, 2018 and 2017, respectively

State Personal Income Tax Revenue Bonds (Transportation) - The Legislature of the State of New York empowered the Authority to issue Personal Income Tax (PIT) Revenue Bonds to provide funds to municipalities and other project sponsors throughout the State for qualifying local highway, bridge, and multi-modal capital project expenditures under established State programs. The Authority did not issue PIT Revenue Bonds in 2018. The Authority receives funds from New York State for debt service on these bonds and related administrative costs. Bonds outstanding under this program were $1,262,500,000 and $1,382,900,000 at December 31, 2018 and 2017, respectively.

Note 7 - Retirement Benefits

a. Plan Description and Benefits Provided

The Authority participates in the New York State and Local Employees' Retirement System (ERS), which is a cost-sharing multiple employer, public employee retirement system. ERS provides retirement benefits as well as death and disability benefits. New York State Retirement and Social Security Law govern obligations of employers and employees to contribute and provide benefits to employees. ERS issues a publicly available financial report that includes financial statements and required supplementary information. This report may be obtained from ERS at www.osc.state.ny.us/retire.

ERS provides retirement, disability, and death benefits for eligible members, including an automatic cost of living adjustment. In general, retirement benefits are determined based on an employee's individual circumstances using a pension factor, age factor, and final average salary. The benefits vary depending on the individual's employment tier. Pension factors are determined based on tier and an employee's years of service, among other factors.

b. Contributions

Employees in ERS Tier I through IV are noncontributory except for employees with less than 10 years of service who contribute 3% of their salary, Tier V employees who contribute 3% of their salary, and Tier VI employees who contribute between 3% and 6% of their salary. The Comptroller annually certifies the rates, expressed as proportions of payroll of members, which are used in computing the contributions required to be made by employers. The Authority's contributions for the preceding ten years can be found in the schedule of pension contributions on page 48.

c. Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

The Authority reported liabilities of $15,619,000 and $46,249,000 at December 31, 2018 and 2017, respectively. The net pension liability was measured as of March 31, 2018 and 2017, respectively, and the total pension liability was determined by actuarial valuations as of April 1, 2017 and 2016, respectively. The proportion of the net pension liability was based on the ratio of its actuarially determined employer contribution to ERS's total actuarially determined employer contribution for the fiscal year ended on the measurement dates. The Thruway Authority's proportionate share was .48% and .49% as of March 31, 2018 and 2017, respectively.

Note 7 - Retirement Benefits - Continued

c. *Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions* - Continued

The Authority recognized pension expense of $19,488,000 and $26,799,000 for the years ended December 31, 2018 and 2017, respectively. The Authority reported deferred outflows of resources and deferred inflows of resources for 2018 and 2017 as follows (in thousands):

	2018		2017	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 5,571	$ 4,603	$ 1,159	$ 7,023
Changes of assumptions	10,356	-	15,800	-
Net differences between projected and actual investment earnings on pension plan investments	22,685	44,778	9,238	-
Changes in proportion and differences between employer contributions and proportionate share of contributions	3,414	1,509	2,636	1,581
Authority contributions subsequent to the measurement date	22,454	-	21,026	-
Totals	$ 64,480	$ 50,890	$ 49,859	$ 8,604

Authority contributions subsequent to the measurement date are recognized as a reduction of the net pension liability in the subsequent fiscal year. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows (in thousands):

Year ending December 31,	
2019	$ 3,950
2020	3,158
2021	(11,008)
2022	(4,964)
Total	$ (8,864)

d. *Actuarial Assumptions*

The pension liabilities at March 31, 2018 and 2017 were determined by using actuarial valuations as of April 1, 2017 and April 1, 2016, respectively, with updated procedures used to roll forward the total pension liability to March 31, 2018 and March 31, 2017. The actuarial valuation used the actuarial experience study for the period April 2010 - March 2015 and the following actuarial assumptions, which were consistent from year to year:

Note 7 - Retirement Benefits - Continued

d. Actuarial Assumptions - Continued

Actuarial Cost Method	Entry age normal
Inflation Rate	2.5 percent
Salary Scale	3.8 percent, indexed by service
Investment rate of return, including inflation	7.0 percent compounded annually, net of expenses
Cost of Living Adjustment	1.3 percent
Decrement	Based on FY 2010-2015 experience
Mortality improvement	Society of Actuaries' Scale MP-2014

The long-term expected rate of return on ERS's pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected return, net of investment expenses and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

e. Investment Asset Allocation

Best estimates of arithmetic real rates of return for each major asset class and ERS's target asset allocation as of the applicable valuation dates are summarized as follows:

Asset Type	Target Allocation	Long-Term Expected Real Rate
Domestic equity	36.00%	4.6%
International equity	14.00%	6.4%
Private equity	10.00%	7.5%
Real estate	10.00%	5.6%
Bonds and mortgages	17.00%	1.3%
Other	13.00%	0.0%-5.7%
	100.00%	

f. Discount Rate

The discount rate projection of cash flows assumed that contributions from members will be made at the current member contribution rates and that contributions from employers will be made at statutorily required rates, actuarially determined. Based on those assumptions, ERS's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Note 7 - Retirement Benefits - Continued

g. Sensitivity of the Proportionate Share of the Net Pension Liability to the Discount Rate Assumption

The following presents the Authority's proportionate share of the net pension liability calculated using the discount rate of 7.0 % and the impact of using a discount rate that is 1% higher or lower than the current rate (in thousands).

	1% Decrease (6.0%)	Current Discount (7.0%)	1% Increase (8.0%)
Authority's proportionate share of the net pension liability (asset)	$ 118,175	$ 15,619	$ (71,140)

h. Pension Plan Fiduciary Net Position

The components of the current-year net pension liability of the New York State and Local Employees' Retirement System as of March 31, 2018 and 2017 respectively, were as follows (amounts in thousands):

	2018	2017
Employers' total pension liability	$ 183,400,590	$ 177,400,586
Plan net position	(180,173,145)	(168,004,363)
Employers' net pension liability	$ 3,227,445	$ 9,396,223
Ratio of plan net position to the employers' total pension liability	98.2%	94.7%

Note 8 - Deferred Compensation Plan

The Authority participates in the New York State Deferred Compensation Plan (Plan). The plan is a 457(b) retirement plan which is administered by New York State. The Authority does not have any authority to amend or abolish the Plan provisions, and the Authority does not make contributions to the Plan.

Note 9 - Other Postemployment Benefits

The Authority reports in its financial statements the financial impact of other postemployment benefits (OPEB), principally employer funded health care and death benefits which the Authority provides for retired employees. With the exception of Part-time Toll Collectors, substantially all employees may become eligible for these benefits if they reach normal retirement age while working for the Authority.

Note 9 - Other Postemployment Benefits - Continued

A summary of participants as of the October 1, 2017 actuarial measurement date is as follows:

Actives	1,986
Vestees	4
Disabled	100
Retirees	1,933
Surving Spouse	323
Total	4,346

Plan Description and Benefits Provided

The Authority participates, pursuant to the provisions of Section 163(4) of the New York State Civil Service Law, in the New York State Health Insurance Program (NYSHIP), an Agent Multiple-Employer plan. NYSHIP is administered through the Department of Civil Service, and the Authority pays the cost of administration.

NYSHIP does not currently issue a standalone financial report since there are no assets legally segregated for the sole purpose of paying benefits under the plan. Certain retiree costs, described below, are first applied against the value of the retiree's existing sick leave bank balance. A plan summary follows:

a. Plan Types

Medical - New York State Health Insurance Program which includes participation in various insurance plans and HMO's and which also includes drug coverage. Details may be found in the Summary Program Description of the New York State Health Insurance Program Booklet.

Medicare Part B Reimbursement - The Authority reimburses the retiree and his/her Medicare eligible spouse for the Medicare Part B premium.

b. Eligibility

To be eligible, an employee must (1) retire as a member of the New York State Employees' Retirement System or be at least 55 years old at time of termination; (2) be enrolled in the NYSHIP on date of retirement; and (3) complete at least five years of service for the retiree and dependent to have coverage while the employee is living. Ten years of service are needed for continued dependent coverage upon death of the employee.

c. Benefit/Cost Sharing

The Authority pays 94% (100% for those employees retired prior to April 1, 1991) of the premium for coverage of the retired employee and 75% of the additional premium for the dependent coverage. The premium paid by the Authority is based on the Empire Plan, one of the options available to retirees under the NYSHIP. If a retiree elects for another plan offered under the NYSHIP, the retiree is responsible for costs that exceed the amount of the Empire Plan premium.

d. Survivor Benefit

$3,000 payable to retiree's designated beneficiary.

Note 9 - Other Postemployment Benefits - Continued

Plan Description and Benefits Provided - Continued

e. Funding Policy

The Authority contributes to the plan to satisfy obligations on a pay-as-you-go basis. For both of the years ended December 31, 2018 and 2017, the Authority paid $30,553,000 annually on behalf of retirees.

Net OPEB Liability

The total OPEB liability for the Authority's years ended December 31, 2018 and December 31, 2017 were measured as of December 31, 2017 and December 31, 2016, respectively, using an actuarial valuation dated October 1, 2017.

The total OPEB liability in the October 1, 2017 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Discount rate	
December 31, 2017 measurement date	3.31 percent
December 31, 2016 measurement date	3.81 percent
Annual payroll growth rate	2.50 percent
Healthcare cost trend rates	Soceity of Actuaries Long Term Medical Trend Model v.2014_b
Mortality rates	Recommended Actuarial Assumptions for New York State / SUNY GASB 45 Valuation (dated 12/27/2012)

Actuarial valuations involve estimates and assumptions about the probability of events far into the future and are subject to continual revisions as actual results are compared to past expectations and new estimates are made about the future. These calculations are designed to reduce short-term volatility in actuarial accrued liabilities. Projected benefits are based on the types of benefits provided at the time of each valuation and on the cost sharing provisions then in effect.

Changes in the Net OPEB Liability (in thousands)

Balance as of December 31, 2017	$ 959,969
Changes for the year	
Service cost	29,485
Interest	35,993
Benefit payments	(30,553)
Change in assumptions and other inputs	88,866
Net changes	123,791
Balance as of December 31, 2018	$ 1,083,760

Note 9 - Other Postemployment Benefits - Continued

Changes in the Net OPEB Liability (in thousands) - Continued

Sensitivity of the OPEB liability to changes in the discount rate: The following presents the net OPEB liability of the Authority, as well as what the Authority's net OPEB liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher that the current discount rate (in thousands):

	1% Decrease 2.31%	Current Discount 3.31%	1% Increase 4.31%
Net OPEB liability	$ 1,298,787	$ 1,083,760	$ 916,207

Sensitivity of the OPEB liability to changes in the healthcare cost trend rates: The following presents the net OPEB liability of the Authority, as well as what the Authority's net OPEB liability would be if it were calculated using healthcare cost trend rates that are one percentage point lower or one percentage point higher that the current healthcare cost trend rates (in thousands):

	1% Decrease 2.90%	Medical Trend Rate 3.90%	1% Increase 4.90%
Net OPEB liability	$ 903,199	$ 1,083,760	$ 1,320,104

OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

The Authority recognized OPEB expense of $83,251,000 for the year ended December 31, 2018. The Authority reported deferred outflows of resources of $71,093,000 at December 31, 2018 related to OPEB.

Amounts reported as deferred outflows of resources related to the OPEB liability will be recognized as expense as follows (in thousands):

Year ending December 31,	
2019	$ 17,773
2020	17,773
2021	17,773
2022	17,774
Total	$ 71,093

Note 10 - Thruway Stabilization Program

The State of New York (State), as part of its 2015-2016 enacted budget, created a $1.285 billion Thruway Stabilization Program for the payment of costs related to the Governor Mario M. Cuomo Bridge and bridge-related transportation improvements, and for other costs of the Thruway Authority including, but not limited to, its core capital program. As part of its 2016-2017 enacted budget, the State committed an additional $700 million to the program bringing the total commitment to $1.985 billion. The Authority intends to use $1.2 billion of these funds to pay for Governor Mario M. Cuomo Bridge related costs and $785 million to pay for capital program costs other than the Governor Mario M. Cuomo Bridge. In 2018 and 2017, capital contributions of $441.8 million and $281.0 million were reported in the Authority's statement of revenues, expenses and changes in net position, respectively. As of December 31, 2018, the program has contributed a total of $1.620 billion to the Authority, consisting of $1.092 billion for the Governor Mario M. Cuomo Bridge and $527.9 million for other Thruway capital projects.

Note 11 - Contingencies and Commitments

a. Governor Mario M. Cuomo Bridge Claims

In 2013, the Authority entered into a $3.14 billion design-build contract with Tappan Zee Constructors, LLC (TZC) to replace the Tappan Zee Bridge. Both spans of the new Governor Mario M. Cuomo Bridge, the replacement of the Tappan Zee Bridge, are in service, however certain elements of the project remain in progress. Through December 31, 2018, contract change orders totaling $180 million have been approved, increasing the value of TZC's contract to $3.32 billion.

In 2018, TZC submitted claims to the Authority in excess of the approved contract value and anticipated contract change orders. The claims submitted by TZC relate to issues of time and extra work. The Authority disputes these claims. Pursuant to the design build contract, TZC's claims are subject to a non-binding contractual dispute resolution procedure consisting of a multi-tiered administrative review process. At the conclusion of the administrative review process, TZC may be entitled to pursue litigation in the New York State Court of Claims.

While the Authority cannot presently predict the outcome of this matter, the Authority believes it has meritorious defenses and positions with respect thereto. However, an adverse decision could significantly affect the Authority's financial position.

b. Other Claims and Litigation

The Authority is a party to various legal proceedings, including negligence suits, some of which involve death or serious injury. Many of these actions arise in the normal course of the Authority's operations. The Authority records accruals for claims liability to the extent that management concludes their occurrence is probable and the related damages are estimable. If the range of the liability is probable and estimable, the Authority accrues the amount most likely to be paid. If no single amount in the estimated range is more likely to be paid, the Authority accrues the lowest amount in the range.

Note 11 - Contingencies and Commitments - Continued

b. Other Claims and Litigation - Continued

Changes in the Authority's claims liability in years 2016 through 2018 were as follows (in thousands):

Year	Beginning of Year Liability	Claims and Changes in Payments Estimates	Claim Liability Payments	End of Year Liability
2016	$ 4,000	$ 1,587	$ (4,437)	$ 1,150
2017	1,150	3,200	(1,000)	3,350
2018	3,350	610	(750)	3,210

In addition, there are claims where liability is not probable, but is possible and estimable. The estimated loss on these claims approximated $1.0 million at December 31, 2018, none of which has been accrued.

Certain other claims cannot be estimated as they involve complex issues. Often these issues are subject to substantial uncertainties and, therefore, the probability of loss or an estimation of damages cannot be determined.

c. Insurance

Loss of revenues is insured through a use and occupancy policy that covers any interruption in excess of 15 days. Property damage to bridges is insured through various policies from major insurance companies equal to the maximum probable loss from a single occurrence (with deductibles ranging from $2.5 million to $10.0 million). In addition, the Authority purchases insurance for workers' compensation benefits and various liability exposures.

The Authority is self-insured for property damage to substantially all buildings and vehicles. The Authority is also self-insured for third-party liability, including automobile liability. There are two funded reserves for these exposures, a $2.5 million insurance fund available to fund certain deductibles and a reserve for public liability claims, which currently totals $12.9 million.

Insurance for the Authority's service area facilities is provided by the concessionaires. The liability related to construction projects, tandem trailer operations, authorized garage operations, and similar risk is transferred through contractual indemnification and compliance with Authority insurance requirements.

d. Construction Commitments

At December 31, 2018, the amounts of remaining unexpended commitments for projects undertaken and the detail by type of contract are as follows:

Project	Commitments (in thousands)
Highway, bridge and facility, construction, and design	$ 707,800
Personal service and miscellaneous	91,400
Total	$ 799,200

Note 11 - Contingencies and Commitments - Continued

e. Environmental Remediation

The Authority records in its financial statements a cost estimate for environmental remediation at a number of sites on Thruway Authority property which have been identified by the New York State Department of Environmental Conservation as locations where operational uses have contributed to various forms of environmental pollution. The estimated costs are developed by Authority engineers and remedial contractors based on the nature of remediation needed and comparable clean-up costs at similar sites and updated for payments made and changes to estimated costs as of December 31, 2018. Estimating environmental remediation obligations requires that a number of assumptions be made. Therefore, it is possible that project cost changes due to price fluctuations, changes in technology, changes in potential responsible parties, results of environmental studies, and other factors could result in revisions to these estimates. Environmental remediation liability amounts are not material.

f. Lease Revenue

The Authority has entered into various non-cancelable contracts with concessionaires to provide patron services on the Thruway System. These contracts provide the Authority with concession revenue, including minimum rentals and contingent revenues based on sales volume. The Authority also leases land, used for antennas and fiber optic cable, under various non-cancelable contracts. Concession contract terms generally range from 16 to 25 years, inclusive of renewal options. Radio tower contract terms generally range from 5 to 10 years, with renewal options up to 10 years, and fiber optic contract terms range from 17 to 20 years.

The following schedule summarizes the future minimum rental revenues to be earned as of December 31, 2018:

Year	Future Minimum Lease Revenue (in thousands)
2019	$ 16,500
2020	9,800
2021	9,600
2022	7,400
2023	3,400
Thereafter	14,800
Total	$ 61,500

Note 12 - General Revenue Junior Indebtedness Obligations - Series 2013A

General Revenue Junior Indebtedness Obligations - Series 2013A (the Series 2013A JIO's), in the amount of $1.6 billion, are term bonds, payable in a single bullet maturity on May 1, 2019. Additional information regarding Series 2013A JIO's is presented in Note 5.

Note 12 - General Revenue Junior Indebtedness Obligations - Series 2013A - Continued

In April 2019, the Authority's Board authorized the issuance of approximately $1.6 billion of Series 2019A Junior Indebtedness Obligations Anticipation Notes (the Series 2019A JIANs). The Authority will issue the Series 2019A JIANs, in an amount approximating $1.6 billion, and use the proceeds to pay the Series 2013A JIO's maturing on May 1, 2019.

In December 2013, the Authority entered into a $1.6 billion loan agreement (TIFIA Loan) with the United States Department of Transportation, acting through the Federal Highway Administration, for the purpose of financing construction of the New NY Bridge Project. The proceeds of the TIFIA Loan are required to be drawn no later than one year after substantial completion of the New NY Bridge Project (defined as the date on which both spans of the bridge were open to vehicular traffic), which occurred on September 12, 2018. The Authority has reserved the right to pay, but is not obligated to pay, all or a portion of the principal of the Series 2019A JIANs using TIFIA Loan proceeds.

In April 2019, the Authority's Board also authorized the issuance of up to $2.2 billion of Series 2019B Junior Indebtedness Obligations (Series 2019B JIO's) to repay the Series 2019A JIANs; pay interest costs on the Series 2019B JIO's; establish a debt service reserve for the Series 2019B JIO's; and pay costs of issuance.

Note 13 - Canal Corporation and Canal System Transfer

The State of New York's final approved and enacted budget for their 2016-2017 fiscal year included legislation establishing the Canal Corporation as a subsidiary of the New York State Power Authority (Power Authority) effective January 1, 2017. On this date, the Power Authority assumed control of the Canal Corporation and Canal System.

Assets approximating $653.7 million, consisting of Canal System land and infrastructure, Canal Corporation equipment and cash on deposit in the Canal Development Fund, together with liabilities approximating $114.2 million, consisting of Canal Corporation retiree health insurance obligations, pension obligations, salaries and benefits owed to employees, and amounts due vendors for goods and services were included in the transfer. In 2017, the Authority recognized a loss approximating $539.5 million representing the net assets transferred to the Power Authority.

The legislation authorizing the January 1, 2017 transfer also authorized the Authority and Power Authority to enter into an agreement whereby the Authority would continue to provide certain services after January 1, 2017 to ensure operational continuity of the Canal Corporation and Canal System during the post-transfer period. In 2018 and 2017, the Authority recognized non-operating revenues of $0.3 and $1.9 million, respectively, from the Power Authority as reimbursement for post-transfer services provided to the Canal Corporation.

Note 14 - Accounting Standards Issued But Not Yet Implemented

GASB Statement No. 83, *Certain Asset Retirement Obligations*. This statement establishes criteria for determining the timing and pattern of recognition for a liability and corresponding deferred outflow of resources for asset retirement obligations. This statement required that recognition occur when the liability is both incurred and reasonably estimable. The requirements of this statement are effective for reporting periods beginning after June 15, 2018.

GASB Statement No. 84, *Fiduciary Activities*. This statement provides guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. The requirements of this statement are effective for reporting periods beginning after December 15, 2018.

Note 14 - Accounting Standards Issued But Not Yet Implemented - Continued

GASB Statement No. 87, *Leases.* This statement requires recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and the recognition of inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this statement, a lessee is required to recognize a lease liability and an intangible right-to-use asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information about governments' leasing activities. The requirements of this statement are effect for reporting periods beginning after December 15, 2019.

GASB Statement No. 88, *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements.* This statement requires that additional essential information related to debt be disclosed in notes to financial statements, including unused lines of credit; assets pledged as collateral for the debt; terms specified in debt agreements related to significant events of default with finance-related consequences, significant termination events with finance-related consequences, and significant acceleration clauses. For notes to financial statements related to debt, this statement also requires that existing and additional information be provided for direct borrowings and direct placements of debt separately from other debt. The requirements of this statement are effective for reporting periods beginning after June 15, 2018.

GASB Statement No. 89, *Accounting for Interest Cost Incurred Before the End of a Construction Period* (GASB No. 89). This statement establishes accounting requirements for interest cost incurred before the end of a construction period. Such interest cost includes all interest that previously was accounted for in accordance with the requirements of paragraphs 5-22 of Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements,* which are superseded by this statement. This statement requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred for financial statements prepared using the economic resources measurement focus. As a result, interest cost incurred before the end of a construction period will not be included in the historical cost of a capital asset reported in a business-type activity or enterprise fund. This statement also reiterates that in financial statements prepared using the current financial resources measurement focus, interest cost incurred before the end of a construction period should be recognized as an expenditure on a basis consistent with governmental fund accounting principles. The requirements of this statement are effective for reporting periods beginning after December 15, 2019.

GASB Statement No. 90, *Majority Equity Interest.* This statement will provide financial reporting uses with information related to the presentation of majority equity interests in legally separate organizations. In addition, this statement requires the reporting of information about component units if the government acquires a 100% equity interest about the cost of services to be provided by the component unit in relation to the consideration provided to acquire the component unit. The requirements for this statement are effective for reporting periods beginning after December 15, 2018.

Management has not estimated the extent of the potential impact, if any, of these statements on the Authority's financial statements.

Note 15 - Reclassifications

Certain amounts have been reclassified in the previously issued 2017 financial statements as follows:

Costs associated with pavement resurfacing projects that did achieve their estimated useful life prior to being removed from service were previously included in Loss on disposal of assets on the accompanying Statements of Revenues, Expenses, and Changes in Net Position. Costs of approximately $9,609,000 have been reclassified within Depreciation expense.

The reclassification resulted in no change to overall change in net position for the year ended December 31, 2017.

New York State Thruway Authority

(A Component Unit of the State of New York)

Required Supplementary Information
Schedule of Other Postemployment Benefits Liability and OPEB as a Percentage of Covered Payroll

(in millions of dollars)

	December 31, 2018
Beginning of the year	$ 959,969
Charges for the year	
Service cost	29,485
Interest	35,993
Changes in assumptions and other inputs	88,866
Benefit payments	(30,553)
Net changes	123,791
End of year	$ 1,083,760
Covered payroll	146,100
OPEB liability as a percentage of covered payroll	741.79%

Data not available prior to the 2018 implementation of Governmental Accounting Standards Board Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*.

See Independent Auditor's Report.

New York State Thruway Authority

(A Component Unit of the State of New York)

Required Supplementary Information
Schedule of the Proportionate Share of the Net Pension Liability
(in thousands of dollars)

	2018	2017	2016	2015
Proportion of the net pension liability (asset)	0.483932%	0.492207%	0.617656%	0.633266%
Proportionate share of the net pension liability (asset)	$ 15,619	$ 46,249	$ 99,135	$ 21,393
Covered-employee payroll	148,206	141,550	164,506	173,658
Proportionate share of the net pension liability (asset) as a percentage of its covered-employee payroll	10.54%	32.67%	60.26%	12.32%
Plan fiduciary net position as a percentage of total pension liability	98.2%	94.7%	90.7%	97.9%

The amounts presented for each fiscal year were determined as of March 31.

Years prior to 2017 include the New York State Canal Corporation.

Data not available prior to fiscal year 2015 implementation of Governmental Accounting Standards Board Statement No. 68, *Accounting and Financial Reporting for Pensions*.

See Independent Auditor's Report.

New York State Thruway Authority

(A Component Unit of the State of New York)

Required Supplementary Information
Schedule of Pension Contributions
Years Ended December 31
(in thousands of dollars)

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Contractually required contribution	22,454	21,026	24,795	28,815	30,537	35,800	34,627	37,125	22,132	12,682
Contributions in relation to the contractually required contribution	22,454	21,026	24,795	28,815	30,537	35,800	34,627	37,125	22,132	12,682
Contribution deficiency (excess)	-	-	-	-	-	-	-	-	-	-
Authority's covered-employee payroll	157,528	145,099	163,041	164,994	176,546	174,784	183,464	181,625	186,206	187,805
Contributions as a percentage of covered-employee payroll	14%	14%	15%	17%	17%	20%	19%	20%	12%	7%

Years prior to 2017 include the New York State Canal Corporation.

See Independent Auditor's Report.

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APPENDIX C

SUMMARY OF CERTAIN PROVISIONS OF THE BOND RESOLUTION

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SUMMARY OF CERTAIN PROVISIONS OF THE BOND RESOLUTION

The following is a general summary of certain provisions of the Bond Resolution*. This summary is not to be considered a full statement of the terms of the Bond Resolution and, accordingly, is qualified by reference thereto and is subject to the full text thereof. Copies of the Bond Resolution are available at the office of the Authority.

Definitions

The following are definitions in summary form of certain terms contained in the Bond Resolution and used in this Official Statement:

"Accrued Debt Service" means, as of any date of calculation, the amount of Debt Service that has accrued with respect to any Series of Bonds, calculating the Debt Service that has accrued with respect to each Series of Bonds as an amount equal to the sum of (1) the interest on the Bonds of such Series that has accrued and is unpaid and that will have accrued by the end of the then current calendar month, including, to the extent not otherwise provided in a Supplemental Resolution, all net amounts due and payable by the Authority and all net amounts to accrue to the end of the then current calendar month pursuant to a Qualified Swap, Qualified Reverse Swap or Parity Reimbursement Obligation; and (2) that portion of the Principal Installments for such Series next due which would be accrued (if deemed to accrue in the manner set forth in the definition of "Debt Service") to the end of such calendar month; provided that the definition of Accrued Debt Service for any Series of Variable Interest Rate Bonds shall be set forth in the applicable Supplemental Resolution.

"Act" means the New York State Thruway Authority Act, Title 9 of Article 2 of the Public Authorities Law, Chapter 43-A of the Consolidated Laws of the State of New York, as it may be amended from time to time.

"Additional Bonds" means additional Series of Bonds authenticated and delivered on original issuance pursuant to the Bond Resolution.

"Additional Project" shall mean any Other Authority Project designated as an Additional Project by the Authority and in respect of which there has been submitted to the Trustee the documents required by the Bond Resolution and any New Interchange or New Extension; and once designated as an Additional Project, any subsequent Facility Capital Improvements related thereto. See "Additional Projects" hereinafter.

"Additional Project Revenues" means Revenues derived from Additional Projects. "Additional Project Revenues" shall not include the proceeds of any gifts, grants or other income to the Authority from the government of the United States or the State, any public instrumentality of the State or any other individual or entity, to the extent the Authority is precluded by law, the grant or other operative contract or instrument from applying such amounts to the general corporate purposes of the Authority.

"Aggregate Debt Service" means, for any period and as of any date of calculation, the sum of the amounts of Debt Service for such period with respect to all Series of Bonds then Outstanding.

"Authority Engineer's Certificate" means, in the sole discretion of the Authority, (i) an Independent Consultant's Certificate (delivered by an Independent Consultant that is a licensed professional engineer) or (ii) a certificate or an opinion signed by a licensed professional engineer employed by the Authority, having knowledge and expertise with respect to the subject matter of such certificate or opinion, and selected by the Authority to deliver such certificate or opinion.

* Omitted from this summary is mention of most of the provisions of the Bond Resolution respecting the Authority's "Guaranteed Bonds" (the last maturity of which was paid in 1995), "Prior General Revenue Bonds" (the outstanding balance of which was refunded in 1992 by the first issue of Bonds under the Bond Resolution) and the Restaurant Concession Bonds (the final maturity of which was January 1, 2006 and which are no longer Outstanding).

"Authorized Newspaper" means The Bond Buyer or any newspaper customarily published at least once a day for at least five days (other than legal holidays) in each calendar week, printed in the English language and of general circulation in the Borough of Manhattan, City and State of New York, designated by the Authority.

"Authorized Officer" means any member of the Authority Board, its Treasurer, any Assistant Treasurer, its Secretary, any Assistant Secretary, its Executive Director, its Director of Thruway Finance and any other person authorized by a resolution or the by-laws of the Authority to perform the act or execute the document in question.

"Bond" or "Bonds" means any bond or bonds payable from amounts in the Senior Debt Service Fund or, to the extent provided in a Supplemental Resolution, any other indebtedness of the Authority payable from amounts in the Senior Debt Service Fund, which indebtedness may include, but is not limited to, any additional payment obligations in connection with a Qualified Swap, a Qualified Reverse Swap, a Parity Reimbursement Obligation or a capital lease undertaken in connection with the issuance of certificates of participation; provided, however, that such terms shall not include any Bond Anticipation Notes, Junior Indebtedness or Subordinated Indebtedness.

"Bondholder," "Holder" or "Holder of Bonds," or any similar term, means any person who shall be the registered owner of any Outstanding Bond or Bonds.

"Business Day" means a day of the year which is not a Saturday, Sunday or legal holiday in the State and not a day on which the Authority, State offices, the Trustee, Paying Agent or provider of a Credit Facility or Reserve Credit Facility are authorized or obligated to close.

"Certificate of Determination" means a certificate of an Authorized Officer of the Authority fixing terms, conditions and other details of Bonds in accordance with the delegation of power to do so under a Supplemental Resolution.

"Code" means the Internal Revenue Code of 1986, as amended. Each reference to a section of the Code shall be deemed to include the Regulations, including temporary and proposed Regulations, relating to such section which are applicable to the Bond Resolution, including the Bonds or the use of Bond proceeds.

"Cost or Costs of Issuance" means the items of expense incurred in connection with the authorization, sale and issuance of a Series of Bonds or Bond Anticipation Notes, which items of expense may include, but are not limited to, Authority expenses, State bond issuance charges, document printing and reproduction costs, filing and recording fees, costs of credit ratings, initial fees and charges of the Trustee, legal fees and charges, professional consultants' fees, underwriting fees, fees and charges for execution, transportation and safekeeping of Bonds, premiums, fees and charges for Credit Facilities, Reserve Credit Facilities, Qualified Swaps, Qualified Reverse Swaps and other similar financial arrangements, costs and expenses of refunding such Bonds and other costs, charges and fees, including those of the Authority, in connection with the foregoing.

"Counsel's Opinion" means an opinion signed by an attorney or firm of attorneys of nationally recognized standing in the practice of law relating to municipal, state and public agency financing selected by the Authority.

"Credit Facility" means any letter of credit, line of credit, policy of bond insurance, surety bond, guarantee or similar instrument which is issued by a financial, insurance or other institution and which provides security or liquidity in respect of the Bonds of any Series (and with respect to a policy of bond insurance, guarantees the payment of principal of and interest on the Bonds), not including any Reserve Credit Facility.

"Date of Completion" means (i) in the case of the construction of any vehicular bridge or road, the date on which such bridge or road is opened to vehicular traffic (as evidenced by an Authority Engineer's Certificate), and (ii) in any other case, the date on which the acquisition, construction, improvement, reconstruction or rehabilitation of a Facility is completed (as evidenced by an Authority Engineer's Certificate).

"Debt Service" for any period means, as of any date of calculation and with respect to any Series, an amount equal to the sum of (i) interest accruing during such period on the Bonds of such Series, including, to the extent not otherwise provided in a Supplemental Resolution, all net amounts due and payable by the Authority and all net amounts to accrue to the end of such period pursuant to a Qualified Swap, Qualified Reverse Swap or Parity Reimbursement Obligation, and (ii) that portion of each Principal Installment for such Series which would accrue during such period if such Principal Installment were deemed to accrue daily in equal amounts from the next preceding Principal Installment payment date for such Series (or, if there shall be no such preceding Principal Installment payment date, from a date one year prior to the due date of the first Principal Installment of the Bonds of such Series); provided, however, that in calculating Aggregate Debt Service for purposes of the calculation of "Net Revenue Requirement" in connection with the test for the issuance of Additional Bonds and Refunding Bonds, the rate covenant and the test for an Other Authority Project to become an Authority Project, Debt Service on Outstanding Bonds for which the Authority has entered into a Qualified Swap shall be calculated assuming that the interest rate on such Bonds shall equal the stated fixed rate on the Qualified Swap. Such interest and Principal Installments shall be calculated on the assumption that no Bonds of such Series Outstanding at the date of calculation will cease to be Outstanding except by reason of the payment of each Principal Installment on the due date thereof, provided, however, that there shall be excluded from "Debt Service" (1) interest on Bonds to the extent that Escrowed Interest is available to pay such interest, (2) Principal Installments on Bonds to the extent that Escrowed Principal is available to pay such Principal Installments, and (3) interest funded from Bond proceeds to the extent that such amounts are held by the Trustee in the Senior Debt Service Fund for such purpose. See "Additional Bonds", "Tolls, Fees and Charges" and "Additional Projects".

"Defeased Municipal Obligations" means pre-refunded municipal obligations rated "AAA" by S&P and "Aaa" by Moody's and meeting the following requirements:

(a) the municipal obligations are (i) not subject to redemption prior to maturity or (ii) the Authority, the Trustee or the Paying Agent has been given irrevocable instructions concerning their call and redemption and the issuer of the municipal obligations has covenanted not to redeem such municipal obligations other than as set forth in such instructions; and

(b) the municipal obligations are fully secured by cash or Government Obligations which may be applied only to payment of the principal of and interest and premium, if any, on such municipal obligations.

"Estimated Aggregate Debt Service" means, for any period and as of any particular date of calculation, the sum of the amounts of Debt Service for such period with respect to all Series of Bonds then Outstanding; provided, however, that in computing such Estimated Aggregate Debt Service, any particular Variable Interest Rate Bonds shall be deemed to bear at all times, to the maturity date thereof, the Estimated Average Interest Rate applicable thereto.

"Estimated Average Interest Rate" means as to any Variable Interest Rate Bonds the interest rate that would have been borne by such Bonds if such Bonds had been sold as fixed interest rate Bonds of the Authority (i) without the benefit of any credit enhancement and (ii) with the same final maturity or maturities (without giving effect to puts or tenders) as the Variable Interest Rate Bonds actually sold, as estimated by the Authority on the date of sale of such Bonds.

"Facilities" means the Original Project and any Additional Project (but not including an Other Authority Project that does not constitute an Additional Project).

"Facility Capital Improvements" means, as applicable to the Original Project or any Additional Project, as may be determined by the Authority Board to be necessary or appropriate, any construction, reconstruction, rehabilitation, widening (including construction of any parallel spans or thoroughfares to any existing Facility bridge or tunnel) or relocation thereof, any extraordinary repairs, modifications or improvements thereto or with respect to any portion thereof, or any incidental expansion thereof or incidental extension thereto, or with respect to any portion thereof, including:

(i) incidental connecting tunnels, bridges, overpasses and underpasses, as well as existing interchanges, new interchanges determined by the Authority Board to be necessary or appropriate for the proper operation of the applicable Facility in order to relieve congestion, to promote the efficient operation thereof, or to enhance the safe operation thereof; and

(ii) administration, storage and other buildings, toll facilities and equipment, entrance plazas, service areas and stations, barriers, machinery, equipment and other facilities relating to the construction, reconstruction, operation or maintenance of any Facility, acquisition of rights-of-way or other interests in real property necessary or appropriate for any of the activities described above in this definition.

"Fund" means any one of the funds created and established pursuant to the Bond Resolution.

"Government Obligations" means (a) direct obligations of, or obligations the principal of and the interest on which are unconditionally guaranteed by, the United States of America and entitled to the full faith and credit thereof; (b) certificates, depositary receipts or other instruments which evidence a direct ownership interest in obligations described in clause (a) above or in any specific interest or principal payments due in respect thereof; provided, however, that the custodian of such obligations or specific interest or principal payments shall be a bank or trust company organized under the laws of the United States of America or of any state or territory thereof or of the District of Columbia, with a combined capital stock, surplus and undivided profits of at least $50,000,000 or the custodian is appointed by or on behalf of the United States of America; and provided, further, that except as may be otherwise required by law, such custodian shall be obligated to pay to the holders of such certificates, depositary receipts or other instruments the full amount received by such custodian in respect of such obligations or specific payments and shall not be permitted to make any deduction therefrom; and (c) Defeased Municipal Obligations.

"Independent Consultant" means an independent licensed professional engineer or firm of independent licensed professional engineers of recognized national standing (who may be an engineer or firm of engineers retained by the Authority for other purposes) selected by the Authority; provided, however, that in connection with an Additional Project, the Authority may, in a Supplemental Resolution, if it determines that the field of engineering is not the most appropriate professional discipline (in terms of knowledge and expertise in connection with such Additional Project) to deliver any Independent Consultant's Certificates required by the terms of the Bond Resolution, select members of another professional discipline, including but not limited to accounting, as appropriate, as an Independent Consultant in connection with such Additional Project; provided further that any members of such discipline thereafter selected by the Authority shall be independent and shall be of recognized national standing in such discipline.

"Independent Consultant's Certificate" means a certificate or an opinion signed and delivered by an Independent Consultant pursuant to the terms of the Bond Resolution.

"Interest Payment Date" means, with respect to a Series of Bonds, each date on which interest, if any, is payable pursuant to the Supplemental Resolution authorizing such Bonds.

"Investment Obligations" means, to the extent the same are at the time legal for investment of funds of the Authority under the Act or under other applicable law:

(a) (i) Government Obligations and (ii) bonds, debentures, notes or other obligations issued or guaranteed by any of the following: Federal National Mortgage Association, the Federal Financing Bank, the Federal Home Loan Mortgage Association, the Federal Housing Administration, the Farmers Home Administration, the Government National Mortgage Association, or any other agency controlled by or supervised by and acting as an instrumentality of the United States government,

(b) certificates of deposit issued by, and time deposits in, and bankers' acceptances of, any bank (including any Paying Agent or Trustee), any branch of any bank, national banking association or federally chartered savings and loan association; provided that, with respect to any of the foregoing institutions, whose long-term unsecured indebtedness is rated less than A by Moody's or S&P, such certificates of deposit or time deposits are (i) insured by the Federal Deposit Insurance Corporation for the full face amount thereof or

(ii) to the extent not so insured, collateralized by direct obligations of the United States of America having a market value of not less than the face amount of such certificates and deposits,

(c) evidences of ownership of a proportionate interest in specified direct obligations of the United States of America, which obligations are held by a bank or trust company organized and existing under the laws of the United States of America or any state thereof in the capacity of custodian, or when "stripped" by the United States Treasury, then by the custodian designated by the United States Treasury,

(d) obligations of state or local government municipal bond issuers which are rated in one of the two highest Rating Categories by S&P and Moody's,

(e) obligations of state or local government municipal bond issuers, the principal of and interest on which, when due and payable, have been insured by an insurance policy or guaranteed by a letter of credit and which are rated in one of the two highest Rating Categories by S&P and Moody's,

(f) interests in a money market mutual fund registered under the Investment Company Act of 1940, 15 U.S.C. §§ 80-1, et seq., as from time to time amended, the portfolio of which is limited to obligations described in clause (a), (d), or (e) above and repurchase agreements fully collateralized thereby provided that such fund has total assets of at least $100,000,000 and is rated in the highest Rating Category by S&P and Moody's,

(g) evidences of ownership of a proportionate interest in specified Defeased Municipal Obligations which Defeased Municipal Obligations are held by a bank or trust company organized and existing under the laws of the United States of America or any state thereof in the capacity of custodian,

(h) any repurchase agreement for Government Obligations by the Authority or any Trustee that is with a bank, trust company (including any Trustee) or securities dealer which is a member of the Securities Investors Protective Corporation, each of which is a primary reporting dealer in government securities as determined by the Federal Reserve Bank, or if "primary reporting dealers" cease to be determined by the Federal Reserve Bank, such other comparable standard as the Authority shall implement pursuant to a Supplemental Resolution; provided, however, that the Government Obligations must be transferred to the Authority or any Trustee or a third party agent by physical delivery or by an entry made on the records of the issuer or registrar of such obligations, and the collateral security must continually have a market value at least equal to the amount so invested and the collateral must be free of third party claims. Any investment in a repurchase agreement shall be considered to mature on the date the bank, trust company or recognized securities dealer providing the repurchase agreement is obligated to repurchase the Government Obligations,

(i) commercial paper rated in the highest Rating Category by S&P and Moody's, and

(j) any other obligations from time to time permitted pursuant to the Act or other applicable law, provided, however, that if the funds invested in any such obligation are pledged for the payment of Bonds hereunder and the Bonds are then rated by Moody's or S&P, such obligation shall be rated in one of the two highest Rating Categories of each such rating agency or, if such obligation is not then rated by either rating agency, an obligation of comparable credit quality of the same issuer is rated in one of the two highest Rating Categories of such rating agency.

Any investment in obligations described in (a), (c), (d), (e), (f), (g), (h) and (i) above may be made in the form of an entry made on the records of the issuer of the particular obligation.

"Junior Indebtedness" means any evidence of indebtedness of the Authority payable out of the Junior Indebtedness Fund.

"Maximum Annual Debt Service" means, as of any date of calculation, an amount equal to the greatest amount of Aggregate Debt Service for the current or any future 12-month period. For purposes of this definition, interest with respect to any Variable Interest Rate Bonds shall be calculated using the Maximum Interest Rate with respect to such Bonds.

"Maximum Interest Rate" means, with respect to any particular Variable Interest Rate Bonds, a numerical rate of interest, which shall be set forth in the Supplemental Resolution authorizing such Bonds, that shall be the maximum rate of interest such Bonds may at any time bear; provided, however, that (a) should the Authority obtain insurance or other coverage which provides that any increase in the variable interest rate on any Variable Interest Rate Bonds above a threshold rate will be reimbursed or paid by the insurer or provider of such other coverage, such threshold rate will be deemed to be the Maximum Interest Rate and (b) with respect to fixed interest rate Bonds deemed to be Variable Interest Rate Bonds because of a Qualified Reverse Swap entered in connection therewith, the Maximum Interest Rate shall be (i) the fixed interest rate of such Bonds for so long as the aggregate Outstanding principal amount of all such fixed interest rate Bonds deemed to be Variable Interest Rate Bonds is less than or equal to 5% of the aggregate principal amount of all Bonds Outstanding, and (ii) otherwise shall be the maximum interest rate of such Qualified Reverse Swap. With respect to the immediately preceding clause (a), the insurer or provider of such other coverage providing such insurance policy or other coverage shall be an insurer or bank whose insurance policies or other coverage are rated in the highest Rating Category by S&P and Moody's.

"Moody's" means Moody's Investors Service, a corporation organized and existing under the laws of the State of Delaware, its successors and assigns, and, if such corporations shall be dissolved or liquidated or shall no longer perform the functions of a securities rating agency, "Moody's" shall be deemed to refer to any other nationally recognized securities rating agency designated by the Authority.

"Net Revenue Requirement" means, with respect to any period of time, an amount equal to the greater of (i) the sum of (A) Aggregate Debt Service, (B) amounts required to make deposits to the Senior Debt Service Reserve Fund, if any, (C) amounts required to make Reserve Maintenance Payments, and (D) amounts required to be deposited in the Junior Indebtedness Fund pursuant to the Supplemental Resolution or other Bond Resolution or agreement authorizing outstanding Junior Indebtedness or (ii) 1.20 times the sum of the Aggregate Debt Service for such period; provided, however, that "Aggregate Debt Service" for purposes of calculating the Net Revenue Requirement may be reduced by an amount equal to investment income on the Senior Debt Service Fund and on the Senior Debt Service Reserve Fund to the extent such investment income is required to be retained in or transferred to the Senior Debt Service Fund, as appropriate, pursuant to a Supplemental Resolution, such amount to be calculated at the rate per annum equal to the lesser of (A) the then current yield on five year obligations of the United States Treasury and (B) the actual income to be earned as estimated by an Authorized Officer.

"Net Revenues" for any period means the amount of the excess of the Revenues over the Operating Expenses during such period; provided, however, that in calculating such amount there shall be excluded from "Revenues" any amounts that (i) are subject to appropriation by the Congress of the United States, the Legislature of the State or any other legislative body of a governmental entity or (ii) are not reasonably expected by the Authority to recur annually in predictable amounts until the scheduled retirement at maturity or pursuant to Sinking Fund Installments of all Bonds Outstanding or then proposed to be Outstanding.

"New Extension" means an additional tolled roadway or an extension to or expansion of any Facility constituting a tolled roadway (including in either case tunnels and bridges), in each case which fully satisfies the requirements of the Bond Resolution and upon such satisfaction is designated by the Authority as an Additional Project; provided that such Additional Project shall be (i) within the jurisdiction and control of the Authority and (ii) undertaken for transportation or transportation-related purposes (including related necessary or appropriate economic development activities). See "Proposed New Interchanges and New Extensions".

"New Interchange" means an interchange on any Facility constituting a tolled roadway which fully satisfies the requirements of the Bond Resolution and upon such satisfaction is designated by the Authority as an Additional Project; provided that such Additional Project shall be (i) within the jurisdiction and control of the Authority and (ii) undertaken for transportation or transportation-related purposes (including related necessary or appropriate economic development activities). See "Proposed New Interchanges and New Extensions".

"Operating Expenses" means the expenses incurred for operation, maintenance and repair, ordinary replacement and ordinary reconstruction of any Facility or any part thereof and shall include, without limiting the generality of the foregoing, administrative expenses, premiums and reserves for insurance and self-insurance, fees or premiums for a Credit Facility, Reserve Credit Facility, Qualified Swap or Qualified Reverse Swap, legal and engineering expenses, payments into pension, retirement, health and hospitalization funds, and any other expenses associated with the rehabilitation and reconstruction of a municipal highway, under which passes any portion of the Original Project, and required to be paid by the Authority by Subdivision 4 of Section 359 of the Act, as in effect on August 25, 1992, all to the extent properly and directly attributable to the operation of the Original Project, and rental payments in connection with operating leases entered in the ordinary course of business, all to the extent properly and directly attributable to any Facility, and the expenses and compensation of the Fiduciaries required to be paid under the Bond Resolution; but does not include (i) any costs or expenses for new construction or for major reconstruction or (ii) any provision for interest, depreciation, amortization or similar charges.

"Original Project" means all New York State Thruway sections and connections constituting roads or bridges, authorized by the Act as in effect on, and open to traffic on the original date of adoption of the Bond Resolution, except the portion of I-84 in the State, together with any Facility Capital Improvements related thereto.

"Other Authority Project" means one or more facilities and other real and personal property, or any interest therein, which the Authority may now or hereafter be authorized to acquire, design, construct, maintain, operate, finance, improve, reconstruct, rehabilitate or otherwise undertake for transportation or transportation-related purposes (including related necessary or appropriate economic development activities). Each Other Authority Project shall be within the jurisdiction and control of the Authority and shall be designated as an Other Authority Project by a Supplemental Resolution adopted pursuant to the Bond Resolution, and if not so designated shall not become an Other Authority Project. Notwithstanding the foregoing, the following projects, to the extent authorized by law, shall in any event be deemed Other Authority Projects regardless of whether the Authority has jurisdiction and control of such projects and whether designated by a Supplemental Resolution: (1) the Inner Harbor project and the Intermodal Transportation Center in Syracuse; (2) the Horizons Waterfront project in Buffalo; (3) the Stewart International Airport Access project in Orange County and intended to provide direct access to Stewart International Airport from Interstate Route 84 in the vicinity of the airport; (4) the New York State Canal system; (5) the Thruway Exit 26 project in Schenectady County; and (6) the Tappan Zee Bridge Ferry Service project between Rockland County and Manhattan.

"Other Authority Project Cost" shall have the meaning set forth for such term in the definition of "Project Cost".

"Outstanding," when used with reference to Bonds, means, as of any date, all Bonds theretofore or thereupon being authenticated and delivered under the Bond Resolution except:

(i) Any Bond cancelled or delivered for cancellation at or prior to such date;

(ii) Any Bond (or portion of a Bond) deemed to have been paid in accordance with the Bond Resolution; or

(iii) Any Bond in lieu of or in substitution for which other Bonds shall have been authenticated and delivered pursuant to the Bond Resolution.

provided, however, that, unless required pursuant to a Supplemental Resolution, a Qualified Swap, Qualified Reverse Swap or Parity Reimbursement Obligation shall not, by itself, increase the Outstanding principal amount of Bonds.

"Principal" or "principal" means (1) with respect to any capital appreciation bond, the accreted amount thereof (the difference between the stated amount to be paid at maturity and the accreted amount being deemed unearned interest), provided, however, when used in connection with (a) the authorization and issuance of Bonds and (b) the order of priority of payments of Bonds after an Event of Default, "Principal" or "principal" means the original principal amount of a capital appreciation bond (the difference between the accreted amount and the original principal amount being deemed interest), and provided further, however, that when used in connection with determining whether the Bondholders of the requisite principal amount of Outstanding Bonds have given any required consent, notice, waiver, request, demand, authorization, direction or notice, "Principal" or "principal" means the accreted amount, (2) with respect to any capital appreciation and current interest bond, the appreciated value thereof, and (3) with respect to any current interest bond, the principal amount of such bond payable at maturity.

"Principal Installment" means, as of any date of calculation and with respect to any Series, (a) the Principal amount of Outstanding Bonds of such Series, due on the dates and in the amounts, in each case as specified in the Supplemental Resolution authorizing such Series, reduced by the Principal amount of such Bonds which would be retired by reason of the payment when due and application in accordance with the Bond Resolution of Sinking Fund Installments payable before such future date, plus the unsatisfied balance of any Sinking Fund Installment due on such certain future date, together with the aggregate amount of the premiums, if any, applicable on such future date upon the redemption of such Bonds by application of such Sinking Fund Installments in a principal amount equal to such unsatisfied balance, and (b) with respect to any amounts due under any Parity Reimbursement Obligation, the Principal amount of such amounts due under any Parity Reimbursement Obligation.

"Project Cost" with respect to any Facility, shall mean (i) the costs incurred or to be incurred by the Authority in connection with or incidental to the acquisition, design, construction, improvement, reconstruction or rehabilitation of such Facility, including legal, administrative, engineering, planning, design, studies, insurance costs and financing costs of such Facility (except to the extent such costs are funded from the proceeds of any indebtedness of the Authority, the payment of which is included as a Project Cost under clause (iii) below), (ii) amounts, if any, required by the Bond Resolution to be paid into any Fund or account upon the issuance of any Series, (iii) payments when due (whether at the maturity of principal or the due date of interest or upon redemption) on Bond Anticipation Notes, (iv) costs of equipment and supplies and initial working capital and reserves required by the Authority for the commencement of operation of such Facility, (v) costs of acquisition by the Authority of real or personal property or any interest therein, including land required for relocation and relocation costs and land required for environmental mitigation, (vi) any other costs properly attributable to the acquisition, design, construction, improvement, reconstruction or rehabilitation of such Facility, including costs of any Facility Capital Improvements, and (vii) interest on Bonds during the estimated period of construction and for a reasonable period thereafter. As distinguished from Project Costs, any such costs incurred in connection with an Other Authority Project that has not been designated an Additional Project are referred to as "Other Authority Project Costs".

"Qualified Reverse Swap" means, to the extent from time to time permitted by law, with respect to Bonds, any financial arrangement (i) that is entered into by the Authority in connection with Bonds bearing interest at a fixed rate of interest in the expectation of lowering the Authority's costs of incurring such indebtedness, (ii) that is entered into by the Authority for a term of more than five years, (iii) the net effect of which, together with the interest rate borne by such Bonds, is a variable rate of interest to the Authority during the term of such arrangement, and (iv) which has been designated in writing to the Trustee by an Authorized Officer as a Qualified Reverse Swap with respect to such Bonds.

"Qualified Swap" means, to the extent from time to time permitted pursuant to law, with respect to Bonds, any financial arrangement (i) that is entered into by the Authority with an entity that is a Qualified Swap Provider at the time the arrangement is entered into; (ii) which provides that the Authority shall pay to such entity an amount based on the interest accruing at a fixed rate on an amount equal either to the principal amount of such Bonds of such Series or a notional principal amount relating to such Series, and that such entity shall pay to the Authority an amount based on the interest accruing on such actual or notional principal amount at a variable rate of interest computed according to a formula set forth in such arrangement (which need not be the same as the actual rate of interest borne by such Bonds) or that one shall pay to the other any net amount due under such arrangement or such other similar arrangement, the net effect of such arrangement and the interest rate borne by such Bonds is at all times a fixed interest rate to the Authority; (iii) which provides for a commencement date and a termination date identical to the term or remaining term of such Bonds, taking into account any conversion of Bonds from a variable interest rate to a fixed interest rate as a termination date; and (iv) which has been designated in writing to the Trustee by an Authorized Officer as a Qualified Swap with respect to such Bonds.

"Qualified Swap Provider" means, with respect to a Series of Bonds, an entity whose senior long term obligations, other senior long term obligations or claims paying ability or whose payment obligations under a Qualified Swap are guaranteed by an entity whose senior long term debt obligations, other senior unsecured long term obligations or claims paying ability are rated either (i) at least as high as A3 by Moody's, and A□ by S&P, or the equivalent thereof by any successor thereto for so long as such rating agency is then maintaining a rating on the Bonds Outstanding, but in no event lower than any Rating Category designated by each such rating agency for the Bonds Outstanding subject to such Qualified Swap, or (ii) any such lower Rating Categories which each such rating agency then maintaining a rating on the Bonds Outstanding indicates in writing to the Authority and the Trustee will not, by itself, result in a reduction or withdrawal of its rating on the Bonds Outstanding subject to such Qualified Swap that is in effect prior to entering into such Qualified Swap.

"Rating Categories" means one of the generic rating categories of either Moody's or S&P without regard to any refinement or gradation of such rating by a numerical modifier or otherwise.

"Rebate Amount" means, with respect to each Series of Bonds, the amount equal to the rebatable arbitrage and any income attributable to the rebatable arbitrage as required by the Code.

"Rebate Fund" means the Fund designated as the Rebate Fund established in the Bond Resolution.

"Record Date" means with respect to any Interest Payment Date, unless the applicable Supplemental Resolution authorizing a particular Series of Bonds or a Certificate of Determination relating thereto provides otherwise with respect to Bonds of such Series, the fifteenth (15th) day of the calendar month next preceding such Interest Payment Date.

"Redemption Date" means the date upon which Bonds are to be called for redemption pursuant to the Bond Resolution.

"Redemption Price" means, with respect to any Bonds, the Principal amount thereof plus the applicable premium, if any, payable upon the redemption thereof.

"Refunding Bonds" means all Bonds, whether issued in one or more Series of Bonds, authenticated and delivered pursuant to the Bond Resolution, on original issuance to refund Bonds or Junior Indebtedness or any Subordinated Indebtedness that was issued to finance or refinance Project Costs or Other Authority Project Costs, and any Bonds thereafter authenticated and delivered in lieu of or in substitution for such Bonds pursuant to the Bond Resolution.

"Regulations" means the Income Tax Regulations promulgated by the Department of the Treasury from time to time.

"Reserve Credit Facility" means (a) any irrevocable, unconditional letter of credit issued by a bank or savings and loan association whose long-term uncollateralized debt obligations are rated in one of the two highest rating categories by each nationally recognized rating agency then rating any Series of Bonds, or if no Series of Bonds is then rated, by any nationally recognized rating agency, and (b) any insurance policy providing substantially equivalent liquidity as an irrevocable, unconditional letter of credit, and which is issued by a municipal bond or other insurance company, obligations insured by which are rated in one of the two highest rating categories by each nationally recognized rating agency then rating any Series of Bonds, or if no Series of Bonds is then rated, by a nationally recognized rating agency, and which is used, to the extent permitted under applicable law, including the Act, to fund all or a portion of the Senior Debt Service Reserve Fund Requirement.

"Reserve Maintenance Payments" means an amount described as such for a particular Authority fiscal year in the Authority Budget, which for each fiscal year of the Authority shall be an amount no less than the greater of (i) $30,000,000 or (ii) the amount specified in an Independent Consultant's Certificate for such Authority fiscal year (the amount so specified in each Authority Budget being the "Minimum Amount"); provided further that Reserve Maintenance Payments may not exceed an amount or amounts from time to time established by the Authority pursuant to a Supplemental Resolution (the "Maximum Amount");

provided further that any such Maximum Amount shall not be less than the Minimum Amount. For purposes of the tests set forth in the Bond Resolution for an Other Authority Project or for a New Interchange or a New Extension to become an Authority Project, for any period beyond the term of an Authority Budget, "Reserve Maintenance Payments" shall be based upon estimates provided in an Independent Consultant's Certificate. See "Additional Projects" and "Proposed New Interchanges and New Extensions".

"Revenues" means (i) all tolls, revenues, fees, charges, rent and other income and receipts derived from the operation, jurisdiction and control of the Facilities, (ii) the proceeds of any use and occupancy insurance relating to the Facilities and of any other insurance which insures against loss of Revenues, and (iii) investment income received on any moneys or securities held under the Bond Resolution other than investment income on amounts held in the Rebate Fund, Junior Indebtedness Fund or any other Fund to the extent the investment income from such Fund or any account thereof is not transferred to the Revenue Fund pursuant to the Bond Resolution. "Revenues" shall not include the proceeds of any gifts, grants or other income to the Authority from the government of the United States or the State, any public instrumentality of the State or any other individual or entity, to the extent the Authority is precluded by law, the grant or other operative contract or instrument from applying such amounts to Operating Expenses and Debt Service.

"S&P" means Standard & Poor's Ratings Services, a corporation organized and existing under the laws of the State of New York, its successors and assigns, and, if such corporation shall be dissolved or liquidated or shall no longer perform the functions of a securities rating agency, "S&P" shall be deemed to refer to any other nationally recognized securities rating agency designated by the Authority.

"Senior Debt Service Reserve Fund Requirement" means, as of any date of calculation, an amount equal to the maximum amount of Aggregate Debt Service for any 12-month period (exclusive of accrued interest, if any) on all Outstanding Bonds secured by the Senior Debt Service Reserve Fund; provided that (i) with respect to Variable Interest Rate Bonds, interest on such Bonds shall be calculated at the Estimated Average Interest Rate until conversion to a fixed rate of interest at which time such requirement shall be recalculated in accordance with actual Debt Service thereafter due and payable for any ensuing 12-month period with respect to such Bonds and (ii) for the purposes of determining the amount required to be on deposit and thereafter maintained in the Senior Debt Service Reserve Fund with respect to any Series of Bonds the interest on which is excludable from gross income for federal income tax purposes, to the extent required to maintain the federal tax status of interest on such Bonds, the Senior Debt Service Reserve Fund Requirement shall at no time exceed the sum of the Senior Debt Service Reserve Fund Requirement immediately prior to the issuance of such Series and an amount equal to ten per centum (10%) of the proceeds (as such term is used in Section 148(d) of the Code) from the sale of such Series.

"Series" means all of the Bonds authenticated and delivered on original issuance and denominated as part of the same series, and thereafter delivered in lieu of or in substitution of such Bonds upon transfer of registration or exchange, partial redemption and amendment of the Bond Resolution regardless of variations in maturity, interest rate, Sinking Fund Installments or other provisions.

"Sinking Fund Installment" means, with respect to any Series of Bonds, as of any date of calculation and with respect to any Bonds of such Series, the amount of money required by the applicable Supplemental Resolution pursuant to which such Bonds were issued, to be paid in all events by the Authority on a single future date for the retirement of any Outstanding Bonds of said Series which mature after said future date, but does not include any amount payable by the Authority by reason only of the maturity of such Bond.

"State" means the State of New York.

"Subordinated Indebtedness" means any evidence of indebtedness of the Authority payable out of amounts available in the General Reserve Fund.

"Supplemental Resolution" shall mean any Bond Resolution supplemental to or amendatory of the Bond Resolution, adopted by the Authority and becoming effective in accordance with the Bond Resolution.

"Term Bonds" means with respect to Bonds of a Series, the Bonds so designated in an applicable Supplemental Resolution or the applicable Certificate of Determination and payable from Sinking Fund Installments.

"Test Period" means a period of time consisting of the greater of (i) the next succeeding five Authority fiscal years and (ii) the period extending from the next succeeding Authority fiscal year through the second Authority fiscal year following the estimated Date of Completion of any Facility not then completed.

"Trustee" means a trustee appointed by the Authority pursuant to the Bond Resolution, its successor and assigns, and any other corporation or association which may at any time be substituted in its place as provided in the Bond Resolution.

"Variable Interest Rate Bonds" means Bonds which bear a variable interest rate but does not include any Bond which, during the remainder of the term thereof to maturity, bears interest at a fixed rate; provided, however, that Bonds bearing a variable rate of interest shall not be deemed Variable Interest Rate Bonds if (a) the Authority has entered into a Qualified Swap with respect to such Bonds (but only for so long as such Qualified Swap meets all requirements of a "Qualified Swap") or (b) each of the following conditions is met: (i) such Bonds are issued concurrently in equal principal amounts with other Bonds bearing a variable rate of interest, (ii) such Bonds and such other Bonds are required to remain Outstanding in equal principal amounts at all times, and (iii) the net effect of such equal principal amounts and variable interest rates is at all times a fixed interest rate to the Authority; provided further that, except for purposes of establishing the amount of the Senior Debt Service Reserve Fund Requirement, (1) Bonds bearing a fixed rate of interest shall be deemed Variable Interest Rate Bonds to the extent that the Authority has entered into a Qualified Reverse Swap and (2) the derivative rate of such arrangement shall be deemed to be the variable interest rate of such Bonds.

Bond Resolution to Constitute Contract

In consideration of the purchase and acceptance of any and all of the Bonds authorized to be issued under the Bond Resolution by those who shall hold the same from time to time, the Bond Resolution shall be deemed to be and shall constitute a contract between the Authority and the Holders from time to time of the Bonds; and the pledge made in the Bond Resolution and the covenants and agreements therein set forth to be performed on behalf of the Authority shall be for the equal benefit, protection and security of the Holders of any and all of the Bonds, all of which, regardless of the time or times of their issue or maturity, shall be of equal rank without preference, priority or distinction of any of the Bonds over any other thereof except as expressly provided in or permitted by the Bond Resolution.

The Pledge Effected by the Bond Resolution

The Bonds shall be direct and general obligations of the Authority, and the full faith and credit of the Authority are pledged for the payment of such principal, Redemption Price, interest, and Sinking Fund Installments.

There are pledged for the payment of the principal and Redemption Price of, interest on, and Sinking Fund Installments for, the Bonds, in accordance with their terms and the provisions of the Bond Resolution, subject only to the provisions of the Bond Resolution permitting the application thereof (and to the subordination provisions set forth in the Bond Resolution) for the purposes and on the terms and conditions set forth in the Bond Resolution, (i) the proceeds of the sale of the Bonds, (ii) the Revenues and (iii) all Funds and accounts established by the Bond Resolution (except the Rebate Fund, the Junior Indebtedness Fund and, with respect to any Series of Bonds not secured by the Senior Debt Service Reserve Fund, the Senior Debt Service Reserve Fund), including the investments, if any, thereof. The pledge and lien created by the Bond Resolution for the Bonds is superior in all respects to any pledge or lien created for Junior Indebtedness or Subordinated Indebtedness.

General Provisions for Issuance of Bonds

The Bonds of each Series shall be executed by the Authority, authenticated by the Trustee and delivered to or upon the order of the Authority upon receipt by the Trustee, among other things, of a Counsel's Opinion to the effect that (i) the Authority has the right and power under the Act to adopt the Bond Resolution, and the Bond Resolution has been duly and lawfully adopted by the Authority, is in full force and effect and is valid and binding upon the Authority and enforceable in accordance with its terms, and no other authorization for the Bond Resolution is required, (ii) the Bond Resolution creates the valid pledge to the payment of the Bonds of the proceeds of sale of Bonds, the Revenues, the Funds and accounts established by the Bond Resolution (other than the Rebate Fund, the Junior Indebtedness Fund and, to the extent any Series of Bonds is not secured by the Senior Debt Service Reserve Fund, the Senior Debt Service Reserve Fund), and investment income on pledged Funds and accounts, subject to the provisions of the Bond Resolution permitting the withdrawal, payment, setting apart or appropriation thereof for the purposes and on the terms and conditions set forth in the Bond Resolution, and (iii) upon the execution and delivery thereof and upon authentication by the Trustee, the Bonds of such Series will be valid, binding, direct and general obligations of the Authority payable as provided in, and enforceable in accordance with their terms and the terms of, the Bond Resolution and entitled to the benefits of the Act and the Bond Resolution, and such Bonds have been duly and validly authorized and issued in accordance with law, including the Act, as amended to the date of such Counsel's Opinion, and in accordance with the Bond Resolution; provided, however, that such Counsel's Opinion may be qualified to the extent that the enforceability thereof may be limited by bankruptcy, insolvency and similar laws affecting rights and remedies of creditors.

Additional Bonds

One or more Series of Additional Bonds may be authorized and delivered upon original issuance for the purpose of (i) paying the Project Costs (other than Project Costs provided for in clause (iii)), (ii) paying Other Authority Project Costs, to the extent permitted by subparagraph (B) below, and (iii) paying or providing for the payment of Project Costs of improvement, reconstruction or rehabilitation of one or more Facilities for the purpose of preventing a loss of Net Revenues derived from such Facilities, provided that such loss of Net Revenues would be the result of an emergency or some unusual or extraordinary occurrence and that proceeds of Additional Bonds would not be used for such purpose to the extent that insurance proceeds relating to such occurrence were then available.

(A) The Bonds of any such Series issued for purposes specified in the foregoing clauses (i) and (ii) above shall be authenticated and delivered by the Trustee only upon receipt by it (in addition to the other documents and moneys required by the Bond Resolution) of:

1. A certificate of an Authorized Officer setting forth (i) the Net Revenues for any period of 12 consecutive calendar months out of the 18 calendar months next preceding the authentication and delivery of the Bonds of such Series, provided that if any adjustment of rates shall have been placed in effect during such 12-month period, such Net Revenues shall reflect the Revenues which an Independent Consultant's Certificate estimates in the certificate delivered pursuant to paragraph 3 below would have resulted had such rate adjustment been in effect for the entire 12-month period, and (ii) the Net Revenue Requirement for such 12 calendar months, which certificate shall demonstrate that such Net Revenues equal or exceed such Net Revenue Requirement;

2. A certificate of an Authorized Officer familiar with such matters and an Independent Consultant's Certificate, in each case stating whether, to the best of such party's knowledge, any federal, State or other agency is then projecting or planning the construction, improvement or acquisition of any highway or other facility which, in the opinion of such person or firm, may be materially competitive with any part of the Facilities, and the estimated date of completion of such highway or other facility;

3. An Independent Consultant's Certificate setting forth, for the then current Authority fiscal year and each of the Authority fiscal years in the Test Period, estimates of Revenues giving effect to (i) the placing in service of any Facility not yet placed in service and on the assumption that any competitive highway or other facility referred to in its certificate delivered pursuant to paragraph 2 above will be completed on the date therein estimated and will thereafter be in operation during the period covered by such

estimates, (ii) any adjustment of rates which shall have been placed in effect subsequent to the beginning of the current Authority fiscal year, as if such toll, fee or charge adjustment had been in effect from the beginning of such Authority fiscal year until the effective date of any subsequent adjustment presumed necessary, and (iii) any adjustment of rates which, in the opinion of the Independent Consultant, would be practicable and necessary to comply with the provisions of the toll, fee and charge covenant in the Bond Resolution, as if such adjustment were to be in effect from its effective date to the effective date of any other such adjustment;

4. An Independent Consultant's Certificate setting forth (i) for the years and taking into account the assumptions specified for the Independent Consultant's Certificate pursuant to paragraph 3 above, estimates of the Operating Expenses giving effect to the placing in service of any Facility taken into account in paragraph 3 above, (ii) the estimated total Project Cost, and (iii) the estimated date of placing in service of any Facility taken into account in such paragraph 3; and

5. A certificate of an Authorized Officer setting forth (i) the estimated Net Revenues (based on the certificates delivered pursuant to paragraphs 3 and 4 above) for the current Authority fiscal year and each of the years in the Test Period giving effect to the placing in service of any Facility not yet placed in service and (ii) the opinion that such estimated Net Revenues for the current Authority fiscal year and each of the Authority fiscal years in the Test Period equal or exceed the estimated Net Revenue Requirement (based on the certificate delivered pursuant to paragraph 1 above and assuming the Maximum Interest Rate on any Variable Interest Rate Bonds) for each such year and that estimated Net Revenues in the last full Authority fiscal year of the Test Period equal or exceed Maximum Annual Debt Service on all Bonds Outstanding immediately after the authentication and delivery of the Bonds being issued.

(B) Any Series of Additional Bonds to be issued for the purpose of financing or refinancing Other Authority Project Costs shall be issued only if, in addition to satisfying the conditions of subparagraph (A) above, the Maximum Annual Debt Service on all Outstanding Bonds issued for the purpose of financing or refinancing Other Authority Project Costs (after the issuance of such Series of Additional Bonds) shall be less than 20% of the amount of Net Revenues calculated pursuant to clause (A)(1)(i) above; provided that there shall not be counted in the calculation of such Maximum Annual Debt Service any Bonds initially issued to finance or refinance an Other Authority Project (1) if such Bonds are no longer Outstanding, (2) if such Other Authority Project has since been designated an "Additional Project" in accordance with provisions of the Bond Resolution, or (3) to the extent that the proceeds of such Bonds were used to finance Project Costs rather than Other Authority Project Costs, in accordance with the terms of the Bond Resolution.

(C) Any Series of Additional Bonds to be issued for the purpose described in clause (iii) of the first paragraph under this heading, shall be authenticated and delivered by the Trustee only upon receipt by it (in addition to the other documents and moneys required by the Bond Resolution) of an Independent Consultant's Certificate setting forth (i) in reasonable detail the improvement, reconstruction or rehabilitation for which such payment is to be made, (ii) the estimated Project Cost of such improvement, reconstruction or rehabilitation, (iii) the amounts reasonably expected to be available therefor from insurance proceeds, and (iv) that such improvement, reconstruction or rehabilitation is necessary to prevent a loss of Net Revenues derived therefrom, that such loss would result from an emergency or some unusual or extraordinary occurrence that has occurred and that insurance proceeds relating to such occurrence are not then available in amounts sufficient to improve, reconstruct or rehabilitate such Facility or Facilities to prevent such loss of Net Revenues.

Refunding Bonds

One or more Series of Refunding Bonds may be authenticated and delivered to refund all Outstanding Bonds of one or more Series of Bonds, a portion of a Series of Outstanding Bonds, a portion of a maturity of a Series of Outstanding Bonds or any Junior Indebtedness or Subordinated Indebtedness that was issued to finance or refinance Project Costs or Other Authority Project Costs. The Authority Board by resolution of its members may issue Refunding Bonds of a Series in an aggregate principal amount sufficient, together with other moneys available therefor, to accomplish such refunding and to make such deposits required by the Bond Resolution and of the Supplemental Resolution authorizing such Series of Refunding Bonds. Refunding Bonds of any Series issued to refund Outstanding Bonds shall be authenticated by the

Trustee only upon satisfaction of the requirements of subparagraph (A) set forth under the heading "Additional Bonds" above or upon the receipt by the Trustee of, among other items, a certificate of an Authorized Officer (a) setting forth the Aggregate Debt Service (assuming with respect to any Variable Interest Rate Bonds a Maximum Interest Rate) for the then current and each future Authority fiscal year to and including the Authority fiscal year in which the latest maturity of any Bonds of any Series then Outstanding matures (i) with respect to the Bonds of all Series Outstanding immediately prior to the date of authentication and delivery of such Refunding Bonds, and (ii) with respect to the Bonds of all Series to be Outstanding immediately thereafter, and (b) demonstrating that the Aggregate Debt Service (assuming with respect to any Variable Interest Rate Bonds a Maximum Interest Rate) set forth for each Authority fiscal year pursuant to (ii) above is no greater than that set forth for such Authority fiscal year pursuant to (i) above.

Provisions Regarding Bonds Secured by a Credit Facility

The Authority may include such provisions in a Supplemental Resolution or related Certificate of Determination authorizing the issuance of a Series of Bonds secured by a Credit Facility as the Authority deems appropriate.

In addition, such Supplemental Resolution or applicable Certificate of Determination may establish such provisions as are necessary (i) to comply with the provisions of each such Credit Facility, (ii) to provide relevant information to the issuer of the Credit Facility, (iii) to provide a mechanism for paying Principal Installments and interest on such Series of Bonds under the Credit Facility, and (iv) to make provision for any events of default or for additional or improved security required by the issuer of a Credit Facility.

In connection therewith the Authority may enter into such agreements with the issuer of such Credit Facility providing for, inter alia: (i) the payment of fees and expenses to such issuer for the issuance of such Credit Facility; (ii) the terms and conditions of such Credit Facility and the Series of Bonds affected thereby; and (iii) the security, if any, to be provided for the issuance of such Credit Facility.

The Authority may secure such Credit Facility by an agreement providing for the purchase of the Series of Bonds secured thereby with such adjustments to the rate of interest, method of determining interest, maturity, or redemption provisions as specified by the Authority in the applicable Supplemental Resolution. The Authority may also in an agreement with the issuer of such Credit Facility agree to directly reimburse such issuer for amounts paid under the terms of such Credit Facility, together with interest thereon (the "Reimbursement Obligation"); provided, however, that no Reimbursement Obligation shall be created, for purposes of the Bond Resolution, until amounts are paid under such Credit Facility. Any such Reimbursement Obligation (a "Parity Reimbursement Obligation") may be secured by a pledge of, and a lien on, Revenues on a parity with the lien created by the Bond Resolution. Any such Parity Reimbursement Obligation shall be deemed to be a part of the Series of Bonds to which the Credit Facility which gave rise to such Parity Reimbursement Obligation relates.

Bond Anticipation Notes

Whenever the Authority shall have, by Supplemental Resolution, authorized the issuance of a Series of Bonds, the Authority Board may by resolution authorize the issuance of Bond Anticipation Notes in anticipation of the issuance of such authorized Series of Bonds, in a principal amount not exceeding the principal amount of the Bonds of such Series so authorized. The principal of and premium, if any, and interest on such Bond Anticipation Notes and any renewals of such Bond Anticipation Notes shall be payable only (i) from the proceeds of any renewals of such Bond Anticipation Notes issued to repay such Bond Anticipation Notes, (ii) from the proceeds of the sale of the Series of Bonds in anticipation of which such Bond Anticipation Notes are issued, (iii) from any amounts provided by the State and/or the federal government expressly for payment of such Bond Anticipation Notes, or (iv) from the proceeds of such Bond Anticipation Notes deposited in any Fund or account under the Bond Resolution. Such proceeds and other amounts set forth in clauses (i), (ii), (iii) and (iv) may be pledged for the payment of the principal of and premium, if any, and interest on such Bond Anticipation Notes and any such pledge shall have priority over any other pledge created by the Bond Resolution. In any case, such Bond Anticipation Notes shall be retired or provision shall be made for their retirement not later than the date of authentication and delivery of the Series of Bonds in anticipation of which they are issued.

Redemption of Bonds

In the case of any redemption of Bonds of a Series at the election of the Authority, or on a mandatory basis, such Bonds may be redeemed at the option of the Authority, or on a mandatory basis, as provided in the Supplemental Resolution authorizing such Bonds or the Certificate of Determination. In addition, pursuant to the Act, the State may, upon furnishing sufficient funds therefor, require the Authority to redeem, prior to maturity, as a whole, any Series of Bonds on any interest payment date not less than fifteen years after the date of issuance of such Bonds at one hundred four per centum of their face value and accrued interest or at such lower redemption price as may be provided in the Bonds in case of the redemption thereof as a whole on the redemption date.

Funds and Revenues

The Bond Resolution establishes the following Funds, to be held as set forth below:

1. Revenue Fund, to be held by the Authority;

2. Operating Fund, to be held by the Authority;

3. Senior Debt Service Fund, to be held by the Trustee;

4. Senior Debt Service Reserve Fund, to be held by the Trustee;

5. Reserve Maintenance Fund, to be held by the Authority;

6. Junior Indebtedness Fund, to be held as determined in the applicable Supplemental Resolution, indenture or other agreement;

7. Facilities Capital Improvement Fund, to be held by the Authority;

8. Other Authority Projects Operating Fund, to be held by the Authority;

9. General Reserve Fund, to be held by the Authority;

10. Rebate Fund, to be held by the Authority; and

11. Construction Fund, to be held by the Authority.

Revenue Fund

The Authority shall pay into the Revenue Fund all Revenues as received, and on or before the last Business Day of each month, the Authority shall, out of the moneys in the Revenue Fund, pay into the Operating Fund all amounts required for reasonable and necessary Operating Expenses and reserves for Operating Expenses and working capital. The Authority shall, out of the moneys remaining in the Revenue Fund after the deposit to the Operating Fund on or before the last Business Day of each month allocate, transfer and apply the balance in the Revenue Fund as of the last day of the preceding month, to the extent sufficient therefor, as follows, but as to each transfer mentioned, only within the limitation indicated below and only after maximum payment within such limitation to the purposes and into the Funds in the following tabulation:

1. To the Trustee for deposit in the Senior Debt Service Fund, if and to the extent required so that the balance in the Senior Debt Service Fund shall be at least equal to Accrued Debt Service for all Bonds Outstanding as of the last day of such month, after taking into account any other amounts available for payment of Debt Service, including any amounts representing investment earnings retained in the Senior Debt Service Fund or transferred from the Senior Debt Service Reserve Fund;

2. To the Trustee for deposit in the Senior Debt Service Reserve Fund, if and to the extent required so that the balance in said Fund shall equal the Senior Debt Service Reserve Requirement for all Bonds secured by such Fund and Outstanding on said date;

3. To the Reserve Maintenance Fund, amounts such that (a) on or before the first day of the seventh month of the Authority's fiscal year there shall have been deposited an amount equal to or greater than one-half of the amount, and (b) on or before the last day of the Authority's fiscal year there shall have been deposited an amount equal to or greater than the full amount, in each case provided in the Authority Budget for the applicable fiscal year for Reserve Maintenance Payments, plus accrued deficits, if any, with respect to prior required allocations to such Fund;

4. To the Junior Indebtedness Fund, if and to the extent required so that the balance in said Fund shall equal the amounts required to be deposited therein by the Supplemental Resolution or other indenture or agreement authorizing the issuance of Junior Indebtedness outstanding on said date;

5. To the Facilities Capital Improvement Fund, in the amounts and at the times determined to be necessary or appropriate by the Authority Board, to fund Project Costs or to set up reserves to fund such costs;

6. To the Other Authority Projects Operating Fund, in the amounts and at the times determined to be necessary or appropriate by the Authority Board, to fund operating expenses relating to Other Authority Projects or to set up reserves to fund such expenses; and

7. To the General Reserve Fund, to the extent of any remaining balance of such moneys withdrawn from the Revenue Fund.

Operating Fund

Amounts in the Operating Fund shall be paid out from time to time by the Authority for reasonable and necessary Operating Expenses, free and clear of the lien and pledge created by the Bond Resolution.

The Authority shall at all times retain in the Operating Fund reasonable and necessary amounts for working capital and reserves for Operating Expenses including expenses which do not recur annually; provided that the total amount of such working capital and reserves set aside during any year shall not exceed 25% of the amount shown for Operating Expenses for such year in the applicable Authority Budget.

Whenever the Operating Fund exceeds the amount reasonable and necessary for Operating Expenses including reserves and working capital, the Authority shall apply the excess to the purposes and in the Funds established under the Bond Resolution in the same manner as payments from the Revenue Fund.

Investment income on amounts in the Operating Fund shall be deposited into the Revenue Fund.

Senior Debt Service Fund

The Trustee shall on or before each Interest Payment Date or Redemption Date, as the case may be, withdraw from the Senior Debt Service Fund and pay:

(A) The interest due on all Outstanding Bonds on such Interest Payment Date;

(B) The Principal Installments due on all Outstanding Bonds on such Interest Payment Date;

(C) The Sinking Fund Installments, if any, due on all Outstanding Bonds on such Interest Payment Date; and

(D) The Redemption Price due on all Outstanding Bonds on any Redemption Date in accordance with the Bond Resolution.

The amounts paid out shall be irrevocably pledged to and applied to such payments.

In the event that on any Interest Payment Date, the amount in the Senior Debt Service Fund shall be less than the amounts, respectively, required for payment of interest on the Outstanding Bonds, for the payment of the principal of Outstanding Bonds or for the payment of Sinking Fund Installments of the Outstanding Bonds of any Series due and payable on such Interest Payment Date, the Authority, in the following order of priority, shall withdraw from the unencumbered moneys in the General Reserve Fund, the unencumbered moneys in the Other Authority Projects Operating Fund, the unencumbered moneys in the Facilities Capital Improvement Fund, the unencumbered moneys in the Reserve Maintenance Fund, and, solely to the extent necessary to make any payments with respect to Bonds secured by the Senior Debt Service Reserve Fund, amounts in the Senior Debt Service Reserve Fund, and deposit to the Senior Debt Service Fund such amounts as will increase the amount in the Senior Debt Service Fund to an amount sufficient to make payment of interest on, and principal and Sinking Fund Installments of the Outstanding Bonds of such Series; provided, however, that with respect to any Series of Bonds not secured by amounts in the Senior Debt Service Reserve Fund pursuant to the related Supplemental Resolution, payments relating to any such Bonds shall be made pro rata with all other Bonds from amounts available from unencumbered moneys in the General Reserve Fund, the Other Authority Projects Operating Fund, the Facilities Capital Improvement Fund and the Reserve Maintenance Fund, but shall not be funded from any amounts in the Senior Debt Service Reserve Fund.

Investment income on amounts in the Senior Debt Service Fund, to the extent permitted in a Supplemental Resolution, shall be retained in such Fund or, upon the direction of an Authorized Officer, shall be transferred to the Rebate Fund, the Construction Fund or the Revenue Fund.

Senior Debt Service Reserve Fund

In addition to the moneys allocated from the Revenue Fund, the Trustee shall deposit into the Senior Debt Service Reserve Fund such portion of the proceeds of the sale of Bonds of any Series, if any, as shall be prescribed in the Supplemental Resolution or the Certificate of Determination for such Series, and any other moneys and investments which may be made available to the Trustee for the purposes of the Senior Debt Service Reserve Fund from any other source or sources in order to increase the amounts on deposit in the Senior Debt Service Reserve Fund to the Senior Debt Service Reserve Fund Requirement.

If necessary, moneys and Investment Obligations held for the credit of the Senior Debt Service Reserve Fund shall be withdrawn by the Trustee, deposited to the credit of the Senior Debt Service Fund and applied to the payment of interest, Principal Installments and Sinking Fund Installments of Bonds secured by the Senior Debt Service Reserve Fund at the times and in the amounts required to permit the Trustee to make timely payment of debt service due and payable on the Bonds.

Except as otherwise provided under this heading, investment income on amounts in the Senior Debt Service Reserve Fund shall be retained therein. If at any time moneys and Investment Obligations on deposit to the credit of the Senior Debt Service Reserve Fund exceed the Senior Debt Service Reserve Fund Requirement, the Trustee shall, to the extent permitted in a Supplemental Resolution, upon the direction of an Authorized Officer, withdraw therefrom and deposit such excess amount into the Senior Debt Service Fund, the Revenue Fund, the Rebate Fund or the Construction Fund.

In lieu of moneys or Investment Obligations, the Authority may, to the extent permitted by law, deposit or cause to be deposited to or substituted for deposit to the Senior Debt Service Reserve Fund a Reserve Credit Facility for the benefit of the Holders of the Bonds secured by the Senior Debt Service Reserve Fund for all or any part of the Senior Debt Service Reserve Fund Requirement. Each Reserve Credit Facility deposited to the Senior Debt Service Reserve Fund shall be payable (upon the giving of such notice as may be required thereby) on any date on which moneys are required to be withdrawn from the Senior Debt Service Reserve Fund and such withdrawal cannot be made without drawing upon such Reserve Credit Facility. In computing the amount on deposit in the Senior Debt Service Reserve Fund, a Reserve Credit Facility shall be valued at the amount available to be drawn or payable thereunder on the date of computation.

In the event of the refunding of any Bonds, the Authority may withdraw from the Senior Debt Service Reserve Fund all or any portion of the amounts accumulated therein with respect to the Bonds being refunded and deposit such amounts with the Trustee to be held for the payment of the principal or Redemption Price, if applicable, and interest on the Bonds being refunded; provided that such withdrawal shall not be made unless (i) upon such refunding, the Bonds being refunded shall be deemed to have been paid within the meaning and with the effect provided in the Bond Resolution, and (ii) the amount remaining in the Senior Debt Service Reserve Fund, after giving effect to any Reserve Credit Facility deposited in such Fund pursuant to the Bond Resolution, shall not be less than the Senior Debt Service Reserve Fund Requirement, and provided, further, that, at the time of such withdrawal, there shall exist no deficiency in the Senior Debt Service Fund.

The Authority may determine by Supplemental Resolution that a Series of Bonds shall not be secured by the Senior Debt Service Reserve Fund, in which case no amounts shall be required from the proceeds of such Series of Bonds for deposit in the Senior Debt Service Reserve Fund and no amounts shall be payable from the Senior Debt Service Reserve Fund to pay amounts due or payable with respect to such Bonds.

Reserve Maintenance Fund

Moneys held for the credit of the Reserve Maintenance Fund shall be disbursed only for the purpose of paying a cost relating to a Facility of:

(a) maintenance or repairs not recurring annually, and renewals and replacements,

(b) repairs or replacements resulting from an emergency or caused by some unusual or extraordinary occurrence, to the extent that the moneys in other available Funds, together with insurance proceeds, if any, available therefor are insufficient to meet such emergency,

(c) items of equipment, and

(d) engineering expenses incurred under the provisions of the Bond Resolution.

The Authority shall from time to time transfer any moneys from the Reserve Maintenance Fund to the credit of the Revenue Fund upon the receipt of a certificate of an Authorized Officer directing such transfer and certifying that the amount so to be transferred is no longer required for the purposes of the Reserve Maintenance Fund.

Investment income on amounts in the Reserve Maintenance Fund shall be deposited into the Revenue Fund.

In connection with the establishment of Authority Budgets for each fiscal year of the Authority, the Authority shall cause the Independent Consultant, at least once every three Authority fiscal years, to make an estimate or to evaluate the Authority's estimate of Reserve Maintenance Payments and to deliver a certificate or certificates setting forth the amount or amounts it has approved as an estimate of Reserve Maintenance Payments for each fiscal year of the Authority covered by such certificate. Any Independent Consultant's Certificate delivered in connection with the establishment of Reserve Maintenance Payments shall take into account any other moneys available for such purposes in determining the amount of such Reserve Maintenance Payments.

Junior Indebtedness Fund

The Authority may, at any time or from time to time, issue evidences of indebtedness payable out of, and which may be secured by a pledge of, such amounts in the Junior Indebtedness Fund as may from time to time be available for the purpose of payment thereof and of Revenues; provided, however, that any pledge of Revenues shall be, and shall be expressed to be, subordinate in all respects to the pledge created by the Bond Resolution with respect to the Bonds.

Subject to the terms of any pledge securing Junior Indebtedness, amounts in the Junior Indebtedness Fund may be applied to payment of the principal or redemption price of and interest on any Junior Indebtedness. Junior Indebtedness may be issued by the Authority to provide for any Facilities or Other Authority Projects constituting a lawful transportation or transportation-related (including related necessary or appropriate economic development activities) corporate purpose of the Authority.

The Authority shall have the right to covenant with the holders from time to time of Junior Indebtedness to add to the conditions, limitations and restrictions under which any Additional Bonds may be issued; provided, however, that the Supplemental Resolution or indenture or other agreement providing for the issuance of such Junior Indebtedness shall not permit the holders of such obligations to declare the same or instruct such holders' trustee to declare the same to be immediately due and payable notwithstanding the occurrence of an event that would give rise to such a declaration unless all Outstanding Bonds shall have been declared immediately due and payable in accordance with the Bond Resolution.

Facilities Capital Improvement Fund

The Authority may, from time to time, disburse or transfer amounts in the Facilities Capital Improvement Fund for the purposes of providing for transfers to the Construction Fund, for Project Costs or, upon the determination of the Authority Board and after satisfying any deficiencies in the Senior Debt Service Fund, the Senior Debt Service Reserve Fund, the Reserve Maintenance Fund or the Junior Indebtedness Fund, transfer such amounts to any other Fund or account held under the Bond Resolution.

Other Authority Projects Operating Fund

The Authority may, from time to time, disburse or transfer amounts in the Other Authority Projects Operating Fund, free and clear of the lien and pledge created by the Bond Resolution, for the purpose of providing for operating costs of Other Authority Projects, or, upon the determination of the Authority Board, transfer such amounts to the General Reserve Fund.

General Reserve Fund

Amounts in the General Reserve Fund are to be transferred, in the following order, to the Senior Debt Service Fund, the Senior Debt Service Reserve Fund, the Reserve Maintenance Fund, the Junior Indebtedness Fund, the Facilities Capital Improvement Fund and the Other Authority Projects Operating Fund to make up deficiencies in or to set aside reserves for such Funds.

Subject to any lien or pledge securing Subordinated Indebtedness that has been determined by the Authority Board to be superior to such purposes, amounts in the General Reserve Fund not immediately required for the purposes specified in the preceding paragraph shall, pursuant to resolution of the Authority Board, be applied in the following order: (i) to the purchase, redemption or payment at maturity of Bonds or Junior Indebtedness, (ii) to pay the capital costs of Other Authority Projects or (iii) paid to the Authority, free and clear of the lien and pledge created by the Bond Resolution, for any lawful corporate purpose of the Authority, including but not limited to payment of amounts due with respect to Subordinated Indebtedness.

Upon any purchase or redemption, with moneys in the General Reserve Fund, of Bonds of any Series and maturity for which Sinking Fund Installments have been established, there shall be credited toward each such Sinking Fund Installment thereafter to become due (other than that next due), unless otherwise directed by the Authority, an amount bearing the same ratio to such Sinking Fund Installment as the total principal amount of such Bonds so purchased or redeemed bears to the total amount of all remaining Sinking Fund Installments for the Bonds of the same Series and maturity to be credited.

Subordinated Indebtedness

Subordinated Indebtedness may be issued to finance any lawful corporate purpose of the Authority. Subordinated Indebtedness may be secured by a pledge of such amounts in the Subordinated Indebtedness Fund as may from time to time be available for the payment thereof and of Revenues; provided, however, that any pledge of Revenues shall be, and shall be expressed to be, subordinate in all respects to the pledge created by the Bond Resolution with respect to the Bonds and any pledge of Revenues with respect to Junior Indebtedness.

The Authority shall have the right to covenant with the holders from time to time of Subordinated Indebtedness to add to the conditions, limitations and restrictions under which any Additional Bonds or Junior Indebtedness may be issued; provided, however, that the Supplemental Resolution or indenture or other agreement providing for the issuance of such Subordinated Indebtedness shall not permit the holders of such obligations to declare the same or instruct such holders' trustee to declare the same to be immediately due and give rise to such a declaration unless all Outstanding Bonds and Junior Indebtedness shall have been declared immediately due and payable in accordance with the Bond Resolution.

Rebate Fund

Moneys on deposit in the Rebate Fund shall be applied by the Authority to make payments to the Department of the Treasury of the United States of America at such times and in such amounts as the Authority shall determine to be required by the Code to be rebated to the Department of the Treasury of the United States of America in accordance with the provisions of the Arbitrage and Use of Proceeds Certificate, if any, delivered in connection with each Series of Bonds. Moneys which the Authority determines to be in excess of the amount required to be so rebated shall be deposited to the Revenue Fund.

Construction Fund

There shall be paid into the Construction Fund the amounts (if any) required to be so paid by the provisions of the Bond Resolution, and there may be paid into the Construction Fund, at the option of the Authority, any moneys received by the Authority for or in connection with any Facility or Other Authority Project, as appropriate, from any other source, unless required to be otherwise applied as provided by the Bond Resolution.

Amounts deposited in the Construction Fund (i) from proceeds of Bonds shall be applied by the Authority to Project Costs or Costs of Issuance, as appropriate; provided, however, that proceeds from Bonds issued to finance Other Authority Project Costs shall be applied by the Authority to finance such Other Authority Project Costs or, to the extent permitted by a Supplemental Resolution, Project Costs, and (ii) other amounts deposited in the Construction Fund shall be applied to the purpose or purposes specified in the Supplemental Resolutions authorizing Bonds to finance a Facility, or if no Bonds are so issued, to the purpose or purposes specified in a resolution of the Authority, a copy of which, certified by an Authorized Officer, shall be filed with the Trustee. Notwithstanding the foregoing, amounts in the Construction Fund may be applied to the payment of Principal Installments and interest on the applicable Series of Bonds when due (including payments when due under a Qualified Swap or Qualified Reverse Swap), and to the extent that other moneys are not available therefor, amounts in the Construction Fund shall be applied to the payment of Principal Installments and interest on the Bonds when due (including payments when due under a Qualified Swap or Qualified Reverse Swap).

Investment income on amounts in the Construction Fund from proceeds of a Series of Bonds, to the extent permitted in a Supplemental Resolution, may be retained by the Authority in such Fund or transferred to the Revenue Fund, the Senior Debt Service Fund or the Rebate Fund.

Application of Moneys in the Senior Debt Service Fund For Redemption of Bonds and Satisfaction of Sinking Fund Installments

Moneys in the Senior Debt Service Fund to be used for redemption of Bonds of a Series shall be applied by the Authority to the purchase of Outstanding Bonds of such Series at purchase prices not exceeding the Redemption Price applicable on the next Interest Payment Date on which such Bonds are redeemable, plus accrued interest to such date, at such times, at such purchase prices and in such manner as the Authority shall direct.

In satisfaction, in whole or in part, of any Sinking Fund Installment, the Authority may deliver to the Trustee at least 45 days prior to the date of such Sinking Fund Installment, for cancellation, Bonds acquired by purchase or redemption (except Bonds acquired by purchase or redemption pursuant to the preceding paragraph), of the maturity and interest rate entitled to such Sinking Fund Installment. All Bonds so delivered to the Trustee in satisfaction of a Sinking Fund Installment shall reduce the amount thereof by the amount of the aggregate principal amount of such Bonds.

Extension of Payment of Bonds

The Authority shall not directly or indirectly extend or assent to the extension of the maturity of any of the Bonds or the time of payment of any claims for interest by the purchase or funding of such Bonds or claims for interest or by any other arrangement and, in case the maturity of any of the Bonds or the time for payment of any claims for interest shall be extended, such Bonds or claims for interest shall not be entitled, in case of any default under the Bond Resolution to the benefit of the Bond Resolution or to any payment out of any assets of the Authority or the Funds and accounts (except Funds and accounts held in trust for the payment of particular Bonds or claims for interest pursuant to the Bond Resolution) held by the Trustee, except subject to the prior payment of the principal of all Bonds issued and Outstanding the maturity of which has not been extended and of such portion of the accrued interest on the Bonds as shall not be represented by such claims for interest. Nothing in the Bond Resolution shall be deemed to limit the right of the Authority to issue Refunding Bonds as permitted thereby and by the Act and such issuance shall not be deemed to constitute an extension of the maturity of the Bonds refunded.

Particular Covenants of the Authority

The Authority shall duly and punctually pay or cause to be paid the principal, Sinking Fund Installments, if any, Redemption Price of, and interest on every Bond, at the dates and places and in the manner set forth in the Bonds according to the true intent and meaning thereof.

The Authority has and shall have good right and lawful authority to take jurisdiction over, construct, reconstruct, improve, maintain and operate the Original Project and any Additional Project or Other Authority Project and to fix and collect tolls, fees, rentals and other charges, if any, as provided in the Bond Resolution or applicable Supplemental Resolution.

The Authority shall not hereafter issue any bonds or other evidences of indebtedness, other than the Bonds, secured by an equal or prior pledge of all or any part of the Revenues or other moneys, securities or funds held or set aside by the Authority or by the Fiduciaries under the Bond Resolution, and shall not create or cause to be created any equal or prior lien or charge on the Revenues, or such moneys, securities or funds except as provided in the Bond Resolution; provided, however, that nothing contained in the Bond Resolution shall prevent the Authority from issuing (i) evidences of indebtedness payable out of, or secured by a pledge of, Revenues to be derived on and after such date as the pledge of the Revenues provided in the Bond Resolution shall be discharged and satisfied as provided under "Defeasance", or (ii) Junior Indebtedness or Subordinated Indebtedness.

No part of the Facilities shall be sold, mortgaged, leased or otherwise disposed of or encumbered, provided that the Authority (i) may sell or exchange at any time and from time to time any property or facilities constituting part of the Facilities and not useful, in its opinion, in the operation thereof, but any proceeds of any such sale or exchange, not used to replace such property so sold or exchanged, shall, subject to the rights of other parties, including the State, be deposited to the Revenue Fund to be applied in the manner provided in the Bond Resolution or (ii) at any time or from time to time, in any manner deemed appropriate by the Authority Board, may dispose of any portion of the Facilities with respect to which it is forbidden by law to impose tolls or other charges and which, in its opinion, is not useful in the operation of the Facilities, but any proceeds of any such disposition, shall, subject to the rights of other parties, including the State, be deposited to the Revenue Fund to be applied in the manner provided in the Bond Resolution.

Notwithstanding the provisions of the preceding paragraph, the Authority may lease or make contracts or grant licenses for the operation of, or grant easements or other rights with respect to, any part of the Facilities, provided that any such lease, contract, license, easement or right does not, in the opinion of the Authority, impede or restrict the operation or maintenance by the Authority of the Facilities.

Operation and Maintenance of the Facilities

The Authority shall at all times operate or cause to be operated the Facilities properly and in a sound and economical manner and shall maintain, preserve, reconstruct and keep the same or cause the same to be so maintained, preserved, reconstructed and kept, with the appurtenances and every part and parcel thereof, in good repair, working order and condition, and shall from time to time make, or cause to be made, all necessary and proper repairs, replacements and renewals so that at all times the operation of the Facilities may be properly and advantageously conducted.

Tolls, Fees and Charges

The Authority covenants that:

(a) it shall at all times, fix, charge and collect such tolls, fees and charges for the use of the Facilities as are required in order that, in each Authority fiscal year, Net Revenues shall at least equal the Net Revenue Requirement for such year.

(b) On or before the sixtieth day preceding the first day of each Authority fiscal year, the Authority shall review its financial condition in order to estimate and determine whether Net Revenues for such Authority fiscal year and for the following Authority fiscal year will be sufficient to comply with the revenue covenant described above; provided that, for purposes of determining the portion of the Net Revenue Requirement relating to Variable Interest Rate Bonds for any prospective period of time, such amounts shall be calculated for each Series or subseries of Bonds bearing interest at the same rate by multiplying the principal amount of such Variable Interest Rate Bonds to be Outstanding during such prospective period by the product of the average rate of interest borne by such Variable Interest Rate Bonds during the immediately preceding 12-month period by 1.25%; provided further that for any partial year such amounts shall be prorated by multiplying the foregoing product by the actual number of days of interest accrual to be determined, and by dividing that product by 365 or 366 days, as appropriate for the particular year. If the Authority determines that Net Revenues may be inadequate, it shall cause a study to be made by an Independent Consultant that shall recommend a schedule of tolls, fees and charges which will provide sufficient Net Revenues in the following Authority fiscal year to comply with the revenue covenant described above and which will provide additional Net Revenues to eliminate any deficiency in Funds and accounts held under the Bond Resolution at the earliest practicable time, and the Authority will place in effect as soon as practicable either (i) the recommended schedule of tolls, fees and charges, or, (ii) a different schedule of tolls, fees and charges developed by the Authority which will provide sufficient Net Revenues in the following Authority fiscal year to comply with the revenue covenant described above and which will provide additional Net Revenues in such following Authority fiscal year to eliminate any deficiency at the earliest practicable time, which conclusion is concurred in by an Independent Consultant's Certificate delivered to the Authority and the Trustee.

The tolls, fees and charges to be established pursuant to paragraph (a) under this heading on the Original Project or on any Additional Project constituting a tolled road, bridge or tunnel, in the sole discretion of the Authority, shall be based on any reasonable vehicle classification, use or occupancy, and further, may consist either alone or in combination of (i) point-to-point tolls based on mileage rates, (ii) fixed or single-trip tolls or commutation rates for passage through a barrier station or bridge, including each Grand Island Bridge and a bridge for crossing the Hudson River via the Hudson section, (iii) a surcharge for crossing the Hudson River via the Berkshire section or, if determined to be necessary or appropriate by the Authority Board, a surcharge for any other location, (iv) congestion pricing, and (v) an annual, seasonal or periodic fee for a permit for the limited use of or access to all or any part of the Original Project or an Additional Project constituting a tolled road, bridge or tunnel.

The Authority covenants that tolls, fees or charges for the use of a Facility constituting a tolled road or bridge will be classified in a reasonable way to cover all traffic within any class regardless of the status or character of any person, firm or corporation participating in the traffic, and that no reduced rate of toll, fee or charge will be allowed within any such class except that provision may be made for the use of commutation or other tickets or privileges based upon frequency, volume, occupancy, congestion pricing or to facilitate implementation of electronic or other new toll collection technologies, or relating to incentives for use of newly tolled facilities which incentives last no longer than three years from the date of introduction of such incentives. The Authority further covenants that no free vehicular passage will be permitted over any portion of the Original Project that was subject to tolls on August 3, 1992 when the Bond Resolution was adopted or any portion of an Additional Project constituting a tolled road or bridge except, to the extent determined necessary and appropriate from time to time in the sole discretion of the Authority, (i) to members, officers and employees of the Authority and the New York State Police, in each case to the extent assigned to any Facility actually in the performance of their duties or in the course of traveling to or from the place of the performance of such duties or as contractually provided, (ii) by means of passes or otherwise, to such vehicles owned by individuals, corporations or partnerships with which the Authority has entered into leases, concession contracts or service and maintenance contracts, as in its discretion may be deemed necessary for the operation of concessions and facilities upon the Facilities, for the maintenance of such concessions or facilities and for the prompt and economical furnishing of emergency services to patrons of the Facilities or any concession or facility thereof, (iii) in a manner and in amounts such that as a result thereof, based upon projections furnished in a report to the Authority and the Trustee by an Independent Consultant, the Authority projects that there will be no material decrease in Revenues, except to the extent offset by a corresponding decrease in Operating Expenses and/or the operating expenses of any Other Authority Projects; provided that for purposes of its report, the Independent Consultant shall take into account implemented or approved toll adjustments and other contemporaneous or prospective changes in the operations of the Original Project and any portion of any Additional Project constituting a tolled road or bridge that shall have been approved by the Authority or any Other Authority Projects, and (iv) otherwise in de minimis amounts.

Insurance

The Authority covenants that it shall maintain with responsible insurers all insurance required and reasonably obtainable, in the judgment of the Authority, to provide against loss of or damage to the Facilities and loss of revenues, to the extent necessary to protect the interests of the Authority and the Bondholders.

Accounts and Reports

The Authority shall keep or cause to be kept proper books of record and account in which complete and correct entries shall be made of all its transactions relating to all Funds established by the Bond Resolution which shall at all reasonable times be subject to the inspection of the Holders of an aggregate of not less than five per cent (5%) in the principal amount of the Bonds then Outstanding or their representatives duly authorized in writing.

The Authority shall annually, within 120 days after the close of each calendar year, file with the Trustee a copy of an annual report for such year, accompanied by a certificate of an Authorized Officer, including statements in reasonable detail of: financial condition as of the end of such year and income and expenses for such year, all to the extent relating to the Facilities; a statement of all classifications of income for such year; and a summary of statement with respect to each Fund and account established under the Bond Resolution.

Tax Covenants

The Authority shall at all times do and perform all acts and things necessary or desirable in order to assure that interest paid on the Bonds shall be not included in the gross income of the owners thereof for purposes of federal income taxation.

The Authority shall not permit at any time any of the proceeds of the Bonds or any other funds of the Authority to be used directly or indirectly to acquire any investment property, the acquisition of which would cause any Bond to be an “arbitrage bond” as defined in Section 148 of the Code.

The Authority shall not permit at any time any proceeds of any Bonds or any other funds of the Authority to be used, directly or indirectly, in a manner which would result in the classification of any Bond as a “private activity bond” within the meaning of Section 141 of the Code.

Notwithstanding the foregoing, the Authority reserves the right to elect to issue obligations the interest on which is not exempt from federal income taxation, if such election is made prior to the issuance of such obligations, and the covenants contained under this heading shall not apply to such obligations.

Notice as to Event of Default

The Authority shall notify each issuer of a Credit Facility and the Trustee in writing that an "Event of Default" has occurred and is continuing, which notice shall be given within five (5) days after the Authority has obtained actual knowledge thereof; provided, however, that the Authority shall provide the issuer of a Credit Facility with immediate notice of any payment default after the Authority has obtained actual knowledge thereof. See "Events of Default" hereinafter.

Covenants with Credit Facility Providers

The Authority may make such covenants as it may in its sole discretion determine to be appropriate with any provider of a Credit Facility or Reserve Credit Facility that shall agree to provide a Credit Facility or Reserve Credit Facility for Bonds of any one or more Series that shall enhance the security or the value of such Bonds and thereby reduce the principal and interest requirements on such Bonds. Such covenants may be set forth in or provided for by the applicable Supplemental Resolution and shall be binding on the Authority, the Trustee, the Paying Agents, and all the owners of Bonds the same as if such covenants were set forth in full in the Bond Resolution.

Additional Projects

The Authority may designate an Other Authority Project to be an Additional Project if and only if there has been submitted to the Trustee with respect to such Other Authority Project at or prior to the date of such designation:

1. A certificate of an Authorized Officer to the effect that the Other Authority Project has been in operation (whether or not by the Authority) for a period of at least twelve (12) months prior to the date of such designation, and that for the 12-month period ending on the last day of a month no more than 90 days preceding the date of designation as an Additional Project the revenues derived from the operation of such Project exceeded the operating expenses for such Other Authority Project;

2. A Counsel's Opinion to the effect that the Authority has good right and lawful authority to acquire, design, construct, maintain, operate, finance, improve, reconstruct, rehabilitate or otherwise undertake such Other Authority Project and to establish, levy, maintain and collect, during the term of the Bonds, tolls, rentals, rates, fees or other charges in connection therewith, which establishment, levy, maintenance or collection shall not then require or be subject to (a) in the case of any Additional Project constituting a tolled road, bridge or tunnel, any governmental approval not applicable to the Original Project, or (b) in the case of any Additional Project not constituting a tolled road, bridge or tunnel, any direct governmental approval;

3. A Counsel's Opinion stating whether or not the Authority is required by law to have a license, order or other authority from any federal, State or other governmental agency or regulatory body having lawful jurisdiction in connection with such Facility and, if so required, that such license, order or other authority has been obtained;

4. A certificate of an Authorized Officer setting forth (A) the Revenues and Operating Expenses of the Authority for the 12-month period set forth in subparagraph (1) above, including revenues and operating expenses relating to the Other Authority Project being designated an Additional Project; provided that if (a) any previously designated Additional Project had not been an Additional Project for any part of the 12-month period, such Additional Project Revenues and Operating Expenses shall be respectively increased by the revenues and operating expenses of such Additional Project for such 12-month period calculated as if the respective definitions of Additional Project Revenues and Operating Expenses had been applicable thereto for the entire 12-month period, and (b) if on the date of such designation by the Authority the amount of the tolls, fees or charges for any Facility shall be less than it was during any part of the period covered by

such certificate, the Revenues for such part of such period shall be decreased as if such tolls, fees or charges had been in effect for all of such period, and (B) that for such 12-month period the Net Revenues as calculated pursuant to clause (A) of this subparagraph (4), are at least equal to the Net Revenue Requirement;

5. An Independent Consultant's Certificate setting forth (A) the estimated Net Revenues for all Facilities, together with estimated Reserve Maintenance Payments, excluding the proposed Additional Project, for each of the Authority fiscal years in the Test Period, and (B) the estimated Net Revenues for all Facilities, together with estimated Reserve Maintenance Payments, including the proposed Additional Project, for each of the Authority fiscal years in the Test Period;

6. A certificate of an Authorized Officer to the effect that the amount of the estimated Net Revenues less Reserve Maintenance Payments determined pursuant to subsection (5)(B) above in each of the Authority fiscal years in the Test Period is not less than 100% of the estimated Net Revenues less estimated Reserve Maintenance Payments for each of the same years in subsection (5)(A) above; and

7. A copy of the Supplemental Resolution designating such Other Authority Project as an Additional Project certified by an Authorized Officer.

Additional Project Revenues

The Authority shall not designate a project as an Additional Project, unless the Authority has jurisdiction and control of such project and the Supplemental Resolution designating the same provides that all tolls, rentals and other charges and other earned income or receipts, if any, derived by the Authority from such Project are and shall be deemed to be Additional Project Revenues.

Authority Budgets

The Authority shall prepare an Authority Budget on an annual basis, or on such other periodic basis as the Authority Board shall determine, but in no event on a less frequent basis than biennially, which shall include amounts for all anticipated Operating Expenses and reserves therefor, Reserve Maintenance Payments and provision for anticipated deposits into each Fund under the Bond Resolution for the period of such budget. Such Authority Budget may set forth such additional material as the Authority may determine. On or before the first day of each fiscal year or for such applicable period for the Authority Budget as aforesaid, the Authority shall finally adopt the Authority Budget for such period and shall mail such Authority Budget to the Trustee. The Authority may at any time adopt an amended Authority Budget for the remainder of the then current fiscal year or other applicable period.

Inspection of Facilities; Duties of Independent Consultants

The Authority shall make, or cause the Independent Consultant to make, an inspection of the Facilities at least once every three Authority fiscal years, and, on or before the first day of the first Authority fiscal year in such period to report as to proper maintenance, repair and operation together with an estimate of the moneys necessary for such purposes during each such Authority fiscal year. In any event, the Authority shall cause an Independent Consultant to deliver an Independent Consultant's Certificate either concurring in and approving or making such determinations, as appropriate.

Proposed New Interchanges and New Extensions

The Authority may construct, acquire or accept any additional tolled roadway or any extension to or expansion of any Facility constituting a tolled roadway or any interchange on any Facility constituting a tolled roadway if and only if there has been submitted to the Trustee with respect to such proposed New Interchange or such proposed New Extension at or prior to the date of undertaking the construction, acquisition or acceptance thereof the following:

1. A Counsel's Opinion stating whether or not the Authority is required by law to have a license, order or other authority from any federal, State or other governmental agency or regulatory body having

lawful jurisdiction in connection with such New Interchange or New Extension, as applicable, and, if so required, that such license, order or other authority has been obtained;

2. A Counsel's Opinion to the effect that the Authority has good right and lawful authority to acquire, design, construct, maintain, operate, finance, improve, reconstruct, rehabilitate or otherwise undertake such New Interchange or New Extension, and to establish, levy, maintain, collect and adjust, during the term of the Bonds, tolls, rentals, rates, fees or other charges in connection therewith, which establishment, levy, maintenance, collection or adjustment shall not then require or be subject to any governmental approval not applicable to the Original Project;

3. An Independent Consultant's Certificate setting forth (A) the estimated Net Revenues for all Facilities, together with estimated Reserve Maintenance Payments, excluding the proposed New Interchange or New Extension, for each of the successive five complete Authority fiscal years following the later of (i) two complete Authority fiscal years following its estimated Date of Completion and (ii) the date of its acquisition or acceptance by the Authority, and (B) the estimated Net Revenues for all Facilities, together with estimated Reserve Maintenance Payments, including the proposed New Interchange or New Extension for each of the same five complete Authority fiscal years;

4. A certificate of an Authorized Officer to the effect that the amount of the estimated Net Revenues less estimated Reserve Maintenance Payments determined pursuant to subparagraph 3(B) above in each of the five Authority fiscal years is not less than 100% of the estimated Net Revenues less estimated Reserve Maintenance Payments for each of the same five years determined pursuant to subparagraph 3(A) above;

5. Solely with respect to New Interchanges, the Independent Consultant shall include in its estimate of Net Revenues for each year calculated for purposes of subsection 3(B) above, the amount of any payments to be received in cash upon undertaking such New Interchange together with any payment obligations that have or would have a long-term rating of "A" or better (if so determined by the Authority, such cash payments to be allocated pro rata for each of the years of the test period, whether such payments are in fact applied for capital or operating expenses of such New Interchange); provided, however, that if the Authority Board determines that a period longer than five years will be necessary for the New Interchange to meet the test in paragraph 4 without the benefit of such cash payments or payment obligations, the test period shall be expanded accordingly; provided further that no such cash payments or payment obligations may be included for purposes of Subsection 3(B) above in estimating Net Revenues for a New Extension; and

6. A copy of the Supplemental Resolution designating such project to be an Additional Project certified by an Authorized Officer.

The foregoing requirements do not apply to an interchange or an extension that meets the requirements under the Bond Resolution for a "Facility Capital Improvement" (See the definition hereinabove) or an "Additional Project" (see "Additional Projects" hereinabove).

Limitation on Certain Acquisitions

Except for amounts released from the lien of the Bond Resolution pursuant to the provisions relating to the General Reserve Fund, the Authority covenants that no Revenues, Bond proceeds, or proceeds of Junior Indebtedness shall be applied to the purchase or acquisition of any existing facility not, in the opinion of the Authority Board, necessary for the proper operation of an existing Facility or an existing Other Authority Project, except to the extent necessary to pay, in due course or through refunding, any outstanding bonds, notes or other evidences of indebtedness of a public corporation transferring such facility.

Investment of Funds

Amounts in the Funds and accounts established by the Bond Resolution may be invested only in Investment Obligations. Investment Obligations on deposit in the Funds and accounts held under the Bond Resolution shall have maturity dates, or shall be subject to redemption or tender at the option of the Authority or the Trustee on the respective dates specified by an Authorized Officer, as appropriate, which dates shall be on or prior to the respective dates on which the moneys invested therein are payable for the purposes of such Funds and accounts; provided that in no event shall the remaining term to maturity or redemption upon the demand of the holder thereof of any Investment Obligation credited to the Senior Debt Service Reserve Fund be greater than seven (7) years from the date such Investment Obligation is credited to such Fund. The Authority, or the Trustee, upon the instructions of an Authorized Officer, shall sell any Investment Obligations held in any Fund or account to the extent required for payments from such Fund or account. The proceeds of such sales, and of all payments at maturity or upon redemption of such investments, shall be held in the applicable Fund or account to the extent required to meet the requirements of such Fund or account. Losses, if any, realized on Investment Obligations held in any Fund or account shall be debited to such Fund or account. In computing the amount of such Funds and accounts, investments shall be valued at par, or if purchased at other than par, shall be valued at Amortized Value. Accrued interest received upon the sale of any Investment Obligation to the extent such amount exceeds any accrued interest paid on the purchase of such Investment Obligation shall be treated as interest earned on such Investment Obligation.

Trustee

The Trustee may at any time resign and be discharged of its duties and obligations under the Bond Resolution by giving not less than sixty (60) days' written notice to the Authority, specifying the date when such resignation shall take effect; provided, however, that any resignation or removal of the Trustee shall in no event take effect until a successor shall have been appointed and accepted the duties of Trustee.

The Authority may at any time remove the Trustee initially appointed or any successor thereto by written notice of such removal mailed by first class mail to the Trustee except that the Trustee may not be removed during the pendency of an Event of Default; provided, however, that any resignation or removal of the Trustee shall in no event take effect until a successor shall have been appointed and accepted the duties of Trustee.

Any Trustee appointed in succession to the original Trustee shall be a bank or trust company organized under the laws of the State of New York or a national banking association and having Capital Funds of at least $100,000,000, if there be such a bank or trust company or national banking association willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon it by the Bond Resolution.

Supplemental Resolutions

The Authority may adopt, for, among other things, any one or more of the following purposes and at any time or from time to time, a Supplemental Resolution which, upon adoption thereof and filing with the Trustee shall be fully effective in accordance with its terms:

1. To modify any of the provisions of the Bond Resolution in any respect whatever, provided that (i) such modification shall be, and be expressed to be, effective only after all Bonds of any Series Outstanding at the date of the adoption of such Supplemental Resolution shall cease to be Outstanding and (ii) such Supplemental Resolution shall be specifically referred to in the text of all Bonds of any Series authenticated and delivered on original issuance after the date of the adoption of such Supplemental Resolution and of Bonds issued in exchange therefor or in place thereof;

2. To insert such provisions clarifying matters or questions arising under the Bond Resolution as are necessary or desirable and are not contrary to or inconsistent with the Bond Resolution as theretofore in effect;

3. To authorize Bonds of a Series;

4. To designate or confirm the designation of any project as an Other Authority Project or to designate an Other Authority Project, New Interchange or New Extension as an Additional Project under the Bond Resolution;

5. To modify, amend, insert or delete such provisions of the Bond Resolution as, in Counsel's Opinion, shall be necessary or desirable to ensure the continued federal tax exemption of the interest on any Series of Bonds Outstanding under the Bond Resolution, so long as the Authority determines that such Supplemental Resolution does not materially adversely affect the right, security and interest of the Holders of Outstanding Bonds;

6. To modify, amend or supplement the Bond Resolution in any manner in order to provide for a Credit Facility or a Reserve Credit Facility for any Series of Bonds, under the Bond Resolution, so long as the Authority determines that such Supplemental Resolution does not materially adversely affect the right, security and interest of the Holders of Outstanding Bonds;

7. To cure any ambiguity, supply any omission, or cure or correct any defect or inconsistent provision in the Bond Resolution, under the Bond Resolution, so long as the Authority determines that such Supplemental Resolution does not materially adversely affect the right, security and interest of the Holders of Outstanding Bonds;

8. To provide for the application of the proceeds of any sale, exchange, lease or other disposition of any Facility permitted by the Bond Resolution;

9. To provide for additional investments that may be delivered in lieu of Government Obligations in order to cause Bonds of a Series then or thereafter being initially issued and delivered to be deemed paid by the Bond Resolution;

10. To the extent authorized by law and to the extent the Authority shall have received a Counsel's Opinion that it will not adversely affect the exclusion of interest from the income of holders of Bonds for federal income tax purposes for any Bonds issued on a tax-exempt basis, to provide for the delivery of Bonds that are not in registered form;

11. To the extent authorized by law and to the extent that it will not adversely affect the exclusion of interest from the income of holders of Bonds for federal income tax purposes for any Bonds issued on a tax-exempt basis, to provide for the delivery of a Series of Bonds or a portion of a Series of Bonds incorporating detachable call options.

In addition, the Authority may adopt a Supplemental Resolution amending any provision of the Bond Resolution, effective upon filing with the Authority of a written determination of the Trustee and a Counsel's Opinion that such amendment will not materially adversely affect the rights of any Holder of Bonds.

Powers of Amendment

Any modification or amendment of the Bond Resolution and of the rights and obligations of the Authority and of the Holders of the Bonds thereunder, in any particular, may be made by a Supplemental Resolution, with the written consent given, and not revoked, as provided in the Bond Resolution, (a) by the Holders of at least a majority in principal amount of the Bonds Outstanding at the time such consent is given, and (b) in case less than all of the Bonds then Outstanding are affected by the modification or amendment, by the Holders of at least a majority in principal amount of the Bonds so affected and Outstanding at the time such consent is given; provided, however, that if such modification or amendment will, by its terms, not take effect so long as any Bonds of any specified like Series and maturity remain Outstanding, the consent of the Holders of such Bonds shall not be required and such Bonds shall not be deemed to be Outstanding for the purpose of any calculation of Outstanding Bonds under this heading. No such modification or amendment shall permit a change in the terms of redemption or maturity of the principal of any Outstanding Bond or of any installment of interest thereon or a reduction in the principal amount or the Redemption Price thereof or in the rate of interest thereon without the consent of the Holders of such Bonds, or shall reduce the percentages or otherwise affect the classes of Bonds the consent of the Holders of which is required to effect any such modification or amendment, or shall change or modify any of the rights or obligations of the Trustee without its written assent thereto. A Series shall be deemed to be affected by a modification or amendment of the Bond Resolution if the same materially adversely affects or diminishes the right, security and interest of the Holders of Bonds of such Series. The Authority may in its discretion determine whether or not in accordance with the foregoing, Bonds of any particular Series or maturity would be affected by any modification or amendment of the Bond Resolution and any such determination shall be binding and conclusive on all Holders of Bonds. The Authority shall, prior to making any such determination, receive a Counsel's Opinion as conclusive evidence as to whether the Bonds of a Series or maturity would be so affected by any such modification or amendment thereof.

Events of Default

The occurrence of one or more of the following events shall constitute an "Event of Default":

(a) payment of principal, Sinking Fund Installments, interest or premium on any Bond shall not be made when the same shall have become due, whether at maturity or upon call for redemption or otherwise, which default shall continue for a period of five (5) days; or

(b) failure by the Authority to observe any of the covenants, agreements or conditions on its part contained in the Bond Resolution or in the Bonds contained, and failure to remedy the same for a period of thirty (30) days after written notice thereof, specifying such failure and requiring the same to be remedied, shall have been given to the Authority by the Trustee or to the Authority and the Trustee by the Holders of not less than a majority in aggregate principal amount of Bonds at the time Outstanding; provided that, if such default cannot be corrected within such thirty (30)-day period, it shall not constitute an Event of Default if corrective action is instituted by the Authority within such period and is diligently pursued until the default is corrected; or

(c) if the Authority (i) admits in writing its inability to pay its debts generally as they become due, (ii) commences voluntary proceedings in bankruptcy or seeking a composition of indebtedness, (iii) makes an assignment for the benefit of its creditors, (iv) consents to the appointment of a receiver of the whole or any substantial part of the Facilities, or (v) consents to the assumption by any court of competent jurisdiction under any law for the relief of debtors of custody or control of the Authority or of the whole or any substantial part of the Facilities.

Remedies

Upon the occurrence and continuance of any Event of Default, the Trustee may, and upon written request of the Holders of not less than a majority in aggregate principal amount of such Bonds then Outstanding, shall:

(a) by mandamus or other suit, action or proceeding at law or in equity enforce all rights of the Holders of Bonds under the Bond Resolution;

(b) bring suit upon such Bonds;

(c) by action or suit in equity, require the Authority to account as if it were the trustee of an express trust for the Holders of such Bonds;

(d) by action or suit in equity, enjoin any acts or things which may be unlawful or in violation of the rights of the Holders of such Bonds;

(e) declare all such Bonds due and payable, and if all defaults shall be made good then with the consent of the Holders of not less than a majority in aggregate principal amount of such Bonds then outstanding, annul such declaration and its consequences.

The Supreme Court of the State shall have jurisdiction of any suit, action or proceeding by the Trustee on behalf of the Holders of Bonds, and venue of any such suit, action or proceeding shall be laid in the County of Albany.

No remedy by the terms of the Bond Resolution conferred upon or reserved to the Trustee or the Holders of the Bonds is intended to be exclusive of any other remedy but each and every such remedy shall be cumulative and shall be in addition to every other remedy given under the Bond Resolution or existing at law or in equity or by statute on or after the date of adoption of the Bond Resolution, except that the Bondholders shall not have the statutory rights afforded by Section 368 of the Act as in effect on August 3, 1992 respecting the appointment of a trustee subsequent to a payment default on the Bonds.

No Holder of any of the Bonds shall have any right to institute any suit, action or proceeding in equity or at law for the enforcement of any trust under the Bond Resolution, or any other remedy thereunder or under the Bonds, unless such Holder previously shall have given to the Trustee written notice of an Event of Default as provided in the Bond Resolution and unless also the Holders of not less than a majority in aggregate principal amount of the Bonds then Outstanding shall have made written request of the Trustee so to do, after the right to exercise such powers or rights of action, as the case may be, shall have accrued, and shall have afforded the Trustee a reasonable opportunity either to proceed to exercise the powers granted under the Bond Resolution, or to institute such action, suit or proceeding in its or their name; nor unless there also shall have been offered to the Trustee security and indemnity satisfactory to it against the costs, expenses and liabilities to be incurred therein or thereby, and the Trustee shall not have complied with such request within a reasonable time; and such notification, request and offer of indemnity are declared in every such case, at the option of the Trustee, to be conditions precedent to the execution of the trusts of the Bond Resolution, or to enforce any right thereunder or under the Bonds, except in the manner therein provided, and that all proceedings at law or in equity shall be instituted, had and maintained in the manner therein provided and for the equal benefit of all Holders of Outstanding Bonds, subject, however, to the provisions of the Bond Resolution regarding the extension of payment for the Bonds. Nothing in the Bond Resolution or in the Bonds contained shall affect or impair the right of action, which is also absolute and unconditional, of any Holder of any Bond to enforce payment of the principal of and premium, if any, and interest on such Bond at the respective dates of maturity of each of the foregoing and at the places therein expressed.

All rights of action under the Bond Resolution or under any of the Bonds which are enforceable by the Trustee may be enforced by it without the possession of any of the Bonds, or the production thereof on the trial or other proceedings relative thereto, and any such suit, action or proceeding instituted by the Trustee shall be brought in its name, as trustee, for the equal and ratable benefit of the Holders of the Bonds, subject to the provisions of the Bond Resolution.

No delay or omission of the Trustee or of any Holder of the Bonds to exercise any right or power accruing upon any default shall impair any such right or power or shall be construed to be a waiver of any such default, or an acquiescence therein; and every power and remedy given by the Bond Resolution to the Trustee and to the Holders of the Bonds, respectively, may be exercised from time to time as often as may be deemed expedient.

No Cross-Default

Except as provided in the Bond Resolution, a Supplemental Resolution or a Certificate of Determination, no default under the Act or any resolution, agreement, or other instrument shall constitute or give rise to a default under the Bond Resolution.

Priority of Payments After Default

In the event that the funds held by the Authority, the Trustee or by the Paying Agents shall be insufficient for the payment of principal, Sinking Fund Installments, if any, or Redemption Price and interest then due on the Bonds, such funds (other than funds held for the payment of particular Bonds which have theretofore become due at maturity or by call for redemption and funds which at the time of their deposit into any Fund or account under the Bond Resolution have been designated to be applied solely to the payment of the principal of and premium, if any, and interest on any series of Bond Anticipation Notes and subject to the provisions governing the application of any separate account in the Senior Debt Service Reserve Fund for a particular Series of Bonds established in the Supplemental Resolution authorizing such Series of Bonds) and any other moneys received or collected by the Trustee or any Paying Agents, or a trustee appointed pursuant to the terms of the Bond Resolution and in accordance with the Act, after making provision for the payment of any expenses necessary in the opinion of the Authority to preserve the continuity of the Revenues, or otherwise protect the interests of the Holders of the Bonds, and after making provision for the payment of the reasonable charges and expenses and liabilities incurred and advances made by the Trustee or any Paying Agents in the performance of their duties under the Bond Resolution, shall be applied as follows:

FIRST: To the payment to the persons entitled thereto of all installments of interest then due in the order of the maturity of the installments of such interest.

SECOND: To the payment to the persons entitled thereto of the unpaid principal, Sinking Fund Installments or Redemption Price of any Bonds which shall have become due whether at maturity or by call for redemption.

If the principal of all of the Bonds shall have become or have been declared due and payable, all such moneys shall be applied to the payment of the principal and interest then due and unpaid upon the Bonds without preference or priority.

Defeasance

Any Bonds of any Series shall prior to the maturity or Redemption Date thereof be deemed to have been paid within the meaning and with the effect expressed in the Bond Resolution if (a) in case any of said Bonds are to be redeemed on any date prior to their maturity, the Authority shall have published or caused to be published notice of redemption on said date of such Bonds, (b) there shall have been deposited with the Authority either moneys in an amount which shall be sufficient, or Government Obligations or other investments authorized for such purpose ("Other Authorized Investments") the principal of and the interest on which when due will provide moneys which, together with the moneys, if any, deposited with the Authority at the same time, shall be sufficient, to pay when due the principal, Sinking Fund Installments, if any, or Redemption Price, if applicable, and interest due and to become due on said Bonds on and prior to the Redemption Date or maturity date as the case may be, and (c) in the event such Bonds are not by their terms subject to redemption within the next succeeding sixty (60) days, the Authority shall (i) publish, as soon as practicable, at least twice, at an interval of not less than seven (7) days between publications, in an Authorized Newspaper a notice to the Holders of such Bonds, and (ii) mail by registered or certified mail, postage prepaid, a notice to the Holders of such Bonds, in each case that the deposit required by (b) above has been made and that said Bonds are deemed to have been paid in accordance with the Bond Resolution and stating such maturity date or Redemption Date upon which moneys are to be available for the payment of the principal, Sinking Fund Installments, if any, or Redemption Price, if applicable, on said Bonds. The Authority shall select which Bonds of a Series and which maturity thereof shall be paid in accordance with the Bond Resolution. Neither Government Obligations, Other Authorized Investments or moneys deposited pursuant to this heading nor principal or interest payments on any such Government Obligations shall be withdrawn or used for any purpose other than, and shall be held in trust for, the payment of the principal, Sinking Fund Installments, if any, or Redemption Price, if applicable, and interest on said Bonds; provided that any moneys received from such principal or interest payments on such Government Obligations or Other Authorized Investments so deposited, if not then needed for such purpose, shall, to the extent practicable, be reinvested in Government Obligations or Other Authorized Investments maturing at times and in amounts sufficient to pay when due the principal, Sinking Fund Installments, if any, or Redemption Price, if applicable, and interest to become due on said Bonds on and prior to such Redemption Date, payment date or maturity date thereof, as the case may be. Any income or interest earned by, or increment to, the investment of any such moneys so deposited shall, to the extent in excess of the amounts required in the Bond Resolution to pay principal, Sinking Fund Installments, if any, or Redemption Price, if applicable, of and interest on such Bonds, as realized, be applied as follows: first to the Rebate Fund, the amount, if any, required to be deposited therein; and, then the balance thereof to the Authority, and any such moneys so paid shall be released of any trust, pledge, lien, encumbrance or security interest created by the Bond Resolution.

Payments due on Saturdays, Sundays and Holidays

In any case where the date of maturity of interest on or principal of the Bonds or the date fixed for redemption of any Bonds shall be on a day that is not a Business Day, then payment of interest or principal and premium, if any, need not be made on such date but may be made (without additional interest) on the next succeeding Business Day, with the same force and effect as if made on the date of maturity or the date fixed for redemption, as the case may be.

No Additional Restaurant Concession Bonds

The Authority covenants that it shall not further amend or supplement the Restaurant Concession Bonds resolution, or take any other action, to allow the authentication and delivery of additional indebtedness under such resolution

Reserve Credit Facilities in the Senior Debt Service Reserve Fund

Pursuant to Supplemental Resolutions adopted in 1995 and 2004, the Authority Board authorized the deposit or substitution of Reserve Credit Facilities for cash and Investment Obligations that would otherwise have been required to be on deposit to the credit of the Senior Debt Service Reserve Fund. See "SOURCES OF PAYMENT AND SECURITY FOR THE BONDS — Senior Debt Service Reserve Fund" in the forepart of this Official Statement. The Authority has entered into agreements with the municipal bond insurance companies (collectively, the "Providers") providing such Reserve Credit Facilities ("Reserve Fund Policies") that, together with such Supplemental Resolutions (collectively, the "SDSRF Contracts"), provide in effect that in the event that the Trustee shall be required to draw on the Senior Debt Service Reserve Fund to pay principal or interest due and payable on any Bonds, the Trustee shall first exhaust any cash and Investment Obligations to the credit of such Fund and then to the extent necessary and subject to the respective maximum amounts of the Reserve Fund Policies, after giving the required notice, demand payment on such Policies pro rata. The SDSRF Contracts obligate the Authority to reimburse the Providers the amounts of such payments, with interest, within 12 months of such payments. Reimbursement of the Providers in accordance with the SDSRF Contracts will reinstate the amounts that can be drawn on the Reserve Fund Policies. Under the SDSRF Contracts and the Bond Resolution, the obligation of the Authority to reimburse the Providers with interest for any payments on the Reserve Fund Policies ranks on a parity with the Authority's obligation to maintain the Senior Debt Service Reserve Fund at the Senior Debt Service Reserve Fund Requirement.

APPENDIX D

BOOK-ENTRY ONLY SYSTEM

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Book-Entry Only System

The Depository Trust Company ("DTC"), New York, New York, will act as securities depository for the Series N Bonds. The Series N Bonds will be issued as fully-registered bonds registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered Series N Bond certificate will be issued for each stated maturity of the Series N Bonds, each in the aggregate principal amount of such maturity, and will be deposited with DTC. SO LONG AS CEDE & CO. IS THE REGISTERED OWNER OF THE SERIES N BONDS, AS PARTNERSHIP NOMINEE FOR DTC, REFERENCES HEREIN TO BONDHOLDERS OR OWNERS OF THE SERIES N BONDS (OTHER THAN UNDER THE CAPTIONS "TAX MATTERS" AND "CONTINUING DISCLOSURE UNDER SEC RULE 15c2-12") SHALL MEAN CEDE & CO. AND SHALL NOT MEAN THE BENEFICIAL OWNERS OF THE SERIES N BONDS.

DTC is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of Series N Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series N Bonds on DTC's records. The ownership interest of each actual purchaser of each Series N Bond ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Series N Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in Series N Bonds, except in the event that use of the book-entry system for the Series N Bonds is discontinued.

To facilitate subsequent transfers, all Series N Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Series N Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee does not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Series N Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Series N Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of Series N Bonds may wish to take certain steps to augment transmission to them of notices of significant events with respect to the Series N Bonds, such as redemptions, tenders, defaults, and proposed amendments to the security documents. For example, Beneficial Owners of Series N Bonds may wish to ascertain that the nominee holding the Series N Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of the notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the Series N Bonds within a stated maturity are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such Bonds to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Series N Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Authority as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts Series N Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal of, redemption premium, if any, and interest payments on the Series N Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Authority or Paying Agent on the payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name", and will be the responsibility of such Participant and not of DTC, the Paying Agent or the Authority, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal, redemption premium, if any, and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Authority or the Paying Agent, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners shall be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the Series N Bonds at any time by giving reasonable notice to the Authority or the Paying Agent. Under such circumstances, in the event that a successor depository is not obtained, Series N Bond certificates are required to be printed and delivered.

The Authority may decide to discontinue use of the system of book-entry transfers through DTC (or a successor securities depository). In that event Series N Bond certificates will be printed and delivered to DTC.

NEITHER THE AUTHORITY NOR THE INITIAL PURCHASERS WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO PARTICIPANTS, TO INDIRECT PARTICIPANTS OR TO ANY BENEFICIAL OWNER WITH RESPECT TO (i) THE ACCURACY OF ANY RECORDS MAINTAINED BY DTC, ANY PARTICIPANT OR INDIRECT PARTICIPANT; (ii) THE PAYMENT BY DTC OR ANY PARTICIPANT OR INDIRECT PARTICIPANT OF ANY AMOUNT WITH RESPECT TO THE PRINCIPAL OF, OR REDEMPTION PREMIUM, IF ANY, OR INTEREST ON, THE SERIES N BONDS; (iii) ANY NOTICE WHICH IS PERMITTED OR REQUIRED TO BE GIVEN TO SERIES N BONDHOLDERS; (iv) ANY CONSENT GIVEN BY DTC OR OTHER ACTION TAKEN BY DTC AS A SERIES N BONDHOLDER; OR (v) THE SELECTION BY DTC OR ANY PARTICIPANT OR INDIRECT PARTICIPANT OF ANY BENEFICIAL OWNERS TO RECEIVE PAYMENT IN THE EVENT OF ANY PARTIAL REDEMPTION OF THE SERIES N BONDS.

The information in this section concerning DTC and DTC's book-entry system has been obtained from DTC or other sources that the Authority believes to be reliable, but neither the Authority nor the Initial Purchasers take any responsibility for the accuracy thereof.

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FORM OF OPINION OF BOND COUNSEL

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APPENDIX E

Upon delivery of the Series N Bonds in definitive form,
Harris Beach PLLC, Bond Counsel to the Authority,
proposes to render its Approving Opinion in substantially the following form:

[Date of Delivery]

New York State Thruway Authority
200 Southern Boulevard
Albany, New York 12209

Ladies and Gentlemen:

As bond counsel to New York State Thruway Authority (herein called the "Authority"), we have examined a record of proceedings relating to the issuance of $450,000,000 aggregate principal amount of General Revenue Bonds, Series N (herein called the "Series N Bonds"), by the Authority, a body corporate and politic constituting a public corporation of the State of New York (herein sometimes called the "State"). We have also examined such certificates, documents, records and matters of law as we have deemed necessary for the purpose of rendering the opinions set forth below.

Capitalized terms used herein and not otherwise defined have the meanings set forth in the Resolutions (hereinafter defined).

The Series N Bonds are to be issued under and pursuant to the New York State Thruway Authority Act, Title 9 of Article 2 of the Public Authorities Law, Chapter 43 A of the Consolidated Laws of the State, as amended (herein called the "Act"), and the General Revenue Bond Resolution of the Authority, adopted by the Authority on August 3, 1992 and amended January 5, 2007 (herein called the "General Resolution"), as supplemented, including as supplemented by the Nineteenth Supplemental Revenue Bond Resolution Authorizing General Revenue Bonds, Series N adopted by the Authority on January 27, 2020 (the "Series N Resolution"), and a Certificate of Determination of the Authority, dated the date hereof, relating to the Series N Bonds. The General Resolution, as so supplemented and amended is referred to herein as the "Resolutions". The Series N Bonds are being issued for the purposes set forth in the Series N Resolution.

The Authority reserves the right to issue additional Bonds under the General Resolution on the terms and conditions, and for the purposes, stated in the General Resolution. Under the General Resolution, all such Bonds will rank equally as to security and payment with the Series N Bonds, except as otherwise provided for a Series of Bonds in a Supplemental Resolution with respect to the Senior Debt Service Reserve Fund.

The Internal Revenue Code of 1986, as amended (the "Code"), establishes certain requirements that must be met at the time of, and subsequent to, the issuance and delivery of the Series N Bonds in order that interest on the Series N Bonds be and remain excluded from gross income for federal income tax purposes. Included among these continuing requirements are certain restrictions and prohibitions on the use of proceeds of Series N Bonds, restrictions on the investment of proceeds of Series N Bonds and other moneys or properties, and the rebate to the United States of certain earnings in respect of investments. Noncompliance with such continuing requirements may cause the interest on the Series N Bonds to be included in gross income for federal income tax purposes retroactive to the date of issuance of the Series N Bonds irrespective of the date on which such noncompliance occurs. The Resolutions and the Arbitrage and Use of Proceeds Certificate dated the date hereof of the Authority (the "Arbitrage Certificate"), contain certain factual certifications, covenants, representations and warranties as to compliance with the requirements of the Code. In rendering the opinions set forth in paragraph 5 herein, we have assumed the accuracy of such factual certifications of, and continuing compliance by the Authority, with such covenants, representations, warranties, provisions and procedures set forth in the Resolutions and the Arbitrage Certificate.

Based on the foregoing, and subject to the further qualifications and limitations noted below, we are of the opinion that:

1. The Authority is duly created and validly existing under the provisions of the Act.

2. The Authority has the right and power under the Act to adopt the Resolutions and issue the Series N Bonds thereunder, and the Resolutions have been duly and lawfully adopted by the Authority, are in full force and effect and are valid and binding upon the Authority and enforceable in accordance with their terms, and no other authorization for the Resolutions is required.

3. The Resolutions create the valid pledge which they purport to create of the proceeds of sale of the Series N Bonds, the Revenues, and the Funds and accounts established by the General Resolution (other than the Rebate Fund, the Junior Indebtedness Fund and, to the extent any Series of Bonds is not secured by the Senior Debt Service Reserve Fund, the Senior Debt Service Reserve Fund) and certain investment income referred to therein subject to the application thereof to the purposes and on the terms and conditions permitted by the Resolution.

4. The Series N Bonds are valid and binding direct and general obligations of the Authority payable as provided in the Resolution and the full faith and credit of the Authority are pledged to the payment thereof. The Series N Bonds are enforceable against the Authority in accordance with their terms and the terms of the Resolutions and entitled to the benefits of the Act and of the Resolutions, and such Series N Bonds have been duly and validly authorized and issued in accordance with the Constitution and statutes of the State, including the Act, and in accordance with the Resolutions.

5. Under existing statutes, regulations, administrative rulings and court decisions, interest on the Series N Bonds is excluded from gross income for federal income tax purposes pursuant to Section 103 of the Code and is not an item of tax preference for purposes of calculating the federal alternative minimum tax imposed on individuals.

6. Under existing statutes, including the Act, interest on the Series N Bonds is exempt from personal income taxes imposed by the State or any political subdivision thereof.

We have examined a fully executed Series N Bond and, in our opinion, the form of said Series N Bond and its execution are regular and proper.

Except as stated in paragraphs 5 and 6 above, we express no opinion as to the federal, state and local tax consequences of the ownership or disposition of, or the accrual or receipt of interest on, the Series N Bonds. Furthermore, we express no opinion as to any federal, state or local tax consequences with respect to the Series N Bonds, or the interest thereon, if any change occurs or action is taken or omitted under the Resolutions, the Arbitrage Certificate or any other relevant documents, upon the advice or approval of any bond counsel other than Harris Beach PLLC. In addition, we have not undertaken to determine, or to inform any person, whether any actions taken, or not taken, or events occurring, or not occurring, after the date of issuance of the Series N Bonds may affect the tax status of interest on the Series N Bonds. Further, although interest on the Series N Bonds is not included in gross income for purposes of federal income taxation, receipt or accrual of the interest may otherwise affect the tax liability of a holder of a Series N Bond depending upon the tax status of such holder and such holder's other items of income and deduction.

The foregoing opinions are qualified only to the extent that the enforceability of the Resolutions and the Series N Bonds may be limited by bankruptcy, moratorium, insolvency, reorganization or other laws affecting creditors' rights or remedies heretofore or hereafter enacted and is subject to general principles of equity (regardless of whether such enforceability is considered in a proceeding in equity or at law).

We express no opinion as to the accuracy, adequacy or sufficiency of any financial or other information which has been or will be supplied to purchasers of the Series N Bonds.

This opinion is rendered solely with regard to the matters expressly opined on above and does not consider or extend to any documents, agreements, representations or other material of any kind not specifically opined on above. No other opinions are intended nor should they be inferred. This opinion is issued as of the date hereof, and we assume no obligation to update, revise or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention, or any changes in law, or in interpretations thereof, that may hereafter occur, or for any other reason whatsoever.

Respectfully submitted,

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STATE OF
OPPORTUNITY™

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Authority

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