



**\$868,045,000**  
**NEW YORK STATE THRUWAY AUTHORITY**  
**General Revenue Bond Anticipation Notes**  
**Series 2011A**

**Dated: Date of Delivery****Due: As shown below**

The General Revenue Bond Anticipation Notes, Series 2011A (the "Series 2011A Notes") offered hereby are issued in accordance with the terms and provisions of the General Revenue Bond Resolution of the New York State Thruway Authority (the "Authority") 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 Thirteenth Supplemental Revenue Bond Resolution Authorizing General Revenue Bonds, Series I (the "Series I Bonds") adopted by the Authority on June 25, 2009, as amended on May 18, 2011 (the "Series I Bond Resolution") and the Resolution Authorizing General Revenue Bond Anticipation Notes, Series 2011A (the "Series 2011A Note Resolution") adopted by the Authority on May 18, 2011 authorizing the issuance of up to \$1,025,000,000 aggregate principal amount of the Series 2011A Notes.

The Series 2011A Notes are being issued to (i) retire the Authority's General Revenue Bond Anticipation Notes, Series 2009A (the "Series 2009A Notes") (ii) fund a portion of the cost of the Authority's Multi-Year Capital Plan (defined herein), and (iii) pay the Costs of Issuance of the Series 2011A Notes.

The Series 2011A Notes will be special obligations of the Authority, and pursuant to the Bond Resolution, the principal of and interest on the Series 2011A Notes shall be payable from and secured by a pledge of the following sources and only such sources: (i) the proceeds of any renewals of the Series 2011A Notes issued to repay the Series 2011A Notes, (ii) the proceeds of the sale of the Series I Bonds, or (iii) the proceeds of the Series 2011A Notes deposited in any Fund or account under the Bond Resolution. The proceeds of the Series I Bonds shall be pledged for the payment of the principal of and interest on the Series 2011A Notes and such pledge shall have a priority over any other pledge of such proceeds created by the Bond Resolution. The Series 2011A Notes are not secured by any other funds, accounts or amounts that are pledged to the payment of Bonds issued under the Bond Resolution. See "SOURCES OF PAYMENT AND SECURITY FOR THE SERIES 2011A NOTES".

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**The Series 2011A Notes are not a debt of the State of New York (the "State") nor shall the State be liable thereon.**

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Principal of and interest on the Series 2011A Notes will be payable through The Bank of New York Mellon, New York, New York. The Series 2011A Notes will be issued only as fully registered Series 2011A Notes, registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("DTC"). Purchases of beneficial interests in the Series 2011A Notes will be made in book-entry form in denominations of \$5,000 principal amount or whole multiples thereof. Purchasers will not be entitled to receive physical delivery of the Series 2011A Notes.

Principal of and interest on the Series 2011A Notes (with interest accruing from the dated date and payable at maturity as set forth below) will be payable to DTC by the Trustee. So long as DTC or its nominee remains the registered owner, disbursements of such payments to DTC Participants are the responsibility of DTC and disbursements of such payments to the purchasers of the Series 2011A Notes are the responsibility of DTC Participants, as described herein. The Series 2011A Notes are not subject to redemption prior to maturity.

<u>Due</u>	<u>Principal Amount</u>	<u>Interest Rate</u>	<u>Yield</u>	<u>CUSIP</u>
July 12, 2012	\$868,045,000	2.00%	0.35%	650009XQ1

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**This cover page contains certain information for general reference only. It is not intended to be a summary of the security or terms of this issue. Investors are advised to read the entire Offering Memorandum to obtain information essential to the making of an informed decision.**

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The Series 2011A Notes are offered when, as and if issued by the Authority and delivered to the Underwriters, and are subject to the approval of legality by Hawkins Delafield & Wood LLP, Bond Counsel to the Authority. Certain legal matters are subject to the approval of William J. Estes, Esq., General Counsel to the Authority, and of the Law Offices of Joseph C. Reid, P.A., New York, New York, Counsel to the Underwriters. First Southwest Company is acting as financial advisor to the Authority. It is expected that the Series 2011A Notes will be available for delivery to The Depository Trust Company, New York, New York, on or about July 13, 2011.

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**IN CONNECTION WITH THE OFFERING OF THE SERIES 2011A NOTES, THE UNDERWRITERS MAY OVERALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF THE SERIES 2011A NOTES 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 Offering Memorandum (the term "Offering Memorandum" 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 Offering Memorandum does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the Series 2011A Notes 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 Underwriters have provided the following sentence for inclusion in this Offering Memorandum. The Underwriters have reviewed the information in this Offering Memorandum in accordance with, and as part of, their respective responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information.

The information herein is subject to change without notice and neither the delivery of this Offering Memorandum 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 Offering Memorandum 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.

Certain statements contained in this Offering Memorandum that are not historical facts are forward looking statements, which are based on the Authority's beliefs, as well as assumptions made by, and information currently available to, its staff and officers. Because the statements are based on expectations about future events and economic performance and are not statements of fact, actual results may differ materially from those projected. The words "anticipate," "assume," "estimate," "expect," "objective," "projection," "forecast," "goal," "budget," or similar words are intended to identify forward looking statements. The words or phrases "to date," "now," "currently," and the like are intended to mean as of the date of the Offering Memorandum.

**THE SERIES 2011A NOTES HAVE NOT BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION. THE REGISTRATION, QUALIFICATION, OR EXEMPTION OF THE SERIES 2011A NOTES 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 2011A NOTES AS AN INVESTMENT, UPON THE PROBABILITY OF ANY EARNINGS THEREON OR UPON THE ACCURACY OR ADEQUACY OF THIS OFFERING MEMORANDUM.**

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# OFFERING MEMORANDUM

**\$868,045,000**

**New York State Thruway Authority  
General Revenue Bond Anticipation Notes  
Series 2011A**

Albany, New York  
June 30, 2011

## INTRODUCTION

The purpose of this Offering Memorandum, including the cover page and appendices, is to set forth information with respect to the General Revenue Bond Anticipation Notes, Series 2011A (the “Series 2011A Notes”), of the New York State Thruway Authority (the “Authority”). The Series 2011A Notes 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 2011A Notes are authorized to be issued in accordance with the terms and provisions of 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 Thirteenth Supplemental Revenue Bond Resolution Authorizing General Revenue Bonds, Series I (the “Series I Bonds”) adopted by the Authority on June 25, 2009, as amended on May 18, 2011 (the “Series I Bond Resolution”) and the Resolution Authorizing General Revenue Bond Anticipation Notes, Series 2011A (the “Series 2011A Note Resolution”) adopted by the Authority on May 18, 2011 authorizing the issuance of up to \$1,025,000,000 aggregate principal amount of the Series 2011A Notes.

## THE AUTHORITY

The Authority, a body corporate and politic constituting a public corporation, created in 1950 by the Act, is empowered, among other things, to construct, operate and maintain as a toll facility, and to improve and reconstruct the New York State Thruway (the “Thruway”), subject to certain statutory limitations on the Authority’s right to impose tolls on certain parts of the Thruway, including the Cross-Westchester Expressway. The Act provides that the Authority shall continue its corporate existence and operate and maintain the Thruway so long as it shall have bonds or other obligations outstanding and until its existence shall be terminated by law. Upon termination of the existence of the Authority, all its rights and properties shall pass to the State of New York (the “State”). The Act 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.

### 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. Governor Thomas E. Dewey broke ground for the Thruway 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. 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 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 416-mile mainline was completed in 1956 and in 1964 it was given Governor Dewey's name in recognition of his role in its development.

In 1992 and 1993, legislation was adopted which, among other things, created and transferred jurisdiction of the State canal system to a subsidiary corporation of the Authority and authorized the Authority to assist in or finance the development of certain projects. For a discussion of such legislation and projects, see "AUTHORITY FACILITIES AND OPERATIONS — Other Authority Projects" herein.

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

Under the Act, the powers of the Authority include, among others, the power to maintain, reconstruct and operate the Thruway 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, 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. The Authority has previously issued under the Bond Resolution \$4,170,305,000 aggregate principal amount of Bonds (including Refunding Bonds), of which \$2,217,305,000 is currently Outstanding.

### **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. In January 2006, the Governor signed into law the Public Authorities Accountability Act of 2005 (the "PAAA") which, in relevant part, expanded the membership of the Authority from three members to seven members and provided that two of the new members serve for an initial term of two years and two of the new members serve for an initial term of three years. Successors are appointed for terms of nine years each. Vacancies in the Board occurring otherwise than by expiration of term are filled for the unexpired term in the manner previously stated. Pursuant to the New York State Public Officer's Law, members of the Authority whose terms have expired continue to serve until a successor is appointed and qualified. The members of the Board receive no salary but are reimbursed for their necessary expenses incurred in connection with their duties. The Chairman serves in that capacity for the full term of his appointment as a member of the Board. The members of the Board may appoint other officers.

The present members of the Board and the expiration dates of their terms of office are as follows:

<u>Name</u>	<u>Expiration of Term</u>
Howard P. Milstein.....	January 1, 2020
E. Virgil Conway.....	January 1, 2017
José Holguín-Veras.....	December 12, 2018
Donna J. Luh.....	June 22, 2017
J. Donald Rice Jr. ....	June 13, 2018
Brandon R. Sall.....	January 1, 2014
Richard N. Simberg.....	September 14, 2017

The present officers of the Authority are as follows:

<u>Name</u>	<u>Office</u>
Howard P. Milstein	Chairman
Donna J. Luh	Vice-Chair
Michael R. Fleischer	Executive Director and Chief Executive Officer
John M. Bryan	Treasurer
Michael Sikule	Assistant Treasurer
Jill Warner	Secretary
William F. McDonough	Assistant Secretary
Judy A. Gallagher	Assistant Secretary
Elizabeth A. Yanus	Assistant Secretary

Pursuant to the provisions of the PAAA, the Board has formed three committees, the Audit Committee, the Finance Committee and the Governance Committee. The Audit Committee is charged with overseeing: (1) the quality and integrity of the financial statements of the Authority, including the Canal Corporation and the Canal Development Fund; (2) the qualifications and independence of the Authority and the Canal Corporation’s independent auditor; (3) the Authority’s and the Canal Corporation’s internal controls and compliance systems; (4) the Authority’s and the Canal Corporation’s compliance with applicable legal and regulatory requirements; and (5) the performance of the Authority’s and the Canal Corporation’s internal audit function.

The Finance Committee is charged with overseeing (1) the financial policies and financial matters of the Authority and the Canal Corporation; (2) review of proposals for the issuance of debt; and (3) risk management.

The purposes of the Governance Committee are to assist the Authority and the Canal Corporation Boards by: (1) keeping the Authority and the Canal Corporation Boards informed of current best practices in corporate governance; (2) reviewing corporate governance trends for their applicability to the Authority and the Canal Corporation; (3) recommending updates to the Authority’s and the Canal Corporation’s corporate governance policies; (4) advising those responsible for appointing members to the Boards on the skills, qualities and professional or educational experiences necessary to be effective Board Members; (5) examining ethical and conflict of interest issues; (6) performing self-evaluations of the Authority and the Canal Corporation Boards; and (7) recommending bylaws which include rules and procedures for the conduct of Authority and Canal Corporation Board business.

John M. Bryan serves as the Chief Financial Officer to the Authority. William J. Estes, Esq. serves as General Counsel to the Authority. See “AUTHORITY FACILITIES AND OPERATIONS – Senior Staff”.

## PLAN OF FINANCE

The Series 2011A Notes are being issued to (i) retire the Authority's General Revenue Bond Anticipation Notes, Series 2009A (the "Series 2009A Notes"), (ii) fund a portion of the cost of the Authority's Multi-Year Capital Plan, and (iii) pay the Costs of Issuance of the Series 2011A Notes. See the table below under "SOURCES AND USES OF FUNDS". Upon maturity of the Series 2011A Notes, the Authority plans to refinance the Series 2011A Notes with the proceeds of a new series of bond anticipation notes or retire the Series 2011A Notes with the proceeds of the Series I Bonds, which may also include additional financing for the Multi-Year Capital Plan, based on market conditions at the time and subject to future Authority Board action.

## SOURCES AND USES OF FUNDS

The proceeds received from the sale of the Series 2011A Notes are expected to be applied in the following approximate amounts:

### Sources of Funds

Principal Amount of Series 2011A Notes	\$868,045,000.00
Original Issue Premium	<u>14,227,257.55</u>
Total Sources of Funds	<u>\$882,272,257.55</u>

### Uses of Funds

Deposit to the Series 2009A Note Payment Fund <sup>(1)</sup>	\$680,610,000.00
Deposit to the Construction Fund	200,000,000.00
Costs of Issuance	414,089.96
Underwriters' Discount	<u>1,248,167.59</u>
Total Uses of Funds	<u>\$882,272,257.55</u>

<sup>(1)</sup>To be applied, together with \$12,852,176.67 in available Authority funds, to retire the Series 2009A Notes at their maturity on July 15, 2011.

## THE SERIES 2011A NOTES

The Series 2011A Notes will be dated the date of delivery and will bear interest at the rate, be payable and will mature on the date set forth on the cover page of this Offering Memorandum. Interest on the Series 2011A Notes will accrue from the dated date and be payable on their due date as set forth on the cover page of this Offering Memorandum. All of the Series 2011A Notes will be issued in book-entry only form. See Appendix D – "Book-Entry Only System". The Series 2011A Notes will be issued in denominations of \$5,000 or whole multiples thereof, and will bear interest calculated on the basis of a 360-day year of 30-day months. The Series 2011A Notes are not subject to redemption prior to maturity.

For a discussion of certain provisions applicable to the Series 2011A Notes while they are registered in the name of DTC or its nominee, including provisions relating to required notices, see Appendix D – "Book-Entry Only System".

## SOURCES OF PAYMENT AND SECURITY FOR THE SERIES 2011A NOTES

The Series 2011A Notes will be special obligations of the Authority, and pursuant to the Bond Resolution and the Series 2011A Note Resolution, the principal of and interest on the Series 2011A Notes shall be payable from and secured by a pledge of the following sources and only such sources: (i) the proceeds of any renewals of the Series 2011A Notes issued to repay the Series 2011A Notes, (ii) the proceeds of the sale of the Series I Bonds, or (iii) the proceeds of the Series 2011A Notes deposited in any Fund or account under the

Bond Resolution, and such pledge shall have a priority over any other pledge of such sources created by the Bond Resolution. Pursuant to the Series I Bond Resolution, the Authority has authorized the issuance of the Series I Bonds in an amount sufficient to pay principal of and interest accrued or to accrue on all Series 2011A Notes to their stated maturity dates, Costs of Issuance relating to the Series I Bonds and any required deposit to the Senior Debt Service Reserve Fund. The Series 2011A Notes are not secured by any other funds, accounts or amounts that are pledged to the payment of Bonds issued under the Bond Resolution. In connection with the payments of the interest due on the Series 2011A Notes on their due date, the Authority expects to have sufficient amounts available to release from the General Reserve Fund for such payments free of the lien of the Bond Resolution and, to the extent such amounts are available, intends to effect such releases on or before such interest payment dates.

The Authority has covenanted in the Series 2011A Note Resolution, among other things, that until the principal of and interest on the Series 2011A Notes has been paid or provided for, the Authority will not issue any Bonds (other than Refunding Bonds) unless as of the date of such issuance there remains after the issuance of such Bonds sufficient capacity under the Bond Resolution's Additional Bonds test to issue a principal amount of Bonds sufficient to refinance the Series 2011A Notes then Outstanding.

**The Authority has no taxing power. The Series 2011A Notes shall not be deemed to be a debt of the State of New York; the State of New York shall not be obligated to pay the Series 2011A Notes or the interest thereon and the faith and credit of the State shall not be pledged to the payment of the principal of or interest on the Series 2011A Notes.**

#### **Agreement of the State**

Under the Act, the State has agreed with the holders of the bonds and notes of the Authority, 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.

#### **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. To date, the Authority has not issued and currently has no plans to issue any Junior Indebtedness or Subordinated Indebtedness under the Bond Resolution. 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”. In the opinion of the Authority, as of the date of this Offering Memorandum, the Series I Bonds could be issued in an amount necessary to refinance the Series 2011A Notes in full at maturity in accordance with the limitations imposed by the Bond Resolution with respect to the issuance of Additional 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.

**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.

**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 or Subordinated Indebtedness to add to the conditions and restrictions under which Additional Bonds may be issued. The holders of Junior Indebtedness 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 may be used to provide for Facilities or Other Authority Projects. Subordinated Indebtedness may be used to finance any lawful corporate purpose of the Authority.

## **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. Bond anticipation notes, including the Series 2011A Notes, are not included in the definition of Net Revenue Requirement, but the Series I Bonds, when issued, would be included in the calculation of Net Revenue Requirement.

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 Tappan Zee Bridge and the Grand Island Bridges, which were 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.

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## RESULTS OF OPERATIONS

### Financial Results of Operations

Set forth below are certain revenue and expense items and certain other financial information derived from the Authority's audited financial statements for each of the Authority's fiscal years 2008 through 2010, and the 2011 Revised Financial Estimates. The revenues and operating expenses shown below have been adjusted to conform with the requirements of the Bond Resolution. 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, 2010 included in Appendix B to this Offering Memorandum. See also "MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS" below.

	(in millions) <sup>(1)</sup>			<b>Revised Financial Estimates 2011<sup>(2)</sup></b>
	<b>Actual 2008</b>	<b>Actual 2009</b>	<b>Actual 2010<sup>(2)</sup></b>	
Revenues:				
Toll Revenue	\$562.7	\$611.6	\$641.2	\$650.3
Concession Revenue	12.5	12.6	12.7	12.8
Other Revenue	<u>21.0</u>	<u>14.1</u>	<u>18.6</u>	<u>16.7</u>
Total Revenues	596.2	638.3	672.5	679.9
Operating Expenses:				
Facilities Operating	334.8 <sup>(3)</sup>	339.3 <sup>(3)</sup>	358.2 <sup>(3)</sup>	381.3
Public Liability Claims & Environmental Reserves	<u>2.5</u>	<u>7.3<sup>(8)</sup></u>	<u>6.0<sup>(8)</sup></u>	<u>4.2<sup>(8)</sup></u>
Total Operating Expenses	337.3	346.6	364.2	385.5
Net Revenue (A)	258.9	291.7	308.3	294.4
Debt Service (B)	<u>163.5</u>	<u>166.3</u>	<u>167.3</u>	<u>167.2</u>
Net Revenue After Debt Service	95.4	125.4	141.0	127.2
Retained for Operating Reserves <sup>(4)</sup>	4.8	(6.8)	(18.8)	4.7
Less: Reserve Maintenance Fund Provisions	<u>30.7</u>	<u>34.5</u>	<u>31.0</u>	<u>36.2</u>
Remaining Net Revenue	69.6	84.1	91.2	95.7
Other Authority Projects: Operating (Canals & I- 84) <sup>(5)</sup>	45.3 <sup>(3)</sup>	48.6 <sup>(3)</sup>	46.0 <sup>(3)</sup>	55.7
General Reserve Fund Provision <sup>(6)</sup>	<u>24.4</u>	<u>35.7</u>	<u>45.1</u>	<u>40.0</u>
Remaining Balance	(0.2)	(0.2)	0.1	0.0
Adjustment to Cash Basis <sup>(7)</sup>	<u>0.2</u>	<u>0.2</u>	<u>(0.1)</u>	<u>0.0</u>
Balance After Cash Adjustment	<u>\$0.0</u>	<u>\$0.0</u>	<u>\$0.0</u>	<u>\$0.0</u>
Pro Forma Debt Service Coverage (A÷B)	1.58	1.75	1.84	1.76

(1) Totals may not add due to rounding.

(2) Based on the Authority's 2010 actual results and 2011 Revised Financial Estimates.

(3) Operating expenses do not include the liability of \$38.3 million in 2008, \$40.6 million in 2009 and \$41.5 million in 2010 for Thruway purposes or \$8.3 million in 2008, \$8.6 million in 2009 and \$8.8 million in 2010 for Canal purposes, relative to the implementation of Government Accounting Standard Board Statement 45 (GASB 45), which establishes reporting standards for post-employment health care benefits. These amounts represent the unfunded expenses for the years as noted.

(4) In 2008 \$5 million was retained and \$7 million was retained in 2009. In 2010, \$4.7 million was retained and \$21 million was deposited into working capital.

(5) Effective October 30, 2007 the Authority entered into agreements with the New York State Department of Transportation ("NYS DOT") and the New York State Police ("State Police") to maintain and operate I-84. The Authority continued to maintain and operate I-84 under the terms of the agreements until October 10, 2010, when maintenance and operating responsibilities for I-84 were returned to NYS DOT and the State Police.

(6) Funds transferred from Net Revenue After Debt Service to cover Canal capital program expenditures and Series 2009A BAN's interest costs in 2009, 2010 and 2011.

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

(8) Includes \$4.3 million for the newly established Environmental Remediation Reserve in 2009, \$4.0 million in 2010 and \$2.2 million in 2011.

## MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS

Several major factors have impacted the Authority's operating results during the years 2008-2010. In January 2008, a 10% cash toll increase was implemented and as of June 29, 2008, the E-ZPass discount was reduced to 5% off of cash rates. Traffic and toll revenues in 2008 were negatively impacted by significant increases in fuel prices during the spring and summer and the downturn in the State's and national economies. In response, the Authority implemented many cost containment efforts that reduced overall operating expenses while maintaining the safety of its patrons. In January, 2009 the Authority implemented a toll adjustment which increased tolls by 5%. This adjustment, when combined with the results of a full year's impact of reduced E-ZPass discounts, positively impacted overall toll revenues. In January, 2010 the next 5% toll adjustment was implemented which is the primary reason for the 4.8% growth in toll revenues.

2008. Total revenues were \$596.2 million or \$14.5 million above the prior year mainly due to the 10% cash toll increase implemented on January 6, 2008 and adjustment of the E-ZPass discount to 5% off of cash rates effective June 29, 2008. Toll revenue increased \$22.4 million or 4.1% compared to 2007. Other revenue decreased \$7.8 million in 2008 primarily due to decreases in interest income. Concession revenues decreased by \$0.5 million, primarily due to the closing of several gas stations for renovations, and an overall decrease in gasoline sales.

Total operating expenses decreased \$1.7 million or 0.5%. This decrease related principally to cost containment measures and a reduction in required claims deposit reserve. There was a \$2.5 million deposit into the Public Liability Claims & Indemnity Reserve due to outstanding claims.

2009. Total revenues were \$638.3 million or \$42.1 million above the prior year mainly due to the toll increase implemented on January 4, 2009. Toll revenue increased \$48.9 million or 8.7% compared to 2008. Other revenue decreased \$6.9 million primarily due to lower interest earnings rates, and lower special hauling and other sundry revenue. Concession revenue increased slightly.

Total operating expenses increased \$9.3 million or 2.8%. The increase related principally due to the establishment of the Environmental Remediation Reserve with a \$4.3 million deposit related to potential environmental liabilities.

2010 Total revenues were \$672.5 million or \$34.2 million above the prior year mainly attributed to the 5% toll increase that went into effect on January 3, 2010 and an increase in sundry revenue. Toll revenue increased \$29.6 million or 4.8% compared to 2009. Other revenue increased \$4.5 million primarily due to increased receipts from the collection of fees from E-ZPass violators and increases of other miscellaneous revenues.

Total operating expenses increased \$17.6 million or 5.1% of which included an additional \$11.4 million set up for the special expense of the 2010 early retirement incentive program.

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## Traffic and Revenue

The following table shows traffic and toll revenues at the various pay points and total operating revenues for 2010:

<b>2010 TRAFFIC AND OPERATING REVENUES</b>					
(in thousands)					
<u>Pay Points</u>	<u>Traffic</u> <sup>(1)</sup>	<u>% of Total</u>	<u>Revenue</u> <sup>(2)</sup>	<u>% of Toll Revenue Before Volume Discount</u>	<u>% of Total 2010 Operating Revenue</u>
Bridges					
Tappan Zee	24,541	9.9%	\$129,254	19.5%	
Grand Island	<u>21,942</u>	<u>8.9</u>	<u>17,247</u>	<u>2.6</u>	
Total Bridges	46,483	18.8%	146,501	22.1%	
Barriers					
New Rochelle	20,068	8.1%	42,260	6.4%	
Harriman	18,498	7.5	23,837	3.6	
Yonkers	16,681	6.7	22,290	3.3	
Spring Valley	<u>1,241</u>	<u>.5</u>	<u>7,590</u>	<u>1.1</u>	
Total Barriers	56,488	22.8%	95,977	14.4	
Controlled (Ticket) System	144,626	58.4%	421,507	63.5%	
Combined Total	247,597	100.0%	663,985	100.0%	
Less: Volume Discount			<u>(22,769)</u>		
Total Toll Revenue			641,216		95.3%
Other Revenue			<u>31,293</u>		<u>4.7</u>
Total Revenues			<u>\$672,509</u>		<u>100.0%</u>

(1) Reflects actual results of traffic operations at 2010 year-end. "Traffic" refers to number of toll transactions at all locations where tolls are collected.

(2) Based on the Authority's 2010 audited financial statements with adjustments to conform with the Bond Resolution.

See Appendix A — "REPORT OF TRAFFIC ENGINEER" for a summary of the results of traffic and projected revenue for the years 2011 through 2015.

## BUDGET AND CAPITAL PROGRAMS; TRAFFIC ENGINEER'S REPORT

### 2011 Revised Financial Estimates

The Board of the Authority adopted a 2011 budget (the "2011 Budget") at its November 17, 2010 meeting which has been revised with updated revenue forecasts, debt assumptions and other updates to Operating and Capital Program spending (the 2011 Budget as revised, the "2011 Revised Financial Estimates"). The 2011 Revised Financial Estimates provide the necessary resources to ensure that current levels of safety, service and maintenance of the facilities are preserved. The 2011 Revised Financial Estimates total \$1.068 billion, which is an increase of \$50.7 million or 5.0% over the actual results in 2010 and \$30.1 million or 2.7% lower than the 2011 Budget. Of this increase, \$61.4 million or 17.5%, is attributable to increased capital spending on the Authority's highways, bridges and facilities. The budget is funded from a combination of Thruway Revenues, note proceeds, and Federal, State and local funds. Total Thruway

Revenues are projected to be \$679.9 million, an increase of \$7.4 million or 1.1% from actual 2010 results. The projected increase in Thruway Revenues from 2010 is principally due to a projected increase in traffic in 2011. Projected 2011 facility operating expenses are \$381.3 million, an increase of \$23.1 million over the actual 2010 figures, due to anticipated increases in salaries, pension costs, health insurance premiums, fuel prices, and snow and ice expenses.

## **Multi-Year Capital Plan**

**Capital Program Requirements.** As the Thruway is at the end of its sixth decade of operation, the necessity for reconstruction and rehabilitation of the aging infrastructure requires an increasing level of investment. At the same time, travelers on the roadway are experiencing delays resulting from increasing traffic volumes. The Authority is committed to providing customers with the mobility and service they expect, and to preserving the transportation artery that supports New York State's economy.

Authority staff, utilizing historical records of past remedial work, and their knowledge of the current condition of facilities, is developing a Multi-Year Capital Plan for 2012 through 2015. The Multi-Year Capital Plan will be designed to address several key objectives that are critical to Thruway customers and will be intended to maximize the benefit to the Thruway. These objectives are system reliability, increased customer service, improved safety and mobility and environmental stewardship. The developing Multi-Year Capital Plan will also take advantage of technology improvements and innovations in the field of transportation management.

On April 25, 2005, the Authority Board approved the 2005 to 2011 Multi-Year Capital Plan at a total cost of \$2.66 billion. Including estimated capital spending for the next four years of the Multi-Year Capital Plans) total capital spending for 2005 through 2011 will be \$2.25 billion and a projected \$1.75 billion would be spent in the following four years. The financial requirements of the Authority over the following four years consist of capital expenditures associated with the Multi-Year Capital Plan, operating and maintenance expenses, and debt service obligations. The Multi-Year Capital Plan under development includes projects addressing the need for reconstruction and rehabilitation of roadway, bridges, facilities and support systems of the Thruway; congestion relief, mobility enhancements and capital funds for other projects that are now the Authority's mandated responsibility; and provision for replacement of equipment and other non-bridge and highway projects of the Authority. The Multi-Year Capital Plan under development may provide for 70 new and/or rehabilitated bridges, the resurfacing/rehabilitation/reconstruction of approximately 1,337 lane miles of highway and the reduction of congestion in key corridors.

**Major Capital Projects.** Customer service, safety, reliability and mobility are strategic priorities adopted by the Authority. On many roadway segments, especially near metropolitan areas, the combination of 55-year-old pavements and heavy traffic volumes creates situations that are contrary to these priorities. Improvements at these locations are essential if the Thruway is to continue its role as the transportation backbone of the State. The Multi-Year Capital Plan addresses the most critical locations.

The Multi-Year Capital Plan under development may include major projects near Buffalo, Syracuse and Albany and in the lower Hudson Valley, intended to reconstruct the pavement and provide relief from mounting user delays. Toll plaza modifications at several critical locations increases throughput by use of highway speed and higher speed E-ZPass lanes and will be expanded to other locations. These modifications will provide improved safety and service, and prepare each toll plaza facility to handle future growth.

Planned improvements will result in renewed infrastructure and provide congestion relief on portions of the Thruway, thus allowing the Thruway to provide for continued economic growth across the State. The recently completed Woodbury toll barrier project improved access and created a system where a customer can travel without slowing down for toll booths, which will be expanded to other locations as part of the project to implement All Electronic Toll Collection (AETC). Developing additional highway speed and higher speed passage lanes for E-ZPass at the busiest toll plazas will not only benefit E-ZPass users, but will free capacity

for other drivers. Highway speed E-ZPass has already been implemented at Spring Valley and at Woodbury in 2010.

The Authority recently reconstructed the I-84/I-87 connection to provide a seamless interchange, relieve congestion on the local highway network and further encourage long-distance truck traffic to use I-84, instead of the congested I-287 Corridor. Further improvements planned on I-87 between I-287 and I-84 will reduce existing user delays and further encourage diversion of New England traffic to the I-84 Corridor. System wide additional information technology elements and upgrades will provide enhanced services and information to Thruway travelers.

***Tappan Zee Bridge Project.*** Given the age of the Tappan Zee Bridge, which opened to traffic in 1956, the Authority has undertaken an ongoing process of studying a full range of engineering, environmental, operational, congestion and financial issues relating to the future of that crossing and the adjacent I-287 Corridor. The 55-year-old bridge is in need of extensive ongoing rehabilitation and reconstruction or replacement. The Tappan Zee Bridge has limitations including substandard lane widths, lack of shoulders and potential seismic vulnerabilities. Peak traffic volumes exceed normal operational volumes by forty percent. As a result, the impacts of any incidents are significant. In view of these conditions, a study of the I-287 Corridor and the Tappan Zee Bridge is underway to determine future alternatives and priorities.

The Tappan Zee Bridge/I-287 Corridor study is divided into three stages: Stage 1 – Alternatives Analysis, Stage 2 – Draft Environmental Impact Statement (“DEIS”) and Stage 3 – Final Environmental Impact Statement (“FEIS”) and Record of Decision. During Stage 1, the Authority, in conjunction with Metro-North Commuter Railroad Company, a subsidiary corporation of the Metropolitan Transportation Authority (“Metro-North”), engaged qualified firms beginning in 2001 to undertake the environmental review process for an FEIS that will consider alternatives to address the structural and operational needs of the Tappan Zee Bridge and congestion in the I-287 Corridor. The project sponsors and the primary Federal review agencies are the Federal Highway Administration (“FHWA”) and the Federal Transit Administration (“FTA”). Numerous alternative elements, including, but not limited to, highway improvements, new or improved transit services and new or upgraded river crossings were initially assessed during Stage 1. In late 2005, the NYS DOT formally joined the study team. In January 2006, six preliminary alternatives were identified for further review. In the process of analyzing these preliminary alternatives, additional options were developed.

In May 2007, NYS DOT expanded its role in the Tappan Zee Bridge/I-287 Corridor study and officially assumed the role of project leader to assist in the oversight and coordination of highway and transit aspects of the study. The alternatives/options were subject to additional screening, utilizing transportation, environmental, engineering and cost criteria, in order to recommend a transit mode or modes and which bridge options were reasonable alternatives to be carried into the DEIS. The result of this screening, completed in March 2009, is a revised set of alternatives for study in the DEIS. Stage 1 was officially completed with the issuance of the Scoping Summary Report in May 2009. The DEIS is currently underway, and is projected to be provided to the FHWA and FTA for review and comment in 2011.

The alternatives to be analyzed in the DEIS include transit elements for both buses and fixed guideway systems in the corridor (“BRT and CRT”) in addition to a replacement structure and limited highway improvements. The transit elements, particularly in the case of any heavy rail component, would add significantly to the cost of any replacement span and related corridor improvements. The Authority does not have legal authority to construct or operate a transit facility, and any future financing of an alternative that includes transit would require financing and operational participation and contributions by other parties, possibly including Metro-North, NYS DOT and FTA. A key component in the eventual selection of a preferred alternative is a finding that the implementation of such alternative is financially feasible.

The Multi-Year Capital Plan and 2012 projected capital expenditures include the anticipated cost to the Authority of the study as well as approximately \$66.5 million for capital projects to keep the bridge in good condition for the immediate future.

**Other Capital Projects.** Due to the current age of the infrastructure, on-going rehabilitation and reconstruction are essential to maintain the Thruway in good condition in order to fulfill its role in providing safe and efficient transportation throughout the State. The Multi-Year Capital Plan includes projects to address critical infrastructure needs and ensure that the current good conditions do not deteriorate.

The Multi-Year Capital Plan includes various highway and bridge projects throughout the Thruway (the “Thruway Bridge and Highway Program”). The Authority Staff have identified over 1,337 lane-miles of roadway as locations for pavement rehabilitation work and 70 bridges as requiring replacement, rehabilitation, or other capital improvement. The Thruway Bridge and Highway Program also includes projects to address other needs such as bridge painting, protective fencing and other maintenance needs. Also included in the Multi-Year Capital Plan is the funding of reserves for equipment replacement, such as highway maintenance vehicles and building heating and ventilating systems, and other facility capital needs, including provision for upgrading systems, such as highway advisory radio, toll collection equipment and the E-ZPass program.

In addition, the Multi-Year Capital Plan includes Canal infrastructure projects involving the rehabilitation of locks, lift bridges and fixed and movable dams to address certain major deficiencies on the Erie, Oswego, Champlain and Cayuga-Seneca Canals (the “Canal Capital Program”), many of which are almost a century old. The Canal Capital Program also provides for the continued emphasis of the Canal System as a recreation facility. In November 2005, the New York State Transportation Bond Act became law, which provides potential funding resources for Canal System infrastructure in the amount of \$50 million, of which the Authority has received authorization for \$35.7 million of projects to date.

**Total Capital Program Expenditures.** The following table presents the year-by-year actual and estimated cash expenditure for the 2005-2011 Multi-Year Capital Plan and the developing Multi-Year Capital Plan for 2012 through 2015. The Multi-Year Capital Plan through 2015 with estimated capital expenditures totals \$4.0 billion, which includes the costs of the Thruway Bridge and Highway Program, and funding for equipment as well as other facility capital needs, and for the Canal Capital Program. With the Multi-Year Capital Plan, the Authority can continue to provide service to patrons at the current level, meet the growing demands of increased use with up-to-date technology and other necessary improvements, and assure that the State’s economy is not adversely affected by deteriorating bridge and pavement conditions or diminished transportation service on Thruway facilities.

<b>ACTUAL AND PROJECTED TOTAL CAPITAL PROGRAM EXPENDITURES</b> <b>2005-2015</b> (in millions)				
<b>Year</b>	<b>Thruway Highway and Bridges Capital Expenditures</b>	<b>Equipment Replacement and Other Facility Capital Needs</b>	<b>Canal Capital Program and Economic Development Projects</b>	<b>Total Capital Program Expenditures<sup>(1)</sup></b>
2005 <sup>(2)(3)</sup>	\$ 97.1	\$ 27.3	\$ 21.0	\$ 145.4
2006 <sup>(2)(3)</sup>	179.3	50.9	14.4	244.6
2007 <sup>(2)(3)</sup>	267.3	59.0	44.2	370.5
2008 <sup>(2)(3)</sup>	288.7	36.2	30.3	355.2
2009 <sup>(2)(3)</sup>	259.6	35.4	26.1	321.2
2010 <sup>(2)(3)</sup>	311.0	39.9	26.8	377.7
2011 <sup>(3)</sup>	351.5	60.7	27.6	439.8
2012 <sup>(4)</sup>	365.5	52.2	26.2	443.9
2013 <sup>(4)</sup>	325.3	45.5	39.8	410.6
2014 <sup>(4)</sup>	354.1	42.2	47.9	444.2
2015 <sup>(4)</sup>	<u>371.5</u>	<u>41.9</u>	<u>42.6</u>	<u>456.0</u>
Grand Total <sup>(1)</sup>	\$3,170.9	\$491.3	\$346.9	\$4,009.1

(1) Totals may not add due to rounding.

(2) Actual.

(3) Current Multi-Year Capital Plan.

(4) Estimated capital expenditures.

## **Funding of the Multi-Year Capital Plan**

The Multi-Year Capital Plan under development for 2012 through 2015 is currently sized at \$1.75 billion and will be funded with revenues, bond/note proceeds, and Federal, State and other funds. The 2005-2011 Multi-Year Capital Plan is fully funded through its conclusion in 2011. The 2012 through 2015 program funding will need to be addressed in the next year.

The Authority's Capital Program Management Group and the Board continually monitor projected needs and the financial plan. It is important to note that the Authority's Board has the power, without approval by the Legislature or the Governor, 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.

## **Report of Traffic Engineer**

The Authority retained Henningson, Durham & Richardson Architecture and Engineering, P.C. (the "Traffic Engineer") to prepare a study (the "Traffic Engineer's Report") of the Authority's Thruway operations to project the financial results of the Authority's operations in the years 2011-2015, assuming implementation of the Multi-Year Capital Plan, including the issuance of additional bonds/notes, and toll rates as currently approved. Among the conclusions contained in the Traffic Engineer's Report is the conclusion that the Authority's planned extensive and regular maintenance programs of the Multi-Year Capital Plan will ensure that the overall operational and structural integrity of the Authority's Facilities will be maintained, and that sufficient toll revenues can be generated to fund this program in 2011, but there will be a need to address funding for the 2012 through 2015 capital projects. See "Toll Adjustments" below. The Traffic Engineer's Report is contained in Appendix A, which should be read in its entirety.

## **2011 Capital Construction Program**

The Authority's 2011 capital construction program includes unspent authorization from prior years and authorizations approved in connection with the 2011 Revised Financial Estimates. Based on these authorizations, the Authority expects to spend \$439.8 million on its capital construction program in 2011. Of the \$439.8 million, \$412.2 million is expected to be spent on the Thruway and \$27.6 million on the Canal System. The Authority's 2011 capital construction program includes bridge rehabilitation, bridge replacement, bridge painting, bridge deck repair and overlay, and roadway rehabilitation and reconstruction (including toll plazas, service area work, and capital replacement). These expenditures will be funded from a combination of sources, including Net Revenues, and other available funds.

## **Toll Adjustments**

The toll increase implemented by the Authority on May 15, 2005 was the first general toll increase on the Thruway since 1988. For passenger vehicles, the adjustment was less than half the cumulative rate of inflation since 1988, the last time tolls on the Thruway were increased. For customers using E-ZPass, the increase was 12.5%. The 2005 toll adjustment was a 25% increase for passenger vehicles and a 35% increase for commercial vehicles. The adjustments were designed to encourage greater use of E-ZPass, as passenger vehicles equipped with E-ZPass would receive a 10% discount on tolls. Commercial E-ZPass users receive a 5% discount and are eligible for additional volume discounts. At the barriers, to facilitate collection and to avoid delays to motorists, tolls were rounded to quarters. In addition to the E-ZPass discount, frequent travelers may choose to sign up for commuter plans which allow regular users at the barriers to continue to travel at rates in effect prior to the toll increases. The toll adjustments also include an additional 10% increase in tolls for cash customers which became effective January 6, 2008.

Based on the results of studies and analyses in the December 2007 report of Stantec Consulting Services, Inc. (then serving as the "Traffic Engineer", as defined in the Bond Resolution, to the Authority), the

Authority determined that toll rates must be adjusted to support the Multi-Year Capital Plan. The Authority Board approved implementation of a toll adjustment, on April 25, 2008, which reduced the E-ZPass discount to 5% off the cash rates and included an additional 5% increase to rates effective January 4, 2009 and another 5% increase effective on January 3, 2010.

## Projected Results

The projections summarized in the following table are based upon the assumptions, which include the previously implemented toll adjustments, the funding of the Multi-Year Capital Plan, and the results of studies and analyses contained in the Traffic Engineer's Report. See "Report of Independent Traffic Engineer" above and Appendix A — "REPORT OF TRAFFIC ENGINEER". As of April 30, 2011, actual results are on target with the Toll revenue projections contained in the Traffic Engineer's Report.

	<b>Actual 2010</b>	<b>Revised 2011</b>	<b>(in millions) <sup>(1)</sup></b>			
			<b>Projected</b>			
			<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Total Revenues	\$672.5	\$679.9	\$699.9	\$714.0	\$727.5	\$739.9
Operating Expenses	364.2	385.5	395.1	406.7	418.7	431.2
Net Revenue	\$308.3	\$294.4	\$304.8	\$307.2	\$308.8	\$308.7
<b>Projections assuming bonds issued in July, 2012 in an amount sufficient to redeem the Series 2011A Notes</b>						
Debt Service	\$167.3	\$167.2	\$199.2	\$230.5	\$230.1	\$230.6
Debt Service Coverage	1.84x	1.76x	1.53x	1.33x	1.34x	1.34x
<b>Projections assuming bond issuances sufficient to fund the Projected 2012 – 2015 Multi-Year Capital Plan</b>						
Debt Service	\$167.3	\$167.2	\$205.8	\$270.5	\$298.8	\$328.8
Debt Service Coverage <sup>(1)</sup>	1.84x	1.76x	1.48x	1.14x	1.03x	0.94x

<sup>(1)</sup> Totals may not add due to rounding.

<sup>(2)</sup> Assumes new money of \$194 million issued in 2012 in addition to the amount issued to redeem the Series 2011A Notes and new issues of \$393.6 million in 2013 and \$421.9 million in 2014. Such issues would require satisfaction of the Authority's 1.20x Additional Bonds Test prior to issuance. See "SOURCES OF PAYMENT AND SECURITY FOR THE SERIES 2011A NOTES - Additional Bonds, Refunding Bonds and Other Indebtedness".

Source: Henningson, Durham & Richardson Architecture and Engineering, P.C. Traffic Engineer's Report for 2011 – 2015, dated May 13, 2011.

In addition to the toll system changes noted, the Revenue estimates take into account certain external factors, including regional economic conditions. A nationwide flattening out of travel growth in the last two and a half years, most likely due in part to the spike in fuel cost and economic downturn, has also impacted traffic growth on the Thruway. The Revenue estimates take into account other external factors include varying winter weather conditions, construction activity and improvements in the regional transportation network.

The estimates of Operating Expenses reflected in the Traffic Engineer's Report reflect present-day costs, terms of existing labor contracts, changes in pension funding requirements, operating reserve requirements, and continued inflation for wages and operating and maintenance supplies. The revenue projections and estimated small amount of traffic shifts are expected to have little effect on the future operating procedures and expenses, and are not expected to impact Operating Expenses. The estimates of Operating Expenses reflected in the Traffic Engineer's Report also reflect that, effective October 11, 2010, the Authority is no longer responsible for the operating and maintenance of I-84.

Future availability of Net Revenues will affect the amount of debt sold to fund capital expenditures and, therefore, the level of future debt service coverages. The Authority has covenanted to maintain tolls in order that Net Revenues will at least equal the Net Revenue Requirement for each year. See “SOURCES OF PAYMENT AND SECURITY FOR THE BONDS — Tolls, Fees and Charges”.

The Authority continually monitors its projected needs and financial plan. It also continually reviews projections of Revenues and expenses. The Authority has the power, without approval by the Legislature or the Governor, 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.

## **Current Studies**

The Authority has conducted, or is in the process of conducting, several studies funded by the Multi-Year Capital Plan.

***Albany and Buffalo Corridors.*** The Authority has completed a regional study of the Albany Corridor from Interchange 21A to 25A. Approximately \$125 million has been included in the Multi-Year Capital Plan to fund projects resulting from the recommendations emerging from the Albany Corridor study. A study of the Buffalo Corridor from Interchange 49 to 53 and I-290 from Interchange 7 to the Thruway is currently underway. The objectives of these regional studies are to identify existing and future mobility, structural and operational challenges and develop practical transportation solutions across the Thruway system. Principally, such studies will assess current highway and bridge conditions, mainline capacity deficiencies and interchange congestion along these key components of the Thruway.

***Mohawk-Erie Multi-Modal Transportation Study (I-90 Corridor).*** The Authority is participating with NYS DOT in a study of the I-90 corridor from Albany to Buffalo. The study will examine multi-modal transportation and help better understand how future growth within the corridor will impact the Thruway and Canal as the State is seeking to attract additional opportunities for economic development.

***Toll Collection System.*** The Authority has also completed a study, currently in draft form, to investigate the feasibility of improving and modernizing the Thruway tolling system to improve mobility. The Study assesses the myriad of toll collection and transportation/mobility alternatives and serves as a potential blueprint for the future of toll collection. The study examines higher speed and highway speed toll collection, toll collection through mainline barriers rather than exit plazas, and/or the development of a cashless toll collection system. None of the alternatives presented in the Study are funded under the Authority’s current capital funding plans.

## **AUTHORITY FACILITIES AND OPERATIONS**

### **Facilities and Operations**

The Thruway is a 570-mile superhighway system crossing the State. It is the largest toll superhighway system in the United States. The Thruway route from the New York City line to the Pennsylvania line at Ripley is 496 miles long and includes the 426-mile mainline connecting New York City and Buffalo, the State’s two largest cities. Other Thruway sections make direct connections with the Connecticut and Massachusetts turnpikes, New Jersey’s Garden State Parkway and other major expressways that lead to New England, Canada, the Midwest and the South. In 1991, the Cross-Westchester Expressway was added to the Thruway system. The Thruway is comprised of 2,822 lane miles of roadway, 811 bridges, 364 buildings, 27 service areas, 275 toll booths, 11 tandem booths, 90 E-ZPass-only lanes, 126 water services, 17 waste water treatment plants and 35 motor fueling stations (including 24 motor fueling stations for Authority vehicles and equipment, 8 automated fueling stations and 3 manual fueling stations for canals). The nine largest cities in the State are located within the Thruway corridor. In addition to being the principal artery

of travel and commerce within the State, the Thruway is a vital link to long distance interstate travel as evidenced by the high proportion of out-of-state users and the heavy volume of traffic at each of its end points. In addition, the Thruway provides the major route of access for visitors to the State's tourist magnets including Niagara Falls, the State canal system, the Finger Lakes, the Adirondacks, the Catskills and New York City. Legislation enacted in 1992 transferred jurisdiction over the New York State Canal System to the New York State Canal Corporation, a subsidiary of the Authority. Pursuant to the same legislation, the Authority has been authorized and directed to assist in the financing of the Inner Harbor project in Syracuse, the Horizons Waterfront project (now the Buffalo Inner Harbor project), and the Stewart International Airport Access Project in Orange County. Substantially all of the Authority's financing assistance for the three foregoing projects has been expended.

The Thruway has a widely diversified traffic base, given the economic diversity of the State as a whole and the Thruway's coverage of all major metropolitan areas as well as the more rural upstate regions. The traffic along the Thruway is composed of short and long trips, commuter and occasional users, recreational and business travelers, local delivery and long-distance trucking and those traveling for many other purposes.

In general, the Westchester/Rockland County region of the Thruway, including the New England section and mainline up to Harriman, is heavily dominated by commuter traffic and short and long distance commercial traffic. Seasonal variations are minimal. On the controlled ticket system extending from Harriman to Buffalo, significant commuter and short distance commercial traffic is centered in and around each of the major cities including Albany, Syracuse, Rochester and Buffalo. In addition, the controlled ticket system is significantly affected by long distance truck traffic and recreational travelers. Seasonal factors are more significant than with the Westchester/Rockland County region.

For a further description of the Thruway's facilities, see Appendix A — "REPORT OF TRAFFIC ENGINEER".

## **Board Members**

The Act grants to the Authority Board the powers of 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.

Howard P. Milstein was unanimously confirmed as Chairman of the New York State Thruway Authority on June 15, 2011, for a term expiring January 1, 2020. Mr. Milstein is an active investor and leader in industries that include finance, real estate, technology and entertainment. He is also a renowned philanthropist, provides dynamic leadership and generous support for a broad range of charitable, educational and civic causes. Mr. Milstein serves as Chairman, President and Chief Executive Officer of New York Private Bank & Trust and its operating bank, Emigrant Bank (the country's largest privately held bank). He also chairs and operates the Milstein family's real estate companies, including: Milstein Properties, Milford Management, and the Milford Agency. Mr. Milstein is founding Chairman of the merchant bank, FriedbergMilstein. Mr. Milstein earned a B.A. in Economics, summa cum laude, from Cornell University, along with a J.D. and a M.B.A. from Harvard University.

E. Virgil Conway was initially confirmed as a member of the Authority Board in December 2006. Mr. Conway has been a financial consultant and corporate director for more than 50 years. Mr. Conway had served most recently as Chairman and Chief Executive Officer for the New York State Metropolitan Transportation Authority (MTA). Mr. Conway is a graduate of Colgate University and received his *Legum Baccalaures* from Yale University School of Law.

José Holguín-Veras, Ph.D., P.E., was confirmed as a member of the Authority Board in May 2010. 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 Autonoma 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.

Donna J. Luh was confirmed as a member of the Authority Board in June 2008. Ms. Luh currently owns and operates Luh Consulting Services. Ms. Luh is a graduate of Canisius College, earning a Master of Science in Education Administration.

J. Donald Rice, Jr., was confirmed as a member of the Authority Board in May 2010. 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.

Brandon R. Sall was confirmed as a member of the Authority Board in June 2008. Mr. Sall is currently a partner in the law firm of Schuman Sall & Geist concentrating in real estate law, trusts and estates. Mr. Sall is a graduate of the University of Miami and earned his Juris Doctor at Benjamin N. Cardozo School of Law.

Richard N. Simberg was confirmed as a member of the Authority Board in June 2009. Mr. Simberg previously served in several positions with the New York State Department of Transportation between 1958 and 1991, including Assistant Commissioner for Engineering and Chief Engineer, and Regional Director of Transportation for the Central New York and Mohawk Valley Regions. Since then he has been active in engineering education, engineering ethics and has consulted with the City of Alexandria regarding the Woodrow Wilson Bridge. Mr. Simberg earned a Bachelor of Civil Engineering degree from Clarkson University and received a Master of Civil Engineering degree from Rensselaer Polytechnic Institute.

## **Senior Staff**

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

*Executive Director.* Michael R. Fleischer was appointed Executive Director to the Authority, effective April 30, 2003 and Chief Executive Officer of the Authority effective March 23, 2006. Mr. Fleischer previously served as the First Deputy Commissioner at the NYS DOT from 2001-2003. He began his career at NYS DOT in 1995, where he also served as Assistant Commissioner for the Office of Government and Public Affairs from 2000 – 2001. Mr. Fleischer is a graduate of Hamilton College, having received a B.A. in Government. Mr. Fleischer earned his Juris Doctor at Western New England College School of Law.

*Chief of Staff.* Thomas J. Ryan was appointed Chief of Staff for the New York State Thruway Authority and Canal Corporation in February 2011. Mr. Ryan joined the Authority in 2009, serving first in the Legal Bureau as the Deputy Director of Governmental Relations and later as the Authority's Director of Public Affairs. His previous employment included service as President of the State Council on Waterways and Regional Administrator for both the U.S. General Services Administration and the U.S. Department of Transportation's Federal Transit Administration. In addition, during a decade of New York State service, he was Deputy Commissioner of the Department of Motor Vehicles and Director of Communications & Intergovernmental Relations for the Department of Transportation, where he chaired the Canal Planning & Development Board and the Tourism Sign Task Force. He began his state service as Assistant Secretary to Governor Mario M. Cuomo after serving Senator Daniel Patrick Moynihan as State Coordinator. Mr. Ryan attended Dutchess Community College and The New School, and is a Merchant Marine Officer licensed by the U.S. Coast Guard.

*Chief Engineer.* Theodore T. Nadratowski, P.E. was appointed Chief Engineer in November 2010. Mr. Nadratowski joined the Authority in April 1989 and has over 30 years of transportation experience in a variety of disciplines, including Highway, Bridge and Facilities Maintenance, Highway Design, Structural Design, Construction Management and Traffic Safety. Prior to his current position, Mr. Nadratowski served as New York Division Director. Mr. Nadratowski received both a Bachelor of Science degree in Civil and Environmental Engineering and a Master of Engineering degree in Civil and Environmental Engineering from Clarkson College. He is a licensed Professional Engineer registered in the State of New York.

*Chief Financial Officer.* John M. Bryan was appointed to serve as the Chief Financial Officer and Treasurer of the Thruway Authority and Canal Corporation in December 2004. Mr. Bryan has also served as the Authority's Interim Chief Information Officer since October 2010. Prior to joining the Authority and the Canal Corporation, Mr. Bryan had 15 years of service for the State of New York, including Senior Vice President and Chief Administrative/Information Officer of the Empire State Development Corporation and various positions at the NYS Senate Finance and NYS Assembly Ways and Means Committees. Mr. Bryan received Bachelor's and Master's degrees in Economics from the Maxwell School of Citizenship and Public Affairs at Syracuse University.

*General Counsel.* William J. Estes, Esq. has served as General Counsel to the New York State Thruway Authority and Canal Corporation since July 2009. Before joining the Authority, Mr. Estes served as Assistant Counsel to the Governor. Prior to that, he held positions with the United States Securities and Exchange Commission, where he was designated a Special Assistant United States Attorney, and with the New York State Attorney General's Office. Mr. Estes received his Bachelor of Arts degree in English from Northwestern University and his Juris Doctor from the Emory University School of Law.

*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.* Donald R. Bell, P.E. has served as Director of Maintenance & Operations since March 2006. Immediately prior to this appointment he served as the Albany Division Director. Mr. Bell has held a number of different positions during his career with the Authority, including Superintendent of Maintenance, and Director of Highway Management. Mr. Bell received his Bachelor of Science degree in Engineering from Clarkson University and he is a licensed Professional Engineer in New York State.

*Director of Audit and Management Services.* J. Marc Hannibal, Esq. has served as Director of Audit and Management Services since April 2010. Prior to joining the Authority, Mr. Hannibal served in various positions within New York State government, most recently with the Office of the State Comptroller. Mr. Hannibal received his Bachelor of Arts degree from Hobart College, his Juris Doctor from the University of Connecticut School of Law and a Master of Public Administration from the John F. Kennedy School of Government at Harvard University.

*Director of the Canal Corporation.* Brian U. Stratton has served as Director of the New York State Canal Corporation since April 2011. In this capacity, he is responsible for overseeing the operation and development of New York's 524-mile Canal System, including the historic Erie Canal. Prior to joining the Canal Corporation Mr. Stratton served as Mayor of the City of Schenectady for seven years. Mr. Stratton received his Bachelor of Arts degree from SUNY Oswego in 1980.

## **Organization**

To administer its responsibilities for the Thruway and Other Authority Projects, the Authority is organized into seven operating departments and employs approximately 2,626 permanent employees. The Canal Corporation employs approximately 533 permanent employees.

The administrative departments are Engineering, Maintenance and Operations, Administrative Services, Finance and Accounts, Legal, Audit and Management Services, and Information Technology. In addition to those functions expressly described, the services performed include human resources management, purchasing, administrative analysis, public information and government relations.

The Department of Engineering includes the Offices of Design, Contracts and Construction Management, Traffic Engineering, the Tappan Zee/I-287 Environmental Study Group, and the Capital Program Management groups. The Department oversees the development and implementation of the Authority's long range capital program. It has the professional capacity to design and inspect many 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 also acts as liaison with New York State Police Troop T, whose 320 members patrol the Thruway. The Department helps develop the Multi-Year Capital Plan 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. Current areas of focus include: new pavement markings, improved reflectivity of signs and improved guide rail systems.

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.

### **Cross-Westchester Expressway**

In accordance with legislation passed by the State Legislature, the Cross-Westchester Expressway was added to the Thruway in 1991. Pursuant to this legislation, the Authority is prohibited from imposing any toll, fee, rental or charge for the use of the Cross-Westchester Expressway.

***Cross-Westchester Expressway.*** The Cross-Westchester Expressway was purchased by and conveyed to the Authority by the State. The Authority financed the acquisition of the Cross-Westchester Expressway through the issuance of the Restaurant Concession Bonds which are no longer outstanding. The Cross-Westchester Expressway is the highway connection between the Tappan Zee Bridge at Exit 8 of the Original Project and the New England Section of the Original Project constituting a portion of Interstate Route 287 (the "Cross-Westchester Expressway"). Consolidating the Cross-Westchester Expressway with the Thruway links the Thruway's mainline and New England Section, puts both roads under common control and facilitates operating efficiency.

The Authority assumed responsibility for the operation and maintenance of the Cross-Westchester Expressway on April 1, 1991. Pursuant to an agreement with the State (the "CWE Agreement"), the Authority's operation and maintenance responsibilities apply only to the Cross-Westchester Expressway mainline and are limited to general highway inspection, pavement repairs, signing, drainage, guide rail and median barrier repair, pavement striping and delineation, snow and ice control, shoulder maintenance and debris removal, vegetation control, emergency repair services and police patrol, all to the extent necessary to keep the roadway in reasonable condition. All responsibilities for operation and maintenance of the Cross-Westchester Expressway not specifically described in the preceding sentence continue to be those of

NYS DOT. All inspections of bridges over or carrying the Cross-Westchester Expressway and all maintenance, repair, construction or reconstruction required to keep any such bridge structure in a safe condition are the sole responsibility and at the expense of the Commissioner of Transportation and the State. In addition, the State has agreed to indemnify the Authority against all liability and loss arising from the Authority's operation and maintenance of the Cross-Westchester Expressway.

Under the Bond Resolution, the Cross-Westchester Expressway is included in the definitions of Original Project and Facilities and the Authority's costs of operation and maintenance thereof are payable as Facilities Operating Expenses.

### **Federal Aid Funds**

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. The Authority received approximately \$759.3 million in Federal highway funding from 1982-2010. The Authority expects to receive \$4.7 million in 2011 in Federal highway and bridge funding based on existing appropriations through the 2008-2009 Federal fiscal year. The Authority also receives Federal aid in connection with the canal system. Historically, the Authority has received approximately \$5.7 million annually for operating expenses and various amounts related to specific canal capital projects.

In accordance with the provisions of Title 23, toll revenues of the Authority in excess of revenues needed for debt service and actual costs of operation and maintenance may be used for (i) any transportation project eligible for assistance under Title 23, or (ii) costs associated with other transportation facilities under the jurisdiction of the Authority. The 1982 agreement referred to above was amended in 1992 to incorporate these provisions.

All Federal surface transportation programs, including those from which the Authority derived the funds described here, were reauthorized in 2005 with the enactment on August 11, 2005 of the "Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users" or "SAFETEA-LU". SAFETEA-LU reauthorized Federal highway programs for the period through September 30, 2009 at levels substantially higher than past authorizations. Subsequent Congressional action has extended the SAFETEA-LU authorization levels through September 30, 2011

There is no assurance that levels of Federal funding historically provided to the Authority will continue to be provided by Congress.

### **Budget Process — Operating and Capital**

***Operating Budget Development.*** The Authority currently adopts an annual operating budget during each fiscal year which includes all expenses for the regular operations of the Authority's seven departments. The process for the development of the annual operating budget commences during the first quarter of the prior fiscal year. The Executive Director and the Chief Financial Officer initiate the process by issuing guidelines to the various department heads outlining budget policies, procedures and timetables. Each department then prepares its preliminary budget request based on its program requirements. This request is then submitted to the Budget Bureau of the Authority for a detailed review and analysis which culminates in a preliminary budget hearing between the Budget staff and departmental management. The resulting proposed budget and related recommendations are then presented for a formal hearing before the Executive Director. The Budget is made available to the Public 30 days before the Board acts on the Budget. The recommended budget is then submitted for review and formal adoption by the Board at a meeting of the Authority, which occurs before the start of the new Fiscal year. As part of the annual operating budget process, the Authority prepares and

updates a five-year operating budget plan which includes revenue, operating expenses, reserve requirements and debt service projections. The Budget is then made available on the Authority's website under the "About us – Financial information" section in accordance with the NYS Public Authority's Accountability Act and NYS Comptroller's Public Authority's regulations. During the fiscal year, the Authority has budget control procedures in place to monitor expenditures and measure performance against projections.

***Capital Budget Development.*** Annually, the Authority adopts a one-year budget, based on the prioritization of projects in the Multi-Year Capital Plan adopted for planning purposes. This one-year capital budget is approved by the Board and represents the Authority's official capital construction program. Project selection considers the following priority factors: safety, bridge and highway condition rating, capacity needs, and facility needs. To provide continuity between annual budgets and to allow for the longer lead time of some capital highway and bridge projects, a contracts program is developed to show how the authorized project funding flows from the budget through the design stages and construction periods, which for major capital projects normally encompass several budget years.

The development process for the capital construction program begins with identification of capital needs as defined by the Authority's internal planning, engineering studies and procedures. The pavement and bridge management system and the bridge inspection program are important in identifying the Authority's capital needs. See "Bridge Inspection Program and Condition Ratings" below. Another source of projects for capital expenditures is from planned improvements to respond to capacity needs such as in the Tappan Zee Bridge corridor, Albany, Syracuse and Buffalo areas. The capital construction program is periodically reviewed for changes in priorities and to address new information and data generated from the pavement and bridge management systems and the comprehensive bridge inspection program. The objective of the capital construction program is the scheduled, continuous, systematic rehabilitation and safety improvement of the roadway, structures, buildings, and equipment, required to preserve the Original Project in good repair and working order.

### **Bridge Inspection Program and Condition Ratings**

The Thruway Authority has inspection responsibility for 811 bridges, including 412 mainline and ramp bridges and 399 overhead bridges, excluding bridges on the Cross-Westchester Expressway for which the Authority has not assumed any inspection responsibility. NYS DOT is responsible for inspecting certain overhead bridges located on the Thruway and all of the bridges located on the Cross-Westchester Expressway.

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 NYS DOT. All bridges are inspected biennially as per the requirement of the State's Uniform Code of Bridge Inspection (the "Bridge Code"). The Authority contracts with outside consultants to conduct this inspection for over 40% 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 each 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 NYS DOT.

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 are shown as follows.

<b>BRIDGE RATINGS</b>		
<b>CONDITION</b>	<b>NO. OF BRIDGES</b>	
	<b>June 2009</b>	<b>May 2011</b>
GENERAL RECOMMENDATION 5-7 Bridges in generally good condition with only minor to moderate repairs required.	674	680
GENERAL RECOMMENDATION 4 Bridges in good to fair condition requiring reconditioning of some structural elements.	128	124
GENERAL RECOMMENDATION 2-3 Bridges in poor condition requiring major repairs or replacement.	4	7

The change in the Authority's bridge condition ratings between June 2009 and May 2011 is generally due to the Authority focusing its resources on larger bridges that have more spans to maintain. For example, the Tappan Zee Bridge has 198 spans, while the typical Thruway bridge has 4-5 spans. This focus has caused some of the Thruway's bridges to be temporarily re-categorized while awaiting contract work. There are seven bridges with a general recommendation of 3. All seven bridges in such condition will be rehabilitated or replaced in the current or ensuing Multi-Year Capital Plan.

### **Other Authority Projects**

Legislation enacted in 1992 (the "1992 Legislation") (i) created and transferred jurisdiction of the State canal system to the New York State Canal Corporation, a subsidiary corporation of the Authority (the "Canal Corporation"), and (ii) authorized and directed the Authority to assist in the financing of the Inner Harbor project and the Intermodal Transportation Center, both in Syracuse, the Horizons Waterfront project in Buffalo, the Stewart International Airport Access Project in Orange County and the Thruway Exit 26 Bridge Project in Schenectady County. The 1992 Legislation also authorized the Authority to issue up to \$60 million of its bonds, notes and other obligations for purposes of financing the construction, reconstruction, development and improvement of the State canal system.

*New York State Canal System.* The 1992 Legislation transferred jurisdiction of the State canal system (except bridges over the canals) from the NYS DOT to the Canal Corporation, transferred all powers and duties of the Commissioner of Transportation over this property to the Canal Corporation and authorized the Authority to issue up to \$60 million in bonds for the construction, reconstruction or improvement of the canal system. This followed the ratification in 1991 of a constitutional amendment which allowed the imposition of user fees and the sale or lease of lands along the canal system. A modest toll schedule was introduced beginning with the 1994 navigation season. The Canal Corporation Board passed a resolution waiving canal tolls for recreational vessels for the 2006 and 2007 navigation seasons. The recreation toll revenues had been offset through State grants and operating savings. Collection of canal tolls for recreational vehicles resumed in 2008 and continues in 2011.

The canal system transferred to the Canal Corporation is comprised of four canals: the Erie, the Champlain, the Oswego and the Cayuga & Seneca. The system's total length is 524 miles, 154 of which are artificial land-cut sections and 370 of which are canalized rivers and lakes.

The Canal Corporation has the same members as the persons holding the offices of members of the Authority. Under the 1992 Legislation, the Canal Corporation has power to operate, toll, maintain, improve, finance (but not issue bonds) and promote the canal system.

The 1992 Legislation also provides that all revenues of the canal system are to be credited to the New York State Canal System Development Fund (created by the 1992 Legislation and held by the State) where they are available to the Canal Corporation, subject to appropriation, only for purposes of the canal system.

The 1992 Legislation, as amended, also created the Canal Recreationway Commission (the "Commission") with 14 voting members, including the Chairman of the Authority and the Commissioners of Transportation, Parks, Recreation and Historic Preservation and Environmental Conservation, or their representatives, plus 10 individuals geographically representative of the canal sections and of canal users, sportsmen's, tourism and environmental interests. There are also 10 non-voting members representing State Departments of Economic Development and Department of State and 8 regional planning agencies. The Commission has primary responsibility for guiding the development of a statewide canal recreationway plan for the canal system.

In June 2011, the Legislature passed an amendment to the Act which would increase the authorized amount of bonds or notes that the Authority could issue for capital projects for the State canal system by \$100 million, as well as adding an additional \$10 million authorization for bonding for any canal capital improvements deemed an emergency project. The legislation is awaiting action by the Governor.

Under the Bond Resolution, the canal system constitutes an Other Authority Project and the Authority supports the cost of the operation and maintenance thereof from the Other Authority Projects Operating Fund and certain capital costs from the General Reserve Fund. The Authority has budgeted for 2011 from such Funds a total of \$55.7 million for operations and \$27.6 million for capital expenditures, of which \$23.1 million is from the General Reserve Fund and \$4.5 million is from the Transportation Bond Act. In addition, it expects \$0.5 million for operating and capital purposes from Federal Aid, and \$2.3 million from Canal Development funds. The operating budget continues to enhance maintenance and service levels on the canals by re-establishing a dredging operation.

***Canal Capital Planning Process.*** The 1992 Legislation required the Canal Corporation to develop and to submit annually to the Governor and the Legislature a five year capital plan for the maintenance and improvement of canal infrastructure. The capital plan is developed by the Office of Canals, using in-house and consultant inspection data, in accordance with established prioritization guidelines. The most recent approved plan is for the rolling five-year period (which is incorporated in the Authority's Multi-Year Capital Plan). It includes rehabilitation of locks, dams and guard gates.

***Certain Other Authority Projects.*** The Authority has been authorized by legislation to participate in the following projects up to the statutory caps on the amount of the Authority's participation: Buffalo Horizons/Waterfront Development (\$15 million); Syracuse Inner Harbor (\$15 million); Syracuse Intermodal Transportation Center (\$5 million); and Stewart Airport Access (\$15 million). Each of these projects has been included in the definition of Other Authority Projects under the Bond Resolution, and the Authority's participation has been or will be funded in the manner provided in the Bond Resolution for Other Authority Projects. All these projects are completed or nearing completion and have reached the Authority's maximum funding obligation.

## **Employee Relations**

Authority and Canal Corporation employees are represented pursuant to New York State's Public Employees' Fair Employment Act (Taylor Law) by three unions, International Brotherhood of Teamsters (the "Teamsters"), Civil Service Employees Association ("CSEA") and the Public Employees Federation ("PEF"). The Teamsters represent the Authority's maintenance, toll collection and clerical employees while the CSEA

represents both Authority professional, supervisory and technical employees and Canal Corporation operational, maintenance and clerical employees in separate locals. PEF represents professional, technical and supervisory Canal Corporation employees. Labor contracts with terms ending on June 30, 2012 have been negotiated with all of the bargaining units and have been approved by the Authority or Canal Corporation Boards. In 2010, the Authority offered a Retirement Incentive Program to employees who met eligibility requirements. Approximately 10% of the Authority's workforce elected to retire under this program. The Authority is responsible for a surcharge that was estimated to be \$13.4 million which was provided for in 2010.

## **Retirement Plans and Other Employee Benefits**

The pension plan for Authority and Canal Corporation employees is part of the New York State Employees' Retirement System. The pension plan for New York State Police assigned to the Authority is part of the New York State Policemen's and Firemen's System. 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. The rate of contributions for all State plan employers, including the Authority, began to increase in 2003 due to the decline in value of the Common Retirement Fund which decreased as a result of stock market conditions. The rate of contributions in 2003, 2004, 2005, 2006, 2007, 2008, 2009 and 2010 was an average of 4.9%, 13.5%, 10.9%, 10.2%, 9.2%, 9.5%, 8.2% and 12.2% respectively, of projected salaries. See Note 8 – Retirement Benefits and Note 9 – Other Postemployment Benefits in the Authority's financial statements in Appendix B to this Offering Memorandum for further discussion of the pension plans and health insurance programs in which the Authority participates.

## **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, 2010 and 2009. 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's largest bridge, the Tappan Zee Bridge, is separately covered by two commercial insurance policies providing loss of revenue and damage coverage in the amount of \$450 million and terrorism coverage in the amount of \$100 million. 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. In addition, the Authority purchases insurance for workers' compensation benefits and various liability exposures.

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 \$2.5 million insurance fund and a reserve for public liability claims which, as of December 31, 2010, totaled \$9.1 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. Those bond programs include the Local Highway and Bridge Service Contract Bonds, the General Highway and Bridge Trust Fund Bonds, and State Personal Income Tax Revenue Bonds (Transportation), all 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.

## **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 2011A Notes, Series 2011A Note Resolution, 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 2011A Notes.

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 and which, in the opinion of the Authority, will be disposed of within the amounts that 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**

### **Opinion of Bond Counsel**

In the opinion of Hawkins Delafield & Wood LLP, Bond Counsel to the Authority, under existing statutes and court decisions and assuming continuing compliance with certain tax covenants described herein, (i) interest on the Series 2011A Notes is excluded from gross income for Federal income tax purposes pursuant to Section 103 of the Internal Revenue Code of 1986, as amended (the "Code"), and (ii) interest on the Series 2011A Notes is not treated as a preference item in calculating the alternative minimum tax imposed on individuals and corporations under the Code; such interest, however, is included in the adjusted current earnings of certain corporations for purposes of calculating the alternative minimum tax imposed on such corporations. In rendering its opinion, Bond Counsel has relied on certain representations, certifications of fact, and statements of reasonable expectations made by the Authority in connection with the Series 2011A Notes, and Bond Counsel has assumed compliance by the Authority with certain ongoing covenants to comply

with applicable requirements of the Code to assure the exclusion of interest on the Series 2011A Notes from gross income under Section 103 of the Code.

In addition, in the opinion of Bond Counsel, under existing statutes, interest on the Series 2011A Notes is exempt from personal income taxes imposed by the State or any political subdivision thereof (including The City of New York and the City of Yonkers).

Bond Counsel expresses no opinion regarding any other Federal or state tax consequences with respect to the Series 2011A Notes. Bond Counsel renders its opinion under existing statutes and court decisions as of the issue date, and assumes no obligation to update its opinion after the issue date to reflect any future action, fact or circumstance, or change in law or interpretation, or otherwise. Bond Counsel expresses no opinion on the effect of any action hereafter taken or not taken in reliance upon an opinion of other counsel on the exclusion from gross income for Federal income tax purposes of interest on the Series 2011A Notes, or under state and local tax law.

### **Certain Ongoing Federal Tax Requirements and Covenants**

The Code establishes certain ongoing requirements that must be met subsequent to the issuance and delivery of the Series 2011A Notes in order that interest on the Series 2011A Notes be and remain excluded from gross income under Section 103 of the Code. These requirements include, but are not limited to, requirements relating to use and expenditure of gross proceeds of the Series 2011A Notes, yield and other restrictions on investments of gross proceeds, and the arbitrage rebate requirement that certain excess earnings on gross proceeds be rebated to the Federal government. Noncompliance with such requirements may cause interest on the Series 2011A Notes to become included in gross income for Federal income tax purposes retroactive to their issue date, irrespective of the date on which such noncompliance occurs or is discovered. The Authority has covenanted to comply with certain applicable requirements of the Code to assure the exclusion of interest on the Series 2011A Notes from gross income under Section 103 of the Code.

### **Certain Collateral Federal Tax Consequences**

The following is a brief discussion of certain collateral Federal income tax matters with respect to the Series 2011A Notes. It does not purport to address all aspects of Federal taxation that may be relevant to a particular owner of a Series 2011A Note. Prospective investors, particularly those who may be subject to special rules, are advised to consult their own tax advisors regarding the Federal tax consequences of owning and disposing of the Series 2011A Notes.

The Series 2011A Notes are not taken into account (subject to certain limitations) in determining the portion of a financial institution's interest expense subject to the pro rata interest disallowance rule of Section 265(b) of the Code for costs of indebtedness incurred or continued to purchase or carry certain tax-exempt obligations. The Series 2011A Notes, however, are taken into account in the calculation of the amount of a financial institution's preference items under Section 291 of the Code.

Prospective owners of the Series 2011A Notes should be aware that the ownership of such obligations may result in collateral Federal income tax consequences to various categories of persons, such as corporations (including S corporations and foreign corporations), financial institutions, property and casualty and life insurance companies, individual recipients of Social Security and railroad retirement benefits, individuals otherwise eligible for the earned income tax credit, and taxpayers deemed to have incurred or continued indebtedness to purchase or carry obligations the interest on which is excluded from gross income for Federal income tax purposes. Interest on the Series 2011A Notes may be taken into account in determining the tax liability of foreign corporations subject to the branch profits tax imposed by Section 884 of the Code.

## **Note Premium**

In general, if an owner acquires a Series 2011A Note upon original issuance for a purchase price (excluding accrued interest) or otherwise at a tax basis that reflects a premium over the sum of all amounts payable on the Series 2011A Note after the acquisition date (excluding certain “qualified stated interest” that is unconditionally payable at least annually at prescribed rates), that premium constitutes “bond premium” on that Series 2011A Note (a “Premium Note”). In general, under Section 171 of the Code, an owner of a Premium Note must amortize the bond premium over the remaining term of the Premium Note based on the owner’s yield over the remaining term of the Premium Note, determined based on constant yield principles (in certain cases involving a Premium Note callable prior to its stated maturity date, the amortization period and yield may be required to be determined on the basis of an earlier call date that results in the lowest yield on such note). An owner of a Premium Note must amortize the bond premium by offsetting the qualified stated interest allocable to each interest accrual period under the owner’s regular method of accounting against the bond premium allocable to that period. In the case of a tax-exempt Premium Note, if the bond premium allocable to an accrual period exceeds the qualified stated interest allocable to that accrual period, the excess is a nondeductible loss. Under certain circumstances, the owner of a Premium Note may realize a taxable gain upon disposition of the Premium Note even though it is sold or redeemed for an amount less than or equal to the owner’s original acquisition cost. Owners of any Premium Notes should consult their own tax advisors regarding the treatment of bond premium for Federal income tax purposes, including various special rules relating thereto, and state and local tax consequences, in connection with the acquisition, ownership, amortization of bond premium on, sale, exchange, or other disposition of Premium Notes.

## **Backup Withholding**

Information reporting requirements apply to interest on tax-exempt obligations, including the Series 2011A Notes. In general, such requirements are satisfied if the interest recipient completes, and provides the payor with, a Form W-9, “Request for Taxpayer Identification Number and Certification,” or unless the recipient is one of a limited class of exempt recipients, including corporations. A recipient not otherwise exempt from information reporting who fails to satisfy the information reporting requirements will be subject to “backup withholding,” which means that the payor is required to deduct and withhold a tax from the interest payment, calculated in the manner set forth in the Code. For the foregoing purpose, a “payor” generally refers to the person or entity from whom a recipient receives its payments of interest or who collects such payments on behalf of the recipient.

If an owner purchasing a Series 2011A Note through a brokerage account has executed a Form W-9 in connection with the establishment of such account, as generally can be expected, no backup withholding should occur. In any event, backup withholding does not affect the excludability of the interest on the Series 2011A Notes from gross income for Federal income tax purposes. Any amounts withheld pursuant to backup withholding would be allowed as a refund or a credit against the owner’s Federal income tax once the required information is furnished to the Internal Revenue Service.

## **Miscellaneous**

Tax legislation, administrative actions taken by tax authorities, and court decisions, whether at the Federal or state level, may adversely affect the tax-exempt status of interest on the Series 2011A Notes under Federal or state law and could affect the market price or marketability of the Series 2011A Notes.

Prospective purchasers of the Series 2011A Notes should consult their own tax advisors regarding the foregoing matters.

See Appendix E for the proposed form of opinion of Bond Counsel.

## **RATINGS**

Moody's Investors Service ("Moody's") and Standard & Poor's Ratings Services ("S&P") have rated the Series 2011A Notes "MIG 1" and "SP-1+", respectively. Such ratings reflect only the views of such organizations, and an explanation of the significance of such ratings may be obtained from the rating agency furnishing the same. There is no assurance that any of the ratings will continue for any given period of time or that any rating will not be lowered or withdrawn entirely by Moody's or S&P if, in their respective judgment, circumstances so warrant. A downward change in, or withdrawal of, a rating may have an adverse effect on the market price of the Series 2011A Notes.

## **UNDERWRITING**

The Underwriters have jointly and severally agreed, subject to certain conditions, to purchase from the Authority the Series 2011A Notes at an aggregate purchase price of \$881,024,089.96, reflecting an original issue premium of \$14,227,257.55 and an Underwriters' discount of \$1,248,167.59 and to reoffer such Series 2011A Notes at the public offering prices or yields set forth on the cover page hereof. Such Series 2011A Notes may be offered and sold to certain dealers (including dealers depositing such Series 2011A Notes into investment trusts) at prices lower and yields higher than such public offering prices and yields and prices and yields may be changed, from time to time, by the Underwriters. The Underwriters' obligations are subject to certain conditions precedent, and they will be obligated to purchase all such Series 2011A Notes if any Series 2011A Notes are purchased. The Underwriters have designated RBC Capital Markets LLC, as Representative of the Underwriters of the Series 2011A Notes.

## **LEGALITY OF INVESTMENT**

Pursuant to the Act, the Series 2011A Notes 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 2011A Notes 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 2011A Notes are subject to the approval of Hawkins Delafield & Wood LLP, New York, New York, Bond Counsel to the Authority. Certain legal matters are subject to the approval of William J. Estes, Esq., General Counsel to the Authority, and of the Law Offices of Joseph C. Reid, P.A., New York, New York, Counsel to the Underwriters.

## **CONSULTANT'S AND ACCOUNTANT'S REPORTS**

The Traffic Engineer's Report is included herein as Appendix A of this Offering Memorandum in reliance upon the authority of Henningson, Durham & Richardson Architecture and Engineering, P.C. (the "Traffic Engineer") as experts. The Traffic Engineer has advised the Authority that they have reviewed the summaries contained in this Offering Memorandum of the information, estimates and projections contained in the Traffic Engineer's Report and that, in their opinion, the statements made herein are correct and fairly present in summary form the information contained in such Traffic Engineer's Report, and that all material assumptions or qualifications with respect to such statements are reflected therein.

The financial statements of the Authority for the fiscal years ended December 31, 2010 and 2009, included in Appendix B of this Offering Memorandum have been audited by Toski, Schaefer & Co., P.C., independent auditors, as stated in their report appearing in Appendix B.

### **FINANCIAL ADVISOR**

First Southwest Company is employed as Financial Advisor to the Authority in connection with the issuance of the Series 2011A Notes. The Financial Advisor's fee for services rendered with respect to the sale of the Series 2011A Notes is contingent upon the issuance and delivery of the Series 2011A Notes. First Southwest Company, in its capacity as Financial Advisor, assumes no responsibility for the information, covenants and representations contained in any of the legal documents with respect to the federal income tax status of the Series 2011A Notes or the possible impact of any present, pending or future actions taken by any legislative or judicial bodies.

The Financial Advisor to the Authority has provided the following sentence for inclusion in this Offering Memorandum. The Financial Advisor has reviewed the information in this Offering Memorandum in accordance with, and as part of, their responsibilities to the Authority and, as applicable, to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Financial Advisor does not guarantee the accuracy or completeness of such information.

### **CONTINUING DISCLOSURE UNDER SEC RULE 15c2-12**

In order to assist the purchasers of the Series 2011A Notes 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 2011A Notes to provide continuing disclosure. The Authority will undertake for the benefit of the holders of the Series 2011A Notes 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, 2011, certain financial information and operating data concerning the Authority and the sources of revenue for Bonds issued under the 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, 2011, 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 2011A Notes, to provide to the MSRB, in a timely manner, 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 Offering Memorandum under the headings "RESULTS OF OPERATIONS — Financial Results of Operations", "MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS — Traffic and Revenue", "BUDGET AND CAPITAL PROGRAMS; TRAFFIC ENGINEER'S REPORT — 2011 Revised Financial Estimates," "— Funding of the Multi-Year Capital Plan", and "— 2011 Capital Construction Program" and "AUTHORITY FACILITIES AND OPERATIONS — Budget Process — Operating and Capital" 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 2011A Notes: (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 Bonds, or other material events affecting the tax status of the 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 Issuer; (13) the consummation of a merger, consolidation, or acquisition involving the Issuer or the sale of all or substantially all of the assets of the Issuer, 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; and (14) appointment of a successor or additional trustee or the change of name of a trustee, if material. In addition, the Authority will undertake, for the benefit of the holders of the Series 2011A Notes, 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 Authority has never failed to timely comply with its obligations under a continuing disclosure agreement or to allow underwriters of its bonds to fulfill their obligations under Rule 15c2-12.

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 2011A Notes, may recover monetary damages thereunder under any circumstances. Any Series 2011A Noteholder, 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 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 2011A Notes will be on file at the office of the Authority.

## **MISCELLANEOUS**

The references herein to the Bond Resolution, the Series 2011A Note Resolution and the Series I Bond Resolution are brief outlines of certain provisions thereof. Such outlines do not purport to be complete and reference is made to such documents for full and complete statements of such provisions. Copies of such documents are on file at the offices of the Authority and the Trustee.

The agreements of the Authority with the holders of the Series 2011A Notes are fully set forth in the Series 2011A Note Resolution. Neither any advertisement of the Series 2011A Notes nor this Offering Memorandum is to be construed as a contract with purchasers of the Series 2011A Notes.

Any statements in this Offering Memorandum 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.

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The delivery of this Offering Memorandum by its Chief Financial Officer has been duly authorized by the Authority.

**NEW YORK STATE THRUWAY AUTHORITY**

By:           /s/ John M. Bryan            
Chief Financial Officer

**REPORT OF TRAFFIC ENGINEER**

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May 13, 2011

***To: Members of the New York State Thruway Authority***

You have requested that Henningson, Durham & Richardson Architecture and Engineering, P.C. (HDR) complete a traffic and revenue study for use in connection with the sale and issuance by the New York State Thruway Authority of its General Revenue Bond Anticipation Notes, Series 2011A.

This study identifies key characteristics of the New York State Thruway, including its users and markets, toll rates, traffic growth trends, and revenue and expense projections through 2015. We also review the physical condition of the system and assess the ability of the proposed capital program to maintain the facility in its current condition.

Our projections for future growth in traffic and revenue on the New York State Thruway are based on unchanged toll rates from those last adjusted in January 2010. Several important assumptions about economic conditions also form the basis of our forecasts and we believe these assumptions to be reasonable:

- The economic recession is segueing into growth, to be sustained through 2015. The national recovery will be reflected, by and large, into recovery in the various regions that form the markets for the Thruway.
- Commercial traffic will be driven by a robust growth of industrial production and trade through 2012, moderating somewhat in the remainder thereafter to 2015.
- Fuel prices are expected to increase by over 29% in 2011, followed by subsequent annual growth of 3.25% thereafter.

Based on our analysis of the facility and its past traffic and revenue history we have reached the following conclusions:

- We forecast revenues to grow by 1.1% in 2011, 2.9% in 2012, 2.0% in 2013, 1.9% in 2014 and 1.7% in 2015.
- Additional toll increases could provide significant amounts of additional revenue.
- The New York State Thruway's capacity will be sufficient to accommodate projected increases in traffic.
- The New York State Thruway has been maintained to a good condition over the years.

- Authority's operating, maintenance and capital program should ensure that the conditions of the Thruway will continue to be maintained to this level in the future.

We recognize the invaluable assistance of Authority staff in completing this study.

Sincerely,

**Henningson, Durham & Richardson Architecture and Engineering, P.C**

The image shows two handwritten signatures in black ink. The signature on the left is 'Pierre Vilain' written in a cursive style. The signature on the right is 'Thomas C. McLaughlin' also in a cursive style.

---

Pierre Vilain, Ph.D.  
Vice President

---

Thomas McLaughlin, P.E.  
Senior Vice President

The logo for HDR, consisting of the letters 'HDR' in a bold, serif font.

Henningson, Durham &  
Richardson Architecture and  
Engineering, P.C. in association  
with HDR Engineering, Inc.



# REPORT OF THE TRAFFIC ENGINEER

May 13, 2011

HDR Project No. 000000000146475

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## 1. EXECUTIVE SUMMARY

This report includes a traffic and revenue study for use in connection with the sale and issuance by the New York State Thruway Authority (Authority) of its General Revenue Bond Anticipation Notes, Series 2011A prepared by Henningson, Durham & Richardson, Architecture and Engineering, P.C. (HDR).

The New York State Thruway (Thruway) is a vital transportation route that links nearly all major cities in the State. The Thruway is a highly diverse facility in terms of the areas it links and the markets it serves. It includes urban, suburban and rural sections, serving commuters and occasional users, recreational and business travelers, and both local and long-distance commercial trucking traffic. Commercial vehicles' share of traffic varies considerably along the Thruway, averaging 10% system-wide. In 2010, there were 222.8 million passenger and 24.8 million commercial vehicle trips on the Thruway, with an average trip length of 37.2 miles for passenger vehicles and 59.5 miles for commercial vehicles.

Tolls on the Thruway are relatively low in comparison to similar facilities in the northeast. For example the Thruway rate for passenger cars is almost 45% lower than the Pennsylvania Turnpike and the New Jersey Turnpike. The Authority has instituted nine general toll increases since the start of toll operations in 1954. The recent increases include January 2008, when a 10% increase for cash paying customers was instituted. Another 5% increase in tolls was implemented in January 2009 which was followed by a similar increase in January 2010.

Thruway traffic trends show that the period between 2001 and 2004 was characterized by buoyant traffic growth, while 2005 to the present saw overall declines. The reasons for the differential trends in the period after 2005 are tied to several major factors, including toll increases in 2005, 2008, 2009 and 2010; the recession that began in December 2007 and ended in 2009; and gas and diesel price increases. Traffic in 2005 and 2006 was impacted by reclassification and simplification of the toll structure, and the removal of tolls from Black Rock and City Line Barriers both of which acted to reduce the number of toll transactions.

Toll revenues have been maintained despite a difficult economic environment: Since 2005, toll revenues on the Thruway increased by over 4% at a compounded rate, reflecting primarily the impact of toll increases. The forecast to 2015 developed here assumes relatively robust economic recovery through 2013, becoming slower in 2014 and 2015. During this forecast horizon diesel prices in real terms are expected to increase 38.4% by 2015 and gasoline prices are expected to increase 50.9%. Together, these factors should generate annual growth in passenger vehicles of 1.4% and commercial vehicles of 3.0%.

The Authority has developed comprehensive integrated long range capital and maintenance plans for its highway, bridge and facilities infrastructure. Pavement and bridge management strategies are developed and implemented to address maintenance, repair and rehabilitation needs. Routine maintenance activities are performed by Authority staff from its 21 maintenance sections in the four divisions. To meet the challenges of maintaining an aging infrastructure in good condition while providing the needed operational and service improvements, the Authority has developed a Multi-Year Capital program for 2005 -2011 with 2011 being the last year of the current program. The Authority is developing a \$1.8 billion Multi-Year Capital Program for the period 2012 to 2015. For the period 2011 – 2015 the Authority expects to spend \$2.2 billion on capital projects.

The review of the Authority's operating, maintenance and capital activities summarized in this report, as well as a "drive through" survey lead to the conclusion that the Thruway has been maintained to a good condition over the years. Further, the Authority's capital program should ensure that the conditions of the facilities will continue to be maintained to this level in the future.

Total revenues, which include concession and lease revenues as well as tolls, are forecast to increase to \$739.9 million in 2015, which reflects annual growth of 2% over the forecast horizon. Given the projected growth in maintenance expenses, the current forecasts suggest a shortfall in the funds available for the reserve maintenance fund provision, canal operating and capital program by 2013 of \$51.0 million. This shortfall is expected to grow to \$120.4 million by 2015.

Our projections for future growth in traffic and revenue on the New York State Thruway are based on unchanged toll rates from those last adjusted in January 2010. The traffic and revenue modeling contained in the report strongly support the premise that sufficient additional toll revenues *can* be generated by toll increases as needed.

## 2. INTRODUCTION

The current report includes a traffic and revenue study for use in connection with the sale and issuance by the New York State Thruway Authority (Authority) of its General Revenue Bond Anticipation Notes, Series 2011A prepared by Henningson, Durham & Richardson, Architecture and Engineering, P.C. (HDR). The Authority is a Public Benefit Corporation created by the New York State Legislature in 1950 to build, operate and maintain the Thruway System (Thruway). The New York State Canal Corporation (Canal Corporation), a subsidiary public corporation of the Authority, was created by the New York State Legislature in August 1992 to accept jurisdiction and control over the New York State Canal System from New York State (the State). The Boards of both the Authority and the Canal Corporation each consist 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 the 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 connection 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) and I-84 were added to the Thruway in 1991 and 1992, respectively. Under the 1991 legislation, the Authority is prohibited from imposing any tolls or other charges for the use of the CWE or I-84. The 1992 legislation which transferred responsibility for maintenance of the Canal System to a subsidiary corporation of the Authority also authorized and directed the Authority to assist in the financing of certain transportation-related projects and facilities under the category of "Other Authority Projects". In October 2006, in accordance with the 1991 legislation, the Authority provided the State with one year's notice of its intent to return the operations of I-84 to the State. Additional legislation in 2007 authorized the Authority and the State's Department of Transportation (NYSDOT) to annually enter into agreements under which the Authority continued to maintain and operate I-84 through October 11, 2010 at NYSDOT's expense. As of October 11, 2010, I-84's operation and maintenance was transferred back to NYSDOT. Similarly, the Authority entered into agreement with the Division of State Police (DSP) to maintain Troop T services on I-84 with the costs to be funded by DSP; this continued until the transfer back on October 11, 2010.

Operationally, the Authority is segmented into four regional divisions – Albany, Buffalo, Syracuse and New York. It includes 2,822 lane miles, 811 bridges, more than 350 office and maintenance buildings, 27 travel plazas, 60 toll facilities, nearly 120 water services, 17 wastewater treatment plants and 24 motor fueling stations for Authority vehicles and equipment.

The Thruway is a vital transportation route with various tolling structures in effect based on vehicle class. There are two main tolling structures: the distance based (or ticket) section where tolls are charged depending on the miles traveled, and the fixed toll barriers generally in the New York metropolitan area, where tolls are charged based on a fixed rate for nine vehicle classes.

In 2010, there were 222.8 million passenger and 24.8 million commercial vehicle trips on the Thruway – with an average trip length of 37.2 miles for passenger vehicles and 59.5 miles for commercial vehicles. This shows a 0.13% growth from 222.5 million passenger vehicle trips in 2009 and a growth of 2.4% from 24.2 million commercial vehicle trips in 2009. Revenues collected during 2010 were \$641.2 million from toll receipts, which was a growth of 4.8% above 2009, primarily due to a 5% toll adjustment implemented January 3, 2010. In 2010, \$413.1 million, or 64.4% of total toll revenues came from passenger vehicles while \$228.1 million or 35.6% of total toll receipts were generated from commercial vehicles.



### 3. THE THRUWAY SYSTEM

#### a. Description

The various sections of the Thruway are shown in Table 1. The Thruway is the major east-west highway transportation connection in the State. The Thruway mainline begins in the upper reaches of New York City and makes its way across the state to the Pennsylvania state line at Ripley, a distance of approximately 496 miles of highway. The mainline links the two major cities in the state, New York City and Buffalo, in addition to linking Rochester and the smaller urban areas of Syracuse, Utica, and the State capital, Albany.

Other Thruway sections provide direct connections to the Connecticut and Massachusetts Turnpikes, New Jersey's Garden State Parkway and other major expressways that lead to Canada, New England, the Midwest and the South.

**Table 1: The Thruway System**

Section	Length (in Miles)
The Mainline (New York - Buffalo)	426
Erie Section (Buffalo - Pennsylvania Line)	70
Niagara Section I-190 (Buffalo - Niagara Falls)	21
Berkshire Section (Selkirk - Massachusetts Line)	24
New England Section (I-95) (Bronx - Connecticut Line)	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
<b>Total</b>	<b>570</b>

Source: The Thruway Fact book

#### i. Core Sections of the Thruway

The Thruway has two tolling systems in place – the distance-based ticket system and the fixed toll bridge and barrier system. Most of the Mainline is under the ticket system, which starts in Orange County at Woodbury and extends to Williamsville, just outside of Buffalo, a driving distance of 381 miles. The Erie Section, which goes a distance of 70 miles from Buffalo to the Pennsylvania state line, has a distance based ticket tolling system as do the 24 miles of highway that comprise the Berkshire Section which provides connection between Albany and the Massachusetts Turnpike. The bridge and barrier locations include the Grand Island Bridges, Tappan Zee Bridge, Yonkers Barrier, New Rochelle Barrier, Spring Valley Barrier and Harriman Barrier.

#### ii. Mandated Additions to the Thruway

In addition to the original mandate of the Authority to operate and maintain the ticket and the bridge and barrier systems along the Thruway, the Authority was given responsibility over several other transportation facilities:

- The Cross-Westchester Expressway, which starts at I-87 near Tarrytown and travels east for 11 miles to the Thruway's New England Section (I-95) in Rye, was added to the Authority's mandate in 1991.
- In 1991, 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. As previously discussed, the Authority has been reimbursed fully for all operating and maintenance costs since November 2007 by NYSDOT. The operation and maintenance responsibility of I-84 was transferred back to NYSDOT as of October 11, 2010.
- In 1992, the State Canal Corporation was formed and the Authority assumed control of the maintenance and operation of the 524-mile New York State Canal System. The Canal System is comprised of the Erie, Champlain, Oswego, and Cayuga-Seneca canals.

Financially, both I-84 and the Canal System projects are considered to be Other Authority Projects, and funds for their maintenance and operations can only be provided through the Other Authority Projects Operating Fund which at this time only funds the Canal System, given the transfer back to NYSDOT of I-84.

#### **b. Use of the Thruway**

The Thruway is a highly diverse facility in terms of the areas it links and the markets it serves. It includes urban, suburban and rural sections, serving commuters and occasional users, recreational and business travelers, and both local and long-distance commercial trucking traffic. Commercial vehicles' share of traffic varies considerably along the Thruway, averaging 10% system-wide. Commercial traffic is higher than average at the Woodbury, Newburgh and Schenectady toll plazas, where it reaches 15%. Commercial traffic is highest at Fultonville, where it reaches 30%, and Waterloo and Pembroke where it is close to 20% at each location. Overall, commercial traffic generates a large share of revenues, accounting for 36% of toll revenues in 2010.

Many of the State's major private sector employers are located within easy access to the Thruway, contributing to the facility's diverse user base. These include IBM, General Electric, Eastman Kodak, Bausch & Lomb, Xerox, Wegmans and United Technologies. In addition, major distribution centers for Wal-Mart, Target and Wegmans are all located near the Thruway, as are several major retail centers such as Woodbury Commons.

#### **i. Thruway Users**

As typical of toll roads in North America, the Thruway has been significantly affected by economic slowdowns, as well as by high fuel prices in the last several years. While traffic in 2010 was 3.3% lower than in 2007 (pre-recession), the components of the facility's market performed differently: Passenger vehicles on the ticket system increased by 1%, while on the barrier sections they declined by over 6%. Commercial vehicles using the ticket and the bridge and barrier systems both declined, by over 11% and 9%, respectively. The heterogeneity of the Thruway system is best illustrated by describing the markets served by different regional sections of the facility:

**Southern Sections:** The southern sections of the Thruway include I-87 from the New York City line over the Tappan Zee Bridge on I-87/I-287 to before the start of the ticket system, and eastern sections of the roadway that include I-95 to the Connecticut border. These sections serve high proportions of commuting traffic, as well as longer distance trips, with New York City being a principal origin and destination point. A large component of the traffic is also comprised of relatively short distance trips between suburban destinations in Westchester

and Rockland counties. Locally, several roads, such as the Saw Mill Parkway, Hutchinson River Parkway and Sprain Brook Parkway, offer un-tolled alternatives to the Thruway for passenger vehicles.

**Hudson Valley:** Beginning at the Woodbury Plaza and extending to south of Albany, the Thruway serves local traffic and a relatively high proportion of recreational and longer distance business trips. Commercial traffic is relatively high in parts, notably at interstate connections of the Newburgh Toll Plaza where the Thruway Mainline now provides a direct connection with I-84.

**Albany to Buffalo:** This section of the Thruway is a part of I-90, and connects many of the State’s largest urban areas, including Buffalo, Rochester, Syracuse, Utica and Albany. The Thruway carries higher proportions of commuters around these cities, while also serving longer distance traffic throughout. There are peaks in commercial traffic shares at several points, as well as relatively high shares of recreational traffic so that these sections have a more pronounced seasonality than the southern sections.

**Buffalo Region:** Traffic is comprised of local traffic as well as longer distance traffic to Niagara Falls and Canada via the Peace Bridge or Grand Island Bridges. The Erie section connects to Pennsylvania, and includes significant leisure traffic along with some of the highest proportions of interstate commercial traffic at the Pennsylvania State line.

Table 2 below reports the population of major urban areas along the Thruway. The Compound Annual Growth Rate (CAGR) shown in this table reveal the contrast in growth between the faster-growing cities in the eastern section of the State (New York City and Albany) compared with the decline of those cities to the west.

**Table 2: Population Growth in the New York State Thruway Markets**

<b>MSA Population Estimates</b>	<b>2009</b>	<b>2000</b>	<b>Compound Annual Growth Rate (CAGR) (00-09)</b>
Albany-Schenectady-Troy, NY	857,592	827,227	0.4%
Buffalo-Niagara Falls, NY	1,123,804	1,169,159	-0.4%
New York-White Plains-Wayne, NY-NJ	11,732,233	11,309,941	0.4%
Rochester, NY	1,035,566	1,041,595	-0.1%
Syracuse, NY	646,084	649,817	-0.1%
Utica-Rome, NY	293,280	299,428	-0.2%
<b>Total</b>	<b>15,688,559</b>	<b>15,297,167</b>	<b>0.3%</b>

Source: Census Bureau

## **ii. Traffic Characteristics**

The busiest section of the ticket system is near Albany at Interchange 24 which joins I-90 and I-87, followed closely by Interchanges 50 and 55 near Buffalo at the end of the main ticket and Erie section ticket systems. The Woodbury traffic interchange near New York City also experiences extensive use, as it is the exit point for southbound traffic from the ticket system.

Traffic on the bridge and barrier system tends to be significantly higher than the traffic on most sections of the ticket system, as the barrier sections are in dense urban or suburban locations. For example, the Tappan Zee Bridge has twice the traffic volume of Interchange 24, and the barrier at New Rochelle on the New England Thruway (I-95) likewise also is busier than the busiest interchange on the ticket system.

Table 3 shows the distribution of exit traffic in 2010 throughout the Thruway System. In 2010, 144.6 million revenue-paying vehicles used the ticket portions of the Thruway. Comparison with similar exit traffic rankings from the past (2006) suggests that that traffic patterns are fairly stable. The top five interchanges in terms of traffic are unchanged from 2006 to 2010. However, there are some changes where, for example, interchanges around Syracuse were busier in 2010 than they were in 2006.

Table 3 shows which interchanges receive a significant proportion of commercial traffic. As a proportion of total traffic, Fultonville (Interchange 28) experiences the highest commercial traffic volume followed by Ripley at the Pennsylvania Stateline (Interchange 61). The Berkshire connector, interchanges around Buffalo (Interchanges 50 and 55) and interchanges near New York City, such as Woodbury and Newburgh, also experience a high proportion of commercial traffic.

**Table 3: Ticket System Traffic Summary 2010**

Exiting Traffic at Interchanges									
Interchange		Mile Post	Passenger Cars	Commercial Vehicles	Grand Total	% of Grand Total	2010 Grand Total Rank	2006 Grand Total Rank	% of Comm. Traffic
No.	Name								
15	Woodbury	45	6,343,868	1,080,462	7,424,330	5.13%	4	4	14.6%
16	Harriman	45	1,025,157	52,010	1,077,167	0.74%	43	42	4.8%
17	Newburgh	60	4,784,991	774,162	5,559,153	3.84%	7	6	13.9%
18	New Paltz	76	2,451,011	135,607	2,586,618	1.79%	21	21	5.2%
19	Kingston	91	2,995,895	196,171	3,192,066	2.21%	16	15	6.1%
20	Saugerties	101	1,398,146	84,037	1,482,183	1.02%	33	34	5.7%
21	Catskill	114	1,471,998	124,475	1,596,473	1.10%	32	29	7.8%
21 B	Coxsackie	124	990,891	115,008	1,105,899	0.76%	42	43	10.4%
B1	Post Road	B7	2,362,284	392,240	2,754,524	1.90%	19	20	14.2%
B2	Taconic	B15	776,670	8,657	785,327	0.54%	47	47	1.1%
B3	Canaan-Mass	B18	3,269,487	780,169	4,049,656	2.80%	9	9	19.3%
22	Selkirk	135	654,049	86,354	740,403	0.51%	49	48	11.7%
23	Boulevard-Alb.	142	4,399,161	364,682	4,763,843	3.29%	8	8	7.7%
24	Washington-Alb.	162	12,240,873	1,048,386	13,289,259	9.19%	1	1	7.9%
25	Schenectady	154	6,579,813	207,281	6,787,094	4.69%	5	5	3.1%
25 A	Schenectady I-88	159	2,953,835	535,378	3,489,213	2.41%	11	12	15.3%
26	Rotterdam	162	1,122,116	101,384	1,223,500	0.85%	37	38	8.3%
27	Amsterdam	174	1,508,334	178,588	1,686,922	1.17%	29	30	10.6%
28	Fultonville	182	557,802	270,013	827,815	0.57%	46	46	32.6%
29	Canajoharie	194	394,230	45,648	439,878	0.30%	50	50	10.4%
29 A	Little Falls	211	198,550	28,718	227,268	0.16%	52	52	12.6%
30	Herkimer	220	671,760	74,861	746,621	0.52%	48	49	10.0%
31	Utica	233	1,579,539	231,572	1,811,111	1.25%	26	26	12.8%
32	Westmoreland	243	1,080,447	83,426	1,163,873	0.80%	40	39	7.2%
33	Verona	253	2,336,680	184,210	2,520,890	1.74%	23	22	7.3%
34	Canastota	262	1,371,912	93,220	1,465,132	1.01%	34	33	6.4%
34 A	Collamer-Syr.	277	3,118,934	296,493	3,415,427	2.36%	13	14	8.7%
35	Thomson-Syr.	279	1,720,305	214,951	1,935,256	1.34%	25	25	11.1%
36	Mattydale-Syr.	283	2,480,090	367,653	2,847,743	1.97%	18	17	12.9%
37	Electronics-Syr.	284	1,153,611	69,664	1,223,275	0.85%	38	41	5.7%
38	Liverpool-Syr.	286	1,079,679	92,967	1,172,646	0.81%	39	40	7.9%
39	State Fair-Syr.	290	2,549,522	399,923	2,949,445	2.04%	17	18	13.6%
40	Weedsport	304	987,632	139,291	1,126,923	0.78%	41	37	12.4%
41	Waterloo	320	1,129,505	316,895	1,446,400	1.00%	35	35	21.9%
42	Geneva	327	1,541,628	201,695	1,743,323	1.21%	28	28	11.6%
43	Manchester	340	1,275,551	92,929	1,368,480	0.95%	36	36	6.8%
44	Canandaigua	347	3,272,139	141,343	3,413,482	2.36%	14	16	4.1%
45	Victor-Roch.	351	5,749,809	275,406	6,025,215	4.17%	6	7	4.6%
46	Henrietta-Roch.	362	3,002,589	446,753	3,449,342	2.39%	12	11	13.0%

Exiting Traffic at Interchanges									
Interchange		Mile Post	Passenger Cars	Commercial Vehicles	Grand Total	% of Grand Total	2010 Grand Total Rank	2006 Grand Total Rank	% of Comm. Traffic
No.	Name								
47	LeRoy-Roch.	379	2,309,196	272,281	2,581,477	1.78%	22	23	10.5%
48	Batavia	390	1,471,221	210,844	1,682,065	1.16%	30	32	12.5%
48 A	Pembroke	402	1,435,156	372,266	1,807,422	1.25%	27	27	20.6%
49	Depew	417	3,485,528	289,633	3,775,161	2.61%	10	10	7.7%
50	Williamsville-Buff	420	7,823,543	1,446,200	9,269,743	6.41%	2	2	15.6%
	<b>*** 15-50 INC BI-B3</b>		<b>111,105,137</b>	<b>12,923,906</b>	<b>124,029,043</b>				
55	Lackawanna-Buff.	429	7,367,609	1,170,668	8,538,277	5.90%	3	3	13.7%
56	Blasdell	432	2,584,722	165,133	2,749,855	1.90%	20	19	6.0%
57	Hamburg	436	2,167,189	97,380	2,264,569	1.57%	24	24	4.3%
57A	Angola	445	838,135	48,686	886,821	0.61%	45	45	5.5%
58	Silver Creek	456	880,882	86,892	967,774	0.67%	44	44	9.0%
59	Dunkirk	468	1,452,926	179,303	1,632,229	1.13%	31	31	11.0%
60	Westfield	485	252,465	25,425	277,890	0.19%	51	51	9.1%
61	Ripley/State Line-Pa.	496	2,305,970	973,544	3,279,514	2.27%	15	13	29.7%
	<b>*** 55-61</b>		<b>17,849,898</b>	<b>2,747,031</b>	<b>20,596,929</b>				
<b>TOTAL</b>			<b>128,955,035</b>	<b>15,670,937</b>	<b>144,625,972</b>				

### c. Existing and Historical Toll Rates

The Authority has instituted nine general toll increases since the start of toll operations in 1954. Tolls were kept constant from April 1988 to May 2005, which was the longest period between toll changes. Before that period, it was 1980 when tolls were last raised for both passenger and commercial vehicles. More recently, tolls were changed in May 2005 for both commercial vehicles and passenger vehicles on the ticket and the bridge and barrier systems along with toll class realignment, the institution of E-ZPass electronic toll collection discounts and an expanded commuter program. The toll class realignment greatly reduced the number of vehicle classifications, from 43 to 9, and is now based on the number of axles and the height of the vehicle. As a result of this change, certain commercial vehicles such as tandem truck trailer combinations that were given two tickets previously, and were thus counted as two transactions, are now only counted as one. In January 2008, a 10% increase for cash paying customers was instituted and in July 2008, the E-ZPass discount was reduced to 5% off of the cash rates. Another 5% increase in tolls was implemented in January 2009 which was followed by a similar increase in January 2010.<sup>1</sup>

#### i. Ticket, Bridge and Barrier Systems

Tolls on the ticket system are based on miles traveled and current tolls on the ticket system have been in effect since January 2010. Table 4 shows existing toll rates for passenger vehicles on a per mile basis. The current toll classification system is based on number of axles and height which categorize vehicles less than 7 feet and 6 inches in height as “low” and those greater than 7 feet and 6 inches in height as “high”.

<sup>1</sup> See the appendix to this report for details on historical toll changes.

To encourage use of E-ZPass, most toll roads, including the Thruway, offer discounts relative to cash tolls. E-ZPass passenger and commercial tolls are 5% lower for the ticket and the bridge and barrier systems. The Authority has instituted additional discounts through the E-ZPass program for frequent users, commuters and car poolers. On the ticket system, these take the form of annual permits (currently at \$88.00 per year) that allow unlimited use for passenger vehicles taking trips of 30 miles or less. Beyond the 30 miles, users pay a standard per mile trip rate for E-ZPass, as shown in Table 4.

**Table 4: Current Ticket System Toll Rates for Passenger Vehicles (in Cents/Mile)**

Existing Passenger Vehicle Ticket System Toll Rates		
Class	Toll Rate Per Mile (Cents per Mile)	
	E-ZPass Rate January 2010	Cash Rate Effective January 2010
2L Passenger car or 2-axle low truck	4.47¢/mile	4.70¢/mile
2L Permit vehicle	\$88/year	
	4.47¢/mile	
	beyond 30 miles	
3L 3-axle low vehicle or combination	6.91	7.28
4L 4-axle or more low vehicle or combination	8.21	8.65

Vehicles that are greater than 7 feet 6 inches in height are classified as commercial vehicles and pay a higher per mile trip rate, as shown in Table 5. Commercial vehicles with E-ZPass transponders pay a 5% lower per mile toll rate similar to the discount given to passenger vehicles.

**Table 5: Current Ticket System Toll Rates for Commercial Vehicles (in Cents/Mile)**

Existing Commercial Vehicle Ticket System Toll Rates		
Class	Toll Rate Per Mile (Cents per Mile)	
	E-ZPass Rate January 2010	Cash Rate Effective January 2010
2H 2-axle high vehicle	8.87¢/mile	9.34¢/mile
3H 3-axle high vehicle, or combination	15.24	16.04
4H 4-axle high vehicle, or combination	16.80	17.68
5H 5-axle high vehicle, or combination	22.71	23.90
6H 6-axle high vehicle, or combination	28.16	29.64
7H 7-axle or more high vehicle, or combination	33.60	35.36

Commercial E-ZPass customers that are frequent users may join the commercial charge account program that offers additional volume discounts on a post-paid account. As shown in Table 6, the Spring Valley and Tappan Zee Bridge barriers utilize incentive toll pricing mechanisms that charge different rates during the peak time periods for E-ZPass vehicles from classes 3L-7H. Generally, vehicles using E-ZPass are charged the lowest rates during off-peak hours, such as night time and early morning, while higher rates apply during the morning rush hours at the Tappan Zee Bridge and evening rush hours at Spring Valley barrier.

**Table 6: Current Passenger Toll (in \$) on the Bridge and Barrier System**

Passenger Toll (in \$) by Vehicle Class										
Current Toll Rates On the Bridge & Barrier System		2L				3L		4L		
		Cash Rate	E-ZPass Rate	Commuter	Resident	Carpool Rate	Cash Rate	E-ZPass Rate	Cash Rate	E-ZPass Rate
<b>Grand Island</b>		\$1.00	\$0.95	\$0.28	\$0.09	-	\$1.50	\$1.43	\$1.75	\$1.66
<b>Tappan Zee</b>	<b>Peak<sup>(1)</sup></b>	5.00	4.75	3.00	-	\$0.50	11.50	11.50	13.75	13.75
	<b>Off-Peak</b>	-	-	-	-	-	-	5.75	-	6.88
<b>Yonkers</b>		1.25	1.19	0.55	-	-	1.50	1.43	1.75	1.66
<b>New Rochelle<sup>(2)</sup></b>		1.75	1.66	1.10	-	-	2.50	2.38	3.00	2.85
<b>Spring Valley</b>	<b>Peak<sup>(3)</sup></b>	-	-	-	-	-	3.00	3.00	4.50	4.50
	<b>Off-Peak</b>	-	-	-	-	-	-	1.50	-	2.25
<b>Harriman</b>		1.25	1.19	0.55	-	-	1.50	1.43	1.75	1.66

**Notes:**

- (1) Round-trip toll collected southbound; no toll collected on northbound trips. For 3L and 4L E-ZPass customers, Peak and Off-Peak amounts reflect maximum and minimum amounts that can be charged.
- (2) Round-trip toll collected northbound; no toll collected on southbound trips.
- (3) Round-trip toll collected northbound for classes 3L and 4L. No southbound toll collected. For E-ZPass customers, Peak and Off-Peak amounts reflect maximum and minimum amounts that can be charged.

Current fixed toll rates for commercial vehicles on the bridge and barrier system are shown in Table 7. The Tappan Zee Bridge, Grand Island Bridges, New Rochelle and Spring Valley barriers collect tolls in only one direction.

**Table 7: Current Commercial Toll (in \$) on the Bridge and Barrier System**

Commercial Toll (in \$) by Vehicle Class													
Current Toll Rates On the Bridge & Barrier System		2H		3H		4H		5H		6H		7H	
		Cash Rate	E- ZPass Rate										
<b>Grand Island</b>		\$2.00	\$1.90	\$2.25	\$2.14	\$2.75	\$2.61	\$4.25	\$4.04	\$4.50	\$4.28	\$5.00	\$4.75
<b>Tappan Zee</b>	<b>Peak<sup>(1)</sup></b>	14.75	14.75	20.75	20.75	24.75	24.75	32.75	32.75	41.00	41.00	49.25	49.25
	<b>Off -Peak</b>	-	7.38	-	10.38	-	12.38	-	16.38	-	20.50	-	24.63
<b>Yonkers</b>		2.00	1.90	2.25	2.14	2.75	2.61	4.25	4.04	4.50	4.28	5.00	4.75
<b>New Rochelle<sup>(2)</sup></b>		3.50	3.33	4.25	4.04	5.00	4.75	8.00	7.60	8.75	8.31	9.75	9.26
<b>Spring Valley</b>	<b>Peak<sup>(3)</sup></b>	5.25	5.25	8.25	8.25	8.25	8.25	13.50	13.50	14.75	14.75	16.50	16.50
	<b>Off -Peak</b>	-	2.63	-	4.13	-	4.13	-	6.75	-	7.38	-	8.25
<b>Harriman</b>		2.00	1.90	2.75	2.61	3.00	2.85	4.25	4.04	5.00	4.75	5.75	5.46

**Notes:**

- (1) Round-trip toll collected southbound; no toll collected on northbound trips. For classes 2H and 7H E-ZPass customers, Peak and Off-Peak amounts reflect maximum and minimum amounts that can be charged.
- (2) Round-trip toll collected northbound; no toll collected on southbound trips.
- (3) Round-trip toll collected northbound for classes 2H-7H. No southbound toll collected. For E-ZPass customers, Peak and Off-Peak amounts reflect maximum and minimum amounts that can be charged.

Table 8 shows comparable per-mile toll rates for other toll facilities in the northeast United States. For example the Thruway rate for passenger cars is almost 45% lower (3.8 cents per mile) than the Pennsylvania Turnpike and the situation is similar for the New Jersey Turnpike. Rates for commercial vehicles are also lower, although

the difference is narrower, 20% lower (5.8 cents per mile) compared to Pennsylvania Turnpike and 18% lower (4.9 cents per mile) compared to New Jersey Turnpike.

**Table 8: Comparable Per-Mile Toll Rates**

Comparable Per-Mile Toll Rates <sup>(1)</sup>		
Toll Road	Passenger Cars cents/mile	5-axle Tractor-Trailer Combination cents/mile
<i>New York State Thruway</i>		
Controlled (Ticket) System	4.7	23.9
<i>Massachusetts Turnpike</i>		
State Line to Boston	3.8	16.7
<i>New Jersey Turnpike</i>		
Entire Length	8.0	28.8
Northern Section	16.1	60.4
<i>Pennsylvania Turnpike<sup>(2)</sup></i>		
Entire Length <sup>(3)</sup>	8.5	32.2 <sup>(4)</sup>
East of Harrisburg	9.3	33.1 <sup>(4)</sup>

**Notes:**

- (1) All calculations based on Cash Toll.
- (2) Does not include the Northeast Extension.
- (3) Does not include the surcharge at Gateway Toll Plaza (Ohio Border).
- (4) Toll by weight. Amounts shown for vehicles 45,001 to 62,000 lbs.

**ii. Discount Programs**

The Authority offers a variety of discounts for both commercial and passenger traffic above the 5% discount from the cash toll rate. Additional discounts that require an E-ZPass account can be divided into two types: (1) commuter discounts that are E-ZPass tag specific and can be availed by only a particular E-ZPass subscriber, and (2) commercial charge account discounts that are account specific and allow multiple E-ZPass tags to receive an additional discount. For passenger vehicles on the ticket system, the annual permit plan for \$88, which is an E-ZPass tag specific discount, allows unlimited usage for the first 30 miles or less per trip after which patrons pay the standard E-ZPass per mile rate (currently 4.47 cents / mile). A similar program exists for commuter passenger vehicles who frequently use the bridge and barrier system. Passengers pay a monthly minimum for a significantly discounted rate. For example, currently, on the Tappan Zee Bridge, passengers can pay \$3.00 per trip with a monthly minimum of \$60.00 (or 20 trips at \$3.00 per trip), a 40% discount off the cash rate. Similar commuter plans exist for the other barriers and Grand Island Bridges (see Table 6).

Table 9 shows the trends and importance of commuter and annual permit based traffic on Thruway facilities. Commuters form a significant portion of traffic on the Tappan Zee Bridge and Grand Island Bridges. On the ticket system and other barriers, commuter traffic as a proportion of total passenger traffic has declined slightly, while it has increased at certain barriers such as Yonkers, New Rochelle and particularly at Harriman where commuter traffic as a proportion of total passenger traffic has almost doubled in the period 2008 – 2010.

**Table 9: Percentage of Commuter and Permit Traffic**

	% Total Passenger Traffic		
	2008	2009	2010
<b>Ticket Section (Int. 15 - 61)</b>	7.6%	7.4%	7.4%
<b>Grand Island Bridge</b>	43.1%	43.6%	43.4%
<b>Tappan Zee Bridge</b>	28.7%	27.7%	26.4%
<b>Yonkers</b>	1.7%	2.3%	2.8%
<b>New Rochelle</b>	0.9%	1.0%	1.2%
<b>Spring Valley</b>	N/A	N/A	N/A
<b>Harriman</b>	3.9%	5.3%	6.5%

Additional E-ZPass discount programs exist for customers who carpool or are Grand Island residents and for other vehicle types such as hybrid passenger vehicles and motorcycles. On the Tappan Zee Bridge, vehicles that have 3 or more occupants are eligible for a carpool discount, which costs \$0.50 per trip (90% off the cash rate). Grand Island residents are eligible for a resident discount plan that applies only to passenger vehicles, at a rate of \$0.09 per trip. Certain hybrid passenger vehicles that are rated highly fuel efficient and meet specific emissions criteria are eligible to apply for a Green Pass discount that provides an additional 10% discount off the E-ZPass rate. A motorcycle E-ZPass tag provides a 50% discount off the passenger car cash rate.

Commercial customers that frequently use the Thruway can enroll in a commercial charge account program and qualify for a volume discount. Commercial vehicle owners and companies that own multiple vehicles that use the Thruway qualify for a 10% discount on their monthly toll bill that is greater than \$1,000. Customers qualify for 15% discount for total toll charges greater than \$2,000 per month and 20% for total toll charges over \$3,000 per month. In 2010, the total volume discount given to commercial customers totaled \$22.7 million, approximately 9.1% of total commercial tolls.

### iii. E-ZPass

The Authority pioneered the use of electronic toll collection in the Northeast when it introduced E-ZPass to travelers in 1993. The Authority is a founding member of the 14-state, 24-agency E-ZPass Interagency Group formed in 1990 with the intention of bringing a single-tag electronic toll collection system to New York, New Jersey and Pennsylvania. Most toll authorities in the Eastern United States have since joined the group.

The E-ZPass system was designed as a traffic management tool to ease congestion and make travel more convenient. While all Thruway toll plaza lanes are equipped to accept E-ZPass, many plazas offer non-stop “E-ZPass Only” lanes, eliminating the need to wait in line with cash-paying customers.

With E-ZPass, tolls are either pre-paid or post-paid depending on the vehicle and account types. With the exception of certain commercial vehicles that use post-paid accounts, most vehicles use pre-paid accounts. Pre-paid accounts can be paid through cash, check or credit card deposits. A tag mounted on the vehicle interacts with computers and the appropriate toll is calculated as the vehicle passes through the toll plaza. E-ZPass customers receive a 5% discount on Thruway cash tolls for both passenger and commercial vehicles.

E-ZPass is an improvement over conventional toll collection since it increases throughput for toll paying traffic and reduces expenses of toll collection. For the Authority, E-ZPass increases toll plaza throughput by some 200% to 300% without the need to build additional infrastructure. Additional benefits offered by E-ZPass are that it provides a more secure method of revenue collection by eliminating the exchange of cash and enhances audit control by centralizing user accounts.

Several improvements have been made at some of the busiest toll plazas system-wide with the installation of E-ZPass lane numbering signs and higher speed E-ZPass lanes at the Tappan Zee Bridge, New Rochelle and other plazas. In 2007, the Authority activated its first highway speed E-ZPass facility at the Spring Valley Toll Barrier for commercial vehicles. In May 2010, the Authority activated another highway speed E-ZPass facility on the ticket system for motorists at the Woodbury Toll Barrier, in Orange County. This major milestone was a step forward in the Authority’s ongoing effort to improve customer service along the Thruway. Passenger and Commercial E-ZPass customers who previously had to slowdown to pay their toll at Woodbury are now able to safely bypass the toll plaza and electronically pay their toll while traveling at highway speed. The Authority has been continually investing to accommodate highway speed E-ZPass, including plans to reconfigure the Williamsville Toll Plaza and Canaan Barrier on the Berkshire Connector.

The percentage of E-ZPass users has been steadily increasing for the Authority. For passengers on the ticket system, this share has increased to 57.6% in 2010 from 55.0% in 2008 on the Woodbury to Williamsville sections (New York – Buffalo) while on the Erie section (Buffalo – Pennsylvania state line) this share has increased from 44.7% in 2008 to 47.5% in 2010. Table 10 suggests that for passenger vehicles, E-ZPass usage at the bridge and barrier facilities is higher than on the ticketed portion of the system. For passenger vehicles, Table 10 does not include passengers who sign up for commuter and permit passes. Including them in this data would increase the percentage of E-ZPass traffic, particularly for those bridge and barrier locations that service significant number of commuters (as seen at the Tappan Zee Bridge). For commercial vehicles, E-ZPass usage is much higher than passenger vehicles across all the ticket, bridge and barrier locations and generally greater than 80% of commercial traffic use E-ZPass.

**Table 10: E-ZPass Adoption on the Ticket, Bridge and Barrier System**

	Passenger <sup>2</sup>				Commercial		
	% Transactions				% Transaction		
	2008	2009	2010		2008	2009	2010
<b>Woodbury - Williamsville Section</b>	55.0%	56.2%	57.6%		79.8%	80.5%	80.9%
<b>Erie Section</b>	44.7%	46.0%	47.5%		71.0%	72.1%	72.2%
<b>Grand Island Bridge</b>	29.6%	30.8%	31.2%		76.2%	77.2%	77.7%
<b>Tappan Zee Bridge</b>	65.4%	66.5%	68.2%		79.4%	79.9%	81.3%
<b>Yonkers</b>	67.2%	68.3%	69.8%		83.4%	84.6%	85.5%
<b>New Rochelle</b>	60.3%	61.1%	63.7%		79.5%	79.8%	81.3%
<b>Spring Valley</b>	27.3%	26.8%	28.5%		84.9%	85.6%	86.7%
<b>Harriman</b>	67.7%	68.7%	69.4%		81.8%	82.7%	83.7%

**d. Thruway Physical Plant**

The Authority maintains 570 center line miles of roadway including the 559-mile long New York State Thruway and the 11 mile long Cross Westchester Expressway. The Thruway connects the principal cities of the State from New York City to Albany, Utica, Syracuse, Rochester, and Buffalo and to the Pennsylvania Line. The New York State Thruway Authority is responsible for the physical plant assets described in this section.

<sup>2</sup> Does not include passengers on commuter or permit plans.

## **i. Roadways**

The Thruway system encompasses over 2800 lane-miles of roadway and 134 interchanges. In 1991, State legislation made the Authority additionally responsible for the operation and maintenance of 11 miles of I-287 Cross-Westchester Expressway. NYSDOT remains responsible for capital improvements to these 11 miles of roadway. The original Thruway was constructed between 1949 and 1960, with typically nine inches of reinforced concrete pavement on top of 12 inches of granular sub-base. Shoulders were constructed of treated granular material with an asphaltic wearing surface. Limited sections of the Thruway have been reconstructed with full-depth concrete pavement, while the vast majority of the original pavement has been repaired or rehabilitated and overlaid with asphalt.

## **ii. Bridges**

The Authority has either full or partial maintenance responsibility for 811 bridges. The structural characteristics of these bridges vary: about 15 percent are concrete structures, while the remaining 85 percent of the bridges are steel structures with reinforced concrete decks overlaid with asphalt.

By far the largest bridge on the Thruway system is the Tappan Zee Bridge over the Hudson River, 20 miles north of New York City. Opened to traffic in 1956, it is a three-mile multi-span steel truss, deck truss and girder type structure. Due to its size and importance, a permanent maintenance team is assigned to the Tappan Zee Bridge. The Tappan Zee Bridge routinely experiences peak hour volumes that are 40 percent higher than normal operational volumes. To increase the bridge's one-way traffic capacity, a movable barrier provides for the reversal of one of the seven traffic lanes to accommodate directional peak volumes. Currently several options are being investigated for a new structure over the Hudson River to replace the Tappan Zee Bridge, including the potential to accommodate a light rail or other transit system with this new structure and related capital improvements to the I-287 corridor. These options are being evaluated in the context of a major, inter-agency study involving the Authority, NYSDOT and the Metropolitan Transportation Authority (updated information is available at [www.nysthruway.gov](http://www.nysthruway.gov)).

Besides the Tappan Zee Bridge, the Thruway contains several other major structures. These include the Castleton-on-Hudson Bridge across the Hudson River on the Berkshire Section south of Albany, the four Grand Island Bridges spanning branches of the Niagara River north of Buffalo, the Niagara Viaduct, and the Byram River Bridge on the New England Section.

The Authority purchases property damage insurance for all bridges valued in excess of \$5.0 million. An insurance reserve has been funded in the amount of \$2.5 million to cover those bridges valued at less than \$5.0 million. For the Tappan Zee Bridge, two separate commercial policies provide loss of revenue and property damage coverage in the amount of \$550 million and terrorism coverage in the amount of \$100 million.

## **iii. Service Areas, Buildings and Equipment**

There are 364 buildings of various types along the Thruway, which are shown in Table 11. These include 4 administrative headquarters and 55 division headquarter buildings; 141 maintenance buildings; 64 service area buildings and 60 toll facilities; 12 police barracks and 28 miscellaneous buildings. The Thruway Authority Administrative Headquarters is located just off the Interchange 23 at 200 Southern Boulevard in Albany overlooking the Thruway mainline and the Albany Division maintenance complex. The building was constructed in 1972.

The Thruway's maintenance responsibility is divided into four divisions, with each division having its own headquarters complex. These Division headquarters are located in Suffern, Albany, Syracuse, and Buffalo. The

Division Headquarters complexes serve several functions, housing the administrative staff for the maintenance program, as well as provide offices for State police, toll collection, traffic and customer service, and personnel.

Tollbooth facilities are an important part of the Authority’s physical plant. The Thruway system contains over 250 toll lanes. The Tollbooths have all of the characteristics of buildings, with their own heating and lighting systems, windows and doors.

The Authority maintains an Advanced Traffic Management System, which provides automatic traffic information to users through dynamic message signs, e-mail alerts, radio systems and media coverage. The system includes a radio communication system with towers along the route, as well as an extensive Intelligent Transportation System (permanent overhead Variable Message Signs, Closed Circuit Television systems, traffic count stations and highway advisory radio signal). The Authority also owns and operates a large fleet of maintenance and construction vehicles and equipment, as well as a fleet of passenger vehicles.

**Table 11: Thruway Authority Buildings**

<b>Thruway Authority Buildings</b>	
<b>Description</b>	<b>Number</b>
Administrative Headquarters	4
Division Headquarters	55
Maintenance Sections	141
Service Areas	64
Toll Buildings	60
Police Barracks	12
Miscellaneous	28
<b>Total</b>	<b>364</b>

**iv. Additional Thruway Amenities (WiFi, ITS, E-ZPass, etc.)**

The Authority has added amenities to the Thruway to aid in travelers' information and convenience, congestion management and E-ZPass improvements. Some notable amenities are:

- Traveler Information Web Site - identifies active construction, accidents and other information for motorists.
- TransAlert Program – Subscribers receive by email or text message updates of incidents/accidents that impact traffic on the Thruway.
- Highway Speed E-ZPass (Open Road Tolling) was introduced at Spring Valley in 2007 and Woodbury in May 2010 with plans to add Highway Speed E-ZPass to additional major facilities in the future.
- Transportation Information System (TIS) upgrades, improved Highway Advisory Radio (HAR), and portable and fixed Dynamic Message Sign boards have been put in place to provide immediate communication with motorists during incidents that impact traffic.
- Free wireless internet access is available at all 27 Thruway travel plazas.

### e. Annual Routine Maintenance Activities

The Authority has developed comprehensive integrated long range capital and maintenance plans for its highway, bridge and facilities infrastructure. Pavement and bridge management strategies are developed and implemented to address maintenance, repair and rehabilitation needs. Routine maintenance activities are performed by Authority staff from its 21 maintenance sections in the four divisions. Responsibilities include snow and ice removal, pavement and bridge repair, guiderail and safety work, responding to incidents and accident damage, and right-of-way maintenance. Additional specialized maintenance activities are provided by the four centralized division maintenance crews and the Tappan Zee Bridge crews.

### f. Past Traffic Growth Trends

Table 12 and Table 13 detail historical traffic on the ticket, bridge and barrier systems since 2001. The traffic here reflects transactions, and as prior to the May 2005 reclassification, where some vehicles were counted as more than one transaction (such as tractor trailers), the total numbers of individual trips for that period are lower than the totals recorded in the tables. The data reveal a differential trend between 2001 and 2004, characterized by buoyant traffic growth, than 2005 to the present. The reasons for the differential trends in the period after 2005 are tied to several major factors:

**Table 12: Historical Traffic on the Ticket System (in '000s)**

Historical Ticket System Traffic				
Year	Passenger Vehicles	% Growth	Commercial Vehicles	% Growth
2001	115,542		22,547	
2002	119,698	3.6%	23,217	3.0%
2003	122,002	1.9%	23,779	2.4%
2004	126,124	3.4%	24,455	2.8%
2005 <sup>(1)</sup>	125,806	-0.3%	19,943	-18.5%
2006 <sup>(1)</sup>	127,751	1.5%	17,696	-11.3%
2007	127,658	-0.1%	17,681	-0.1%
2008	125,516	-1.7%	16,860	-4.6%
2009	128,230	2.2%	15,367	-8.9%
2010	128,955	0.6%	15,671	2.0%

**Notes:**

(1) A toll reclassification was implemented in May 2005 as a result some vehicle types that received 2 tickets are now processed as a single transaction and passenger and commercial classifications changed. See section 3.f.i for details

- The Thruway instituted toll increases in May 2005, January 2008 (cash), July 2008 (E-ZPass users), January 2009 and January 2010. Toll increases will impact traffic for all vehicle classes, though the toll increases also acted to increase revenues.
- Tolls were removed at the Black Rock and City Line barriers in Buffalo on October 30, 2006 which resulted in a decline in the number of transactions.
- The 18 month recession that began in December 2007 and ended in 2009 impacted traffic significantly nationwide, with several toll facilities impacted dramatically. The Thruway itself was not immune to the effects of the economic slowdown, as discussed in Appendix A.
- During 2008, gas and diesel prices increased significantly in the US. Overall compared to 2007, gas prices increased 16.2% in nominal terms and 11.7% in real terms in 2008. Diesel prices increased 32.1% in nominal terms and 27.1% in real terms. We estimate that during 2008 passenger traffic on the ticket system declined approximately 0.63% due to gas prices alone while commercial traffic declined 1% on

the ticket system as a result of increases in diesel prices. Increases in fuel prices impacted the bridge and barrier system similarly.

- Reclassification of the toll schedule had a considerable impact on commercial vehicle trends; this issue is discussed in the required data adjustments section.

**Table 13: Historical Traffic on the Bridge and Barrier System (in '000s)**

Historical Bridge and Barrier System Traffic				
Year	Passenger Vehicles	% Growth	Commercial Vehicles	% Growth
2001	108,403		13,230	
2002	110,844	2.3%	13,451	1.7%
2003	112,776	1.7%	13,481	0.2%
2004	117,061	3.8%	14,204	5.4%
2005 <sup>(1)</sup>	115,725	-1.1%	12,541	-11.7%
2006 <sup>(1)(2)</sup>	112,643	-2.7%	11,301	-9.9%
2007 <sup>(2)</sup>	100,565	-10.7%	10,061	-11.0%
2008	96,476	-4.1%	9,685	-3.7%
2009	94,281	-2.3%	8,841	-8.7%
2010	93,850	-0.5%	9,121	3.2%

**Notes:**

(1) A toll reclassification was implemented in May 2005 as a result some vehicle types that received 2 tickets are now processed as a single transaction and passenger and commercial classifications changed. See section 3.f.i for details

(2) Blackrock and Buffalo City Line tolls were removed on October 30, 2006 which reduced the number of transactions for the bridge and barrier system. 2007 was the first full year after the tolls were removed.

**i. Required Data Adjustments**

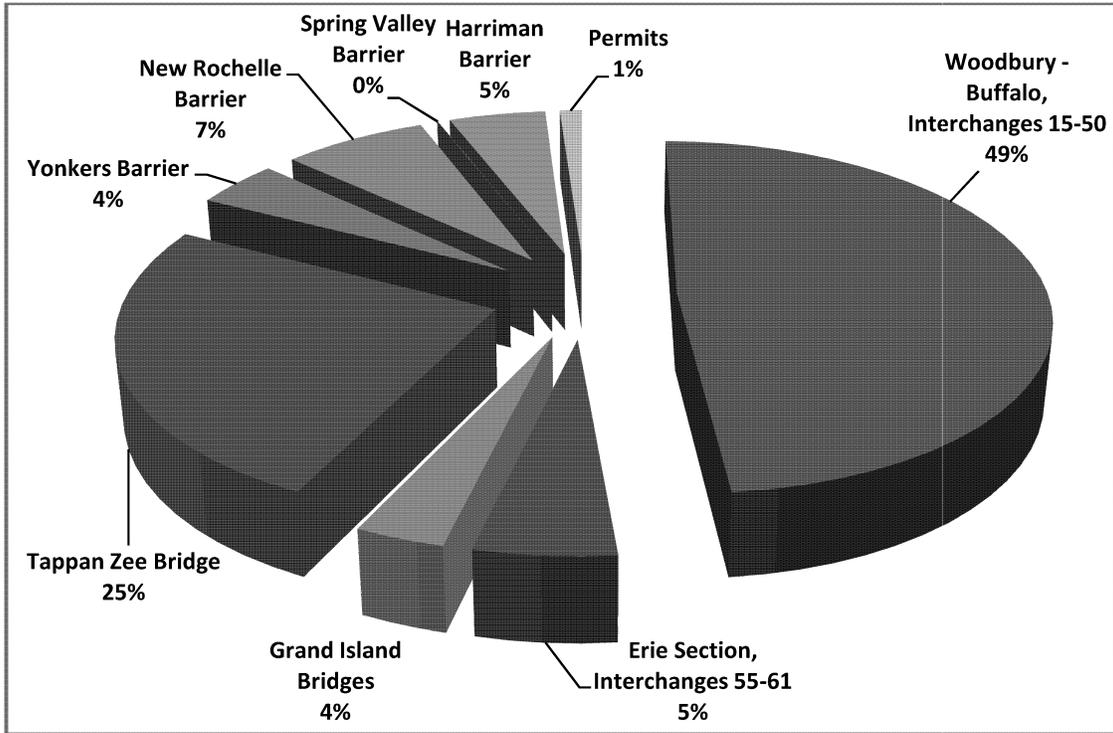
In May 2005, the Authority instituted a vehicle reclassification that simplified the toll schedule which is now based on height and number of axles. Some previous vehicle types received 2 tickets, such as 53 foot tractor trailer and tandem combinations, these now count as a single transaction. The net effect reduces the recorded number of commercial vehicle transactions on the bridge, barrier and ticket systems in 2005 as well as 2006, the first full year in which the reclassifications were in effect.

In October 2006, tolls were discontinued at the Buffalo Black Rock and City Line barriers. These changes contributed, to a reduction in the number of recorded transactions on the bridge and barrier system, which resulted in a significant one-time drop in traffic in 2007. It is necessary to take these changes into account when comparing current and historical traffic.

**ii. Revenue Trends**

The relative contributions to toll revenue of different sections of the Thruway are detailed in Figure 2 and Figure 3. For commercial vehicles, the ticket system generates more than 78% of all commercial revenues, while passenger vehicles revenues originating on the ticket system account for approximately 54% of all passenger revenues. This difference reflects the considerable amount of long-distance commercial trips using the Thruway. Heavy reliance on the Thruway by commuters on the southern sections of the facility results in 25% of all passenger revenues originating on the Tappan Zee Bridge, while the comparable figure for commercial traffic is only 10%.

**Figure 2: Breakdown of 2010 Passenger Toll Revenues**



**Figure 3: Breakdown of 2010 Commercial Toll Revenues**

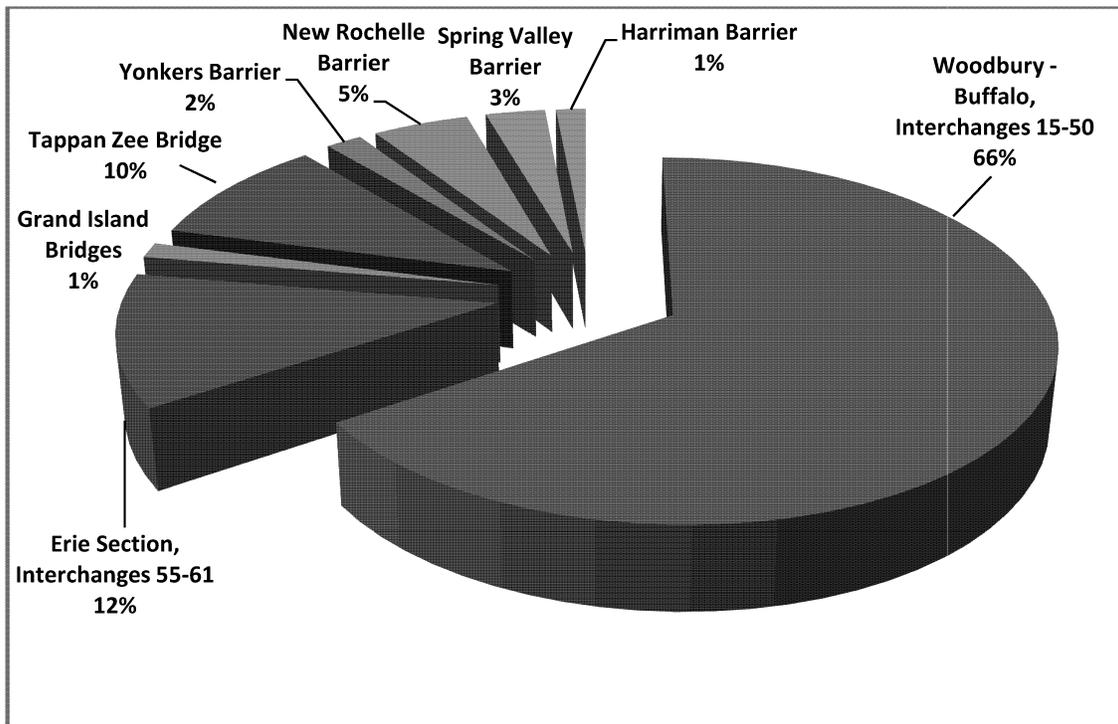
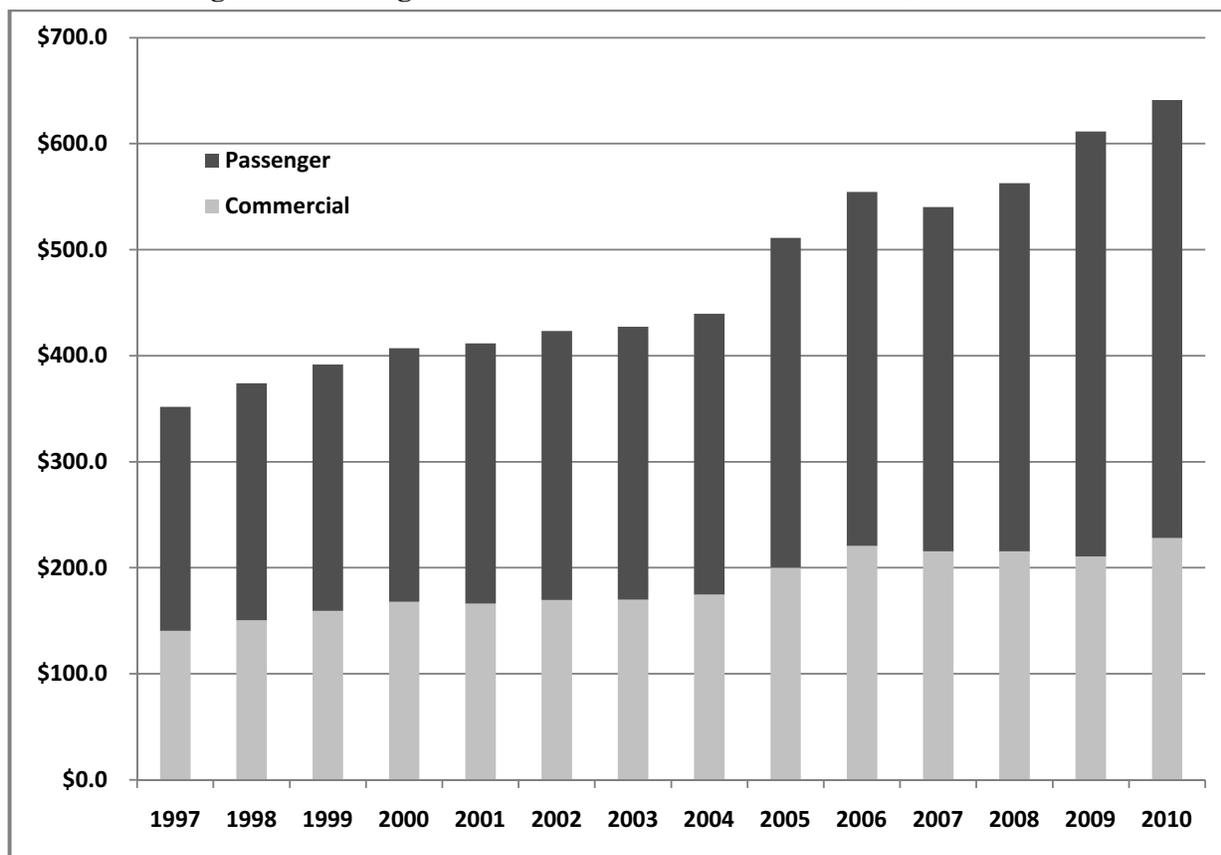


Figure 4 and Table 14 report revenue trends on the Thruway since 2001. As shown, revenue growth since 2004 has been high relative to the historical trend despite slower growth in traffic, reflecting the implementation of toll increases. In general, the period since 2004 has been marked by slower growth in commercial vehicle revenues, reflecting primarily the impact of the recession, which was felt more acutely in manufacturing and industrial production than in producer services, health services and government employment that generate much of the Thruway’s passenger commuter traffic. Another effect on commercial vehicle revenue growth, though much more modest, is the fact that commercial traffic has shown itself to be more sensitive to toll increases than passenger traffic. The sensitivity of commercial traffic to tolls, discussed further in Section 6, means that while toll increases raise revenues from passenger and commercial traffic, the latter is more price elastic. These two factors combined have a significant impact on the share of toll revenues attributable to commercial traffic. In 1997, commercial revenues accounted for approximately 40% of the toll revenues, but this share declined during the recession to 34.5% in 2009 and has started to recover in 2010 – the share of commercial vehicle revenues increased to 35.5%.

**Figure 4: Passenger and Commercial Vehicle Revenues \$ Millions<sup>(1)</sup>**



**Notes:** 1) Tolls were increased in May 2005, January 2008, January 2009 and January 2010

2) In October 2006, tolls were removed from the Buffalo City Line and Black Rock barriers which explain the drop in revenues in 2007.

**Table 14: Average Annual Toll Revenue Growth 2001-2010**

Toll Revenue Average Annual Growth <sup>(1)</sup>				
Thruway Section	Passenger Cars		Commercial Vehicles <sup>(2)</sup>	
	Average Annual Growth		Average Annual Growth	
	2001-2010	2008-2010	2001-2010	2008-2010
Ticket System <sup>(3)</sup>	5.5%	8.1%	4.1%	2.1%
Grand Island Bridges	9.1%	1.1%	2.4%	1.0%
Tappan Zee Bridge <sup>(4)</sup>	6.9%	10.7%	4.6%	7.8%
Yonkers Barrier	8.1%	11.4%	5.5%	1.8%
New Rochelle Barrier	5.8%	10.1%	5.0%	2.7%
Spring Valley Barrier <sup>(4)</sup>	-	-1.1%	5.8%	6.4%
Harriman Barrier	10.5%	15.0%	7.6%	8.0%
<b>Total</b>	<b>6.3%</b>	<b>9.1%</b>	<b>4.3%</b>	<b>2.8%</b>

**Notes:**

(1) Toll class system reclassified in 2005. Toll increases in 2005, 2008, 2009 and 2010.

(2) Does not reflect the commercial vehicle volume discount.

(3) Includes revenue from permits.

(4) Passenger car 3L-4L tolls implemented in 2005 as part of reclassification

#### 4. REVENUES, EXPENSES, AND NET REVENUES

##### a. Revenues

##### i. Toll Revenues

As shown, Table 15 details the historical trends in toll revenues and other revenues since 2001. From 2001 through 2010, toll revenues on the Thruway increased by over 55%, reflecting primarily the impact of toll increases in 2005, 2008, 2009 and 2010.

As previously mentioned, the recession that started in December 2007 and ended in June 2009 has had a significant impact on traffic and revenue for toll roads nationwide, and the Thruway was no exception. Even accounting for reclassification and removal of tolls at Black Rock and City Line barriers, commercial vehicle traffic on the bridge, barrier and ticket systems have yet to recover to 2001 levels, despite recent significant gains in 2010. For passenger traffic, ticket system volumes increased by over 11% in the last decade, but decreased by about 4% on the bridge and barrier system (a calculation made after adjusting for elimination of tolls at the Black Rock and City Line barriers).

Signs of the recession's severity can be found at the national and regional level. Industrial production, a primary driver of commercial traffic, declined by 1.3% from December 2005 to December 2010, but in the depth of the recession in 2008, had actually fallen by nearly 6%. Trade with Canada, a significant determinant of Thruway commercial traffic, actually fell for imports during this period by 16% in real terms, with exports stagnating. Regional employment for metropolitan areas in the Thruway markets all decreased during 2008, including New York (-2%), Rochester (-2.6%), Albany (-2.3%) and Buffalo (-1.7%). Finally, average 2010 fuel prices, though well below their 2008 peaks, were 23% higher in real terms than in 2005.

In summary, toll rate increases were sufficient to generate higher revenues during a period of great challenge for toll facilities. As discussed in Section 7, economic forecasts underlying the traffic and revenue forecasts

confirm a return to moderate growth in traffic and stabilization of revenue growth to the past pre-recession trend.

**Table 15: Historical Summary of Total Revenues (\$ Millions)**

Year	Passenger	% Growth	Commercial	% Growth	Toll Revenue	% Growth	Other Revenue	Total Revenue
2001	\$245.6	2.6%	\$166.2	-1.0%	\$411.8	1.2%	\$30.1	\$441.9
2002	253.9	3.4%	169.5	2.0%	423.4	2.8%	26.5	449.9
2003	257.2	1.3%	170.0	0.3%	427.2	0.9%	27.4	454.6
2004	264.8	3.0%	174.8	2.8%	439.6	2.9%	30.4	470.0
2005	311.1	17.5%	200.1	14.5%	511.2	16.3%	36.4	547.6
2006	333.7	7.3%	220.7	10.3%	554.4	8.5%	39.6	594.0
2007	324.7	-2.7%	215.6	-2.3%	540.3	-2.5%	41.4	581.7
2008	347.1	6.9%	215.6	0.0%	562.7	4.1%	33.5	596.2
2009	400.8	15.5%	210.8	-2.2%	611.6	8.7%	26.7	638.3
2010	413.1	3.1%	228.1	8.2%	641.2	4.8%	31.3	672.5

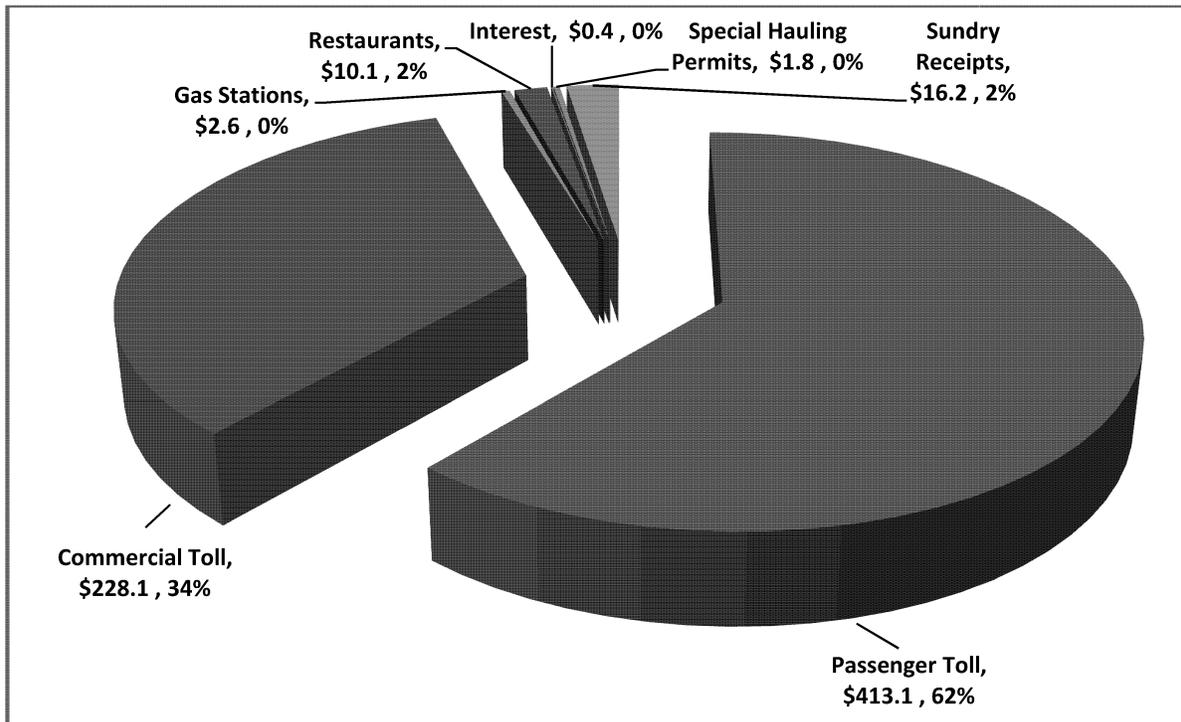
**Notes:**

(1) In October 2006, tolls were removed from Buffalo City Line and Black Rock Barriers, which explains the drop in 2007 revenues.

**ii. Other Revenues**

As detailed in Figure 5, the Authority also earns income from non-toll sources, which account for approximately 4% of total revenues. These sources include restaurant and fuel station concession revenue, sales of real and surplus property, fiber optic lease agreements, commercial and business E-ZPass vehicle tag lease fees, interest income and other miscellaneous revenue. These income sources have fluctuated over the last ten years, but 2010 revenues of \$31.3 million are close to the average for the last decade.

**Figure 5: Revenue Sources for 2010 (\$ Millions)**



### iii. Total Revenues

Given the small share of non-toll revenues in relation to total revenues, it is not surprising that total revenue trends follow those for toll revenues closely. The Thruway's total revenues of \$672.5 million in 2010 were more than 52% higher than the 2001 revenues of \$441.9 million.

### iv. Operating and Maintenance

Operating expenses detailed here include those for normal maintenance activities required for highways, buildings and equipment, snow and ice removal, policing, toll collection, traffic operations, administrative costs, employee fringe benefits, finance and accounting, provisions for the Environmental Remediation and Public Liabilities Claims and Indemnities operating reserves. These expenditures are to a large degree determined by labor agreements and mandated increases related to health insurance, retirement and other benefits, environmental regulations, commodities such as fuel, asphalt, steel and expenses related to snow and ice control.

Table 16 details operating and maintenance expenditures since 2001 for the Thruway, including those attributable to I-84 and the Canal System. As noted previously, expenditures related to I-84 and the Canal System have been expended out of the Other Authority Projects Operating Fund. In 2007 the Authority entered into annual agreements for the operation and maintenance of I-84 for NYSDOT and thus was reimbursed for all costs. As of October 11, 2010 I-84 operation and maintenance was transferred back to NYSDOT.

**Table 16: Operating and Maintenance Expenditures (\$ Millions)**

Year	Thruway	I-84	Canal System	Total Operating Expenses
2001	\$229.1	\$10.3	\$25.9	\$265.3
2002 <sup>(1)</sup>	267.9	10.5	31.9	310.3
2003	272.5	11.8	30.7	315.0
2004 <sup>(2)</sup>	299.2	11.5	6.3	317.0
2005	307.3	12.5	38.2	358.0
2006 <sup>(3)</sup>	323.7	11.5	42.8	378.0
2007 <sup>(3) (4)</sup>	339.0	10.3	43.4	392.7
2008 <sup>(4)</sup>	337.3	0.0	45.2	382.5
2009 <sup>(4)</sup>	346.7	0.0	48.7	395.4
2010 <sup>(5)</sup>	364.2	0.0	42.8	407.1

**Notes:**

- (1) Due to implementation of GASB 34, that changed the policy for the treatment of certain capital and equipment expenditures as operating.
- (2) In 2004 additional federal funds were made available for Canal operations that offset \$40.9 million of expenses.
- (3) Operating expenses in 2006 and 2007 were impacted due to the liability for two legal claims.
- (4) As of November 2007, expenditures for I-84 were fully reimbursable from NYSDOT.
- (5) In 2010, operating expenses include \$13.3 million for the special early retirement surcharge of which \$11.4 million was for the Thruway and \$1.9 million in Canal operating expenses. Also, in 2010 \$5.6 million in federal funds was received for Canal operations.

**v. Debt Service**

The annual debt service obligations for the Authority since 2001 are detailed in Table 17. Authority bonds were issued in 1991 to acquire the Cross Westchester Expressway, whose debt service obligations are detailed as well, which were paid in full by 2006. Overall, annual debt service payments have increased from \$84.8 million in 2001 to over \$191 million in 2010 and are inclusive of interest for the 2009 Bond Anticipation Notes.

**Table 17: Debt Service (\$ Millions)**

<b>Year</b>	<b>Debt Service on Outstanding Bonds and Notes</b>	<b>Debt Service on CWE Bonds</b>	<b>Total Debt Service</b>
<b>2001</b>	\$84.8	\$7.2	\$92.0
<b>2002</b>	85.1	8.1	93.2
<b>2003</b>	85.2	8.8	94.0
<b>2004</b>	86.2	6.5	92.7
<b>2005</b>	108.4	0.0	108.4
<b>2006</b>	128.5	0.0	128.5
<b>2007</b>	135.8	0.0	135.8
<b>2008</b>	163.5	0.0	163.5
<b>2009</b>	176.9	0.0	176.9
<b>2010</b>	191.2	0.0	191.2

**vi. Reserve Maintenance Fund**

Table 18 includes total revenues, operating and maintenance expenditures, debt service obligations and the remaining funds available for capital projects and equipment. Deposits to the Reserve Maintenance Fund draw on the funds remaining after operating and maintenance and debt service expenditures. The Authority’s Bond Resolution requires that a minimum of \$30 million a year be deposited to the Reserve Maintenance Fund. The same Bond Resolution requires that this deposit be made prior to expenditures on the Canal System and I-84 operating expenses, with the latter no longer a fiscal responsibility since November 2007.

The Reserve Maintenance Fund provision is a Pay-as-you-go funding source for Thruway capital and equipment, including rehabilitation of highway bridges, equipment replacement, E-ZPass improvements or special initiatives such as rock slope remediation. Since 2001, annual revenues available for capital projects and equipment have varied, ranging from \$87.5 million in 2006 to \$45.6 million in 2003.

**Table 18: Revenues Available for Capital Projects and Equipment (\$ Millions)**

<b>Year</b>	<b>Total Revenues</b>	<b>Operating and Maintenance</b>	<b>Debt Service</b>	<b>Available for Capital Projects and Equipment</b>
<b>2001</b>	\$441.9	\$265.3	\$92.0	\$84.6
<b>2002</b>	449.9	310.3	93.2	46.4
<b>2003</b>	454.6	315.0	94.0	45.6
<b>2004</b>	470.0	317.0	92.7	60.3
<b>2005</b>	547.6	358.0	108.4	81.2
<b>2006</b>	594.0	378.0	128.5	87.5
<b>2007</b>	581.7	392.7	135.8	53.2
<b>2008</b>	596.2	382.5	163.5	50.2
<b>2009</b>	638.3	395.4	176.9	66.0
<b>2010</b>	672.5	407.1	191.2	74.3

**Notes:**

(1) Canal funded expenses are included in the amounts shown.

**b. Net Revenues**

Table 19 details revenues, expenses and provisions for the Reserve Maintenance Fund, the General Fund, and net funds available for working capital. The reporting here is in accordance with the flow of funds as required by the Authority's Bond Resolution.

**Table 19: Revenues, Operating Expenses and Reserve Fund Requirements (\$ Millions)**

<b>Revenues, Operating Expenses and Reserve Fund Requirements</b>											
	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Total</b>
<b>Total Revenues</b>	\$441.9	\$449.9	\$ 454.6	\$ 470.0	\$547.3	\$594.0	\$581.6	\$596.2	\$638.3	\$672.5	\$5,446.3
<b>CWE Debt Service &amp; Reserve</b>	<u>(7.2)</u>	<u>(8.1)</u>	<u>(8.8)</u>	<u>(6.5)</u>	<u>0.3</u>						<u>(30.3)</u>
<b>Available Revenues</b>	434.7	441.8	445.8	463.6	547.6	594.0	581.6	596.2	638.3	672.5	5,416.1
<b>Less:</b>											
<b>Operating Expenses</b>	228.3	267.9	265.2	291.6	305.3	310.7	332.2	334.8	339.3	358.2	3,033.6
<b>Operating Reserves</b>	<u>0.8</u>	-	<u>7.3</u>	<u>7.5</u>	<u>2.0</u>	<u>13.0</u>	<u>6.8</u>	<u>2.5</u>	<u>7.3</u>	<u>6.0</u>	<u>53.1</u>
<b>Total</b>	229.1	267.9	272.5	299.1	307.3	323.7	339.0	337.3	346.7	364.2	3,086.8
<b>Net Revenues</b>	205.6	173.9	173.3	164.5	240.3	270.3	242.6	258.9	291.7	308.3	2,329.3
<b>Less: Debt Service</b>	<u>78.2</u>	<u>80.5</u>	<u>81.5</u>	<u>82.1</u>	<u>103.8</u>	<u>127.4</u>	<u>135.8</u>	<u>163.5</u>	<u>166.3</u>	<u>167.3</u>	<u>1,186.4</u>
<b>Net Revenues After Debt Service</b>	127.4	93.4	91.8	82.3	136.5	142.9	106.8	95.4	125.4	141.0	1,142.9
<b>Less: Retained for Operating Reserves</b>	<u>(12.1)</u>	<u>2.1</u>	<u>9.0</u>	<u>(5.2)</u>	<u>5.2</u>	<u>(5.0)</u>	<u>(5.0)</u>	<u>5.1</u>	<u>(1.8)</u>	<u>2.3</u>	<u>(5.5)</u>
<b>Net Revenues</b>	115.3	95.5	100.8	77.2	141.7	137.9	101.8	100.5	123.5	143.2	1,137.4
<b>Less:</b>											
<b>Reserve Maintenance Provisions <sup>(2)</sup></b>	32.4	33.0	52.3	36.7	60.9	69.8	20.7	30.7	34.5	31.0	402.0
<b>Other Authority Projects <sup>(3)</sup></b>	36.2	35.5	42.5	17.8	50.7	54.3	53.7	45.2	48.7	46.0	430.6
<b>General Reserve Fund</b>	41.1	22.5	2.4	9.8	24.9	12.8	26.8	24.4	25.1	21.2	211.1
<b>General Reserve Fund - CP1, CP 2 &amp; BAN's</b>	<u>6.7</u>	<u>4.6</u>	<u>3.7</u>	<u>10.5</u>	<u>4.6</u>	-	-	-	<u>10.6</u>	<u>23.8</u>	<u>64.5</u>
<b>Balance After Reserve Maintenance Provisions, Other Authority Projects and General Reserve Fund</b>	(1.1)	(0.1)	(0.1)	2.4	0.6	1.0	0.6	0.0	4.7	21.1	29.2
<b>Adjustments for Cash Basis</b>	1.1	0.1	0.1	(2.4)	(0.6)	(1.0)	(0.6)	-	0.2	(0.1)	(3.1)
<b>Net Balance Available for Working Capital</b>	(0.0)	(0.0)	0.0	(0.0)	(0.0)	0.0	0.0	0.0	5.0	21.1	\$26.1

**Notes:**

(1) Totals may not add due to rounding.

(2) Shows that the Reserve Maintenance Fund provisions were funded from Debt proceeds when sufficient revenues were not available.

(3) As of 10/31/2007, expenditures for I-84 were funded from NYS Department of Transportation.

## **5. PHYSICAL FACILITIES**

### **a. Physical Inspection**

HDR engineers conducted “drive-through” field inspections in March and April of 2011 to document conditions along the full length of the Thruway from a rider’s perspective. While an inspection of this type is not intended to identify specific localized problems, it does provide an overview of the condition of the physical plant. As part of the physical features review, bridge inspection summary and pavement ratings reports were reviewed. The effectiveness of the ongoing maintenance activities and the Multi-Year Capital Program was evident during this inspection. The physical inspection clearly documents the overall good condition of the entire Thruway plant.

Additionally, during the same time frame, HDR conducted interviews with each of the four Division Directors and Division staff, to obtain their current assessment of each Division’s condition, including information on their bridge inspections programs, planned heavy maintenance and their respective capital programs. The assessments provided by each of the Division Directors supported the observations obtained through independent field inspection by HDR.

#### **i. Highways**

Periodic comprehensive pavement evaluation surveys are undertaken by the Authority for the purposes of monitoring pavement conditions, identifying any problem areas and developing a long range maintenance program. These surveys, combined with traffic and axle load data, are used to develop service-life evaluation for various sections of the system leading to the development of a long-range pavement rehabilitation program.

By combining these data collection efforts with regular physical inspection and direct knowledge of work history, Authority engineers select and implement pavement maintenance and rehabilitative projects in a cost effective manner.

Some pavement sections observed during the 2011 inspection by HDR were noted to be in less than completely satisfactory condition. While the Authority’s current capital program remains financially constrained, improvements to these sections are included in the 2011-2015 Multi-Year Capital Program.

#### **ii. Bridges**

New York State's uniform code of bridge inspection includes specific requirements that all bridges are inspected biennially and that individual bridge elements be rated and an overall assessment of the bridge be expressed as a general recommendation. The biennial inspection program includes evaluation of scour conditions of the bridge substructures in and adjacent to waterways are evaluated.

The biennial bridge inspections are performed by the Authority in accordance with the New York State Department of Transportation's Bridge Inspection Manual - 1997 and current Technical Advisories. Utilizing the State's rating system, a general recommendation has been given for each bridge. Ratings range between seven and one, with a rating of seven indicating ideal condition while a rating of one indicates potentially hazardous condition.

In addition to biennial inspections, the Authority performs annual inspections of the suspension components of pin and hanger assemblies of bridges, visual inspections of bridges over waterways after each major flood

event, and visual inspections of bridges after each seismic event in the area. Follow-up detailed inspections are triggered by the identification of any issues or concerns during these inspections.

Interviews were conducted in March and April of 2011 with the Division Directors of each of the four Thruway divisions. Information discussed in the Division Office interviews indicates that:

- Every bridge under the Authority's jurisdiction is inspected at least every other year as required by law. Inspections are undertaken by either consultants or by in-house inspection teams. Consultants inspect all large, complex or unique structures. The use of consultant/Authority inspections varies by Divisions.
- Canal bridges are inspected on the same two year cycle using the same procedure as Authority inspected bridges.
- All culverts, overhead sign structures and retaining walls are inspected on a regular basis in a program modeled on the bridge inspection program. The inspection program follows Thruway Maintenance Directives.

The 2007 collapse of the I-35W Bridge in Minneapolis was a catalyst for the creation of a Task Force that was established by the Governor to address concerns of bridge safety. The Task Force was comprised of representatives from the Authority, NYSDOT, New York State Bridge Authority and the Metropolitan Transportation Authority, and directed to review bridges of similar design for safety and to review bridge inspection standards and procedures used throughout the State. A key conclusion from the Task Force was that the NYSDOT's bridge inspection program, which is that used by the Authority "meets or exceeds federal requirements and consistently receives high marks in annual FHWA management reviews."

## **6. MULTI-YEAR CAPITAL PROGRAM**

As the Thruway System is beginning its seventh decade of operation, the need for reconstruction and rehabilitation of the aging infrastructure requires an increasing level of investment. Customer service, safety, reliability and mobility are the strategic priorities that inform investment decision-making. On many roadway segments, especially near metropolitan areas, the combination of a 60 year old infrastructure and heavy traffic volumes pose challenges that must be addressed in order meet performance objectives. Maintaining good conditions both on segments that see the highest traffic levels and continuous repair of the remaining system is essential if the Thruway is to continue its role as the transportation backbone of the State.

The Authority has been able to provide for its operating needs from annual operating revenues. At the same time, the Authority has provided for its capital needs from a combination of annual operating revenues and accessing the capital markets. Capital expenditures from 2001 through 2010 are shown in Table 20. A majority of this amount was spent on highways and bridges, as well as customer-related projects such as travel plazas improvements (i.e. fuel and food venue upgrades), developing the E-ZPass program, patron communication enhancements, and the operation of a Traffic Operations Center.

**Table 20: Actual Capital Expenditures (\$ Millions)**

<b>Year</b>	<b>Highways &amp; Bridges</b>	<b>Facilities, Travel Plaza's and Equipment</b>	<b>Canal System and Economic Development Projects</b>	<b>Total Capital Expenses</b>
<b>2001</b>	\$185.5	\$48.6	\$49.1	\$283.2
<b>2002</b>	158.5	37.1	38.4	234.0
<b>2003</b>	158.6	37.1	33.3	229.0
<b>2004</b>	142.5	31.1	15.0	188.6
<b>2005</b>	97.1	27.3	21.0	145.4
<b>2006</b>	179.3	50.9	14.4	244.6
<b>2007</b>	267.3	59.0	44.2	370.5
<b>2008</b>	288.7	36.2	30.3	355.2
<b>2009</b>	259.6	35.4	26.1	321.2
<b>2010</b>	311.0	39.9	26.8	377.7

To meet the challenges of maintaining an aging infrastructure in good condition while providing the needed operational and service improvements, the Authority has developed a Multi-Year Capital program for 2005 - 2011 with 2011 being the last year of the current program. The Authority is developing a \$1.8 billion Multi-Year Capital Program for the period 2012 to 2015. For the period 2011 – 2015 the Authority expects to spend \$2.2 billion on capital projects.

The Multi-Year Capital Program includes projects addressing the need for reconstruction and rehabilitation of roadway, bridges, facilities and support systems of the Thruway as well as projects providing congestion relief and mobility enhancements. Also included in the program are provisions for replacement of equipment and other Authority non-bridge and highway projects, as well as other projects that are now the Authority's mandated responsibility.

In addition to highway and bridge projects, the Authority's Multi-Year Capital programs provides for toll barrier improvements and reconfigurations to provide for non-stop travel from one-end of the system to the other, including improved access to major connector roads. In addition, the programs include rehabilitation of certain interchange and connecting ramp pavement and shoulders. Work at toll barriers and interchanges also include elements required for the safe implementation of higher speed E-ZPass lanes and expansions at some toll plazas to serve increasing traffic demands. This work will reduce traffic conflicts resulting from access to toll booths, truck lots and Thruway maintenance facilities and will also improve signage, lighting, guide rails and safety. These modifications will provide improved service, safety, and prepare the facility to handle future growth.

The Authority's Multi-Year Capital Programs ensure that the Thruway's physical plant is maintained in good condition and that a responsible funding program is available to carry out the plan. Performance goals are established relating to the desired condition, and the plan is then developed based on the known existing condition of the physical elements that make up the Thruway physical plant, expected life cycle of these elements based on past experience and realistic cost estimates developed from the records of recent construction contracts.

The rehabilitation projects included in the future capital program depend on the detailed evaluation of the existing conditions of the roadway and bridges and the development of a program of projects that will maintain or improve upon those conditions. The process for developing the rehabilitation portion of the capital program for the roadway and bridges is briefly described below.

## **a. Highways**

The Authority's Headquarters Highway Management Bureau collects and analyzes a range of pavement data, including surface distress obtained through the annual windshield survey, pavement ride quality obtained through the annual International Roughness Index (IRI) survey, and maintenance and contract work histories used in conjunction with traffic data to assist in identifying the estimated remaining pavement service life and cost effective pavement treatment solutions for a given pavement segment. These solutions are incorporated in the Multi-Year Capital Program for highway infrastructure.

Headquarters Highway Management Bureau develops and maintains a 15 year Long Range Plan identifying treatments, budgets and schedules for future projects for each roadway segment based on historical trends and experience. The Long Range Plan is based on maintaining a state of good repair and generally does not include capacity or expansion projects.

Highway Projects included in the 2011 to 2015 Capital Plan are first identified by the Division Highway Engineer. Utilizing historical records of roadway condition ratings and past remedial work, and knowledge of the current conditions, the Division Highway Engineer recommends an appropriate treatment, budget and schedule for each particular roadway segment. The Headquarters Highway Management Bureau combines the programs from the various Divisions and reviews recommended treatments, budgets and schedules. The Headquarters Highway Management Bureau prioritizes and adjusts treatments and/or schedules to meet available funding goals. Annually, the Headquarters Highway Management Bureau staff, Design staff and Division Maintenance staff review in the field all proposed projects to reach a consensus on treatment, budget and schedule for each roadway segment

## **b. Bridges**

The Authority has in place an aggressive program of bridge inspection, maintenance, repair, and rehabilitation. The Authority's Bridge Management Bureau has the responsibility for ensuring the safety and serviceability of Thruway bridges in the most cost efficient manner. The program of maintenance, rehabilitation and replacement is developed through careful review of bridge conditions, work histories and maintenance capabilities. The result is a management plan for bridge infrastructure that incorporates work by the Authority's maintenance forces, repair or rehabilitation by contract, and bridge replacement where warranted.

The identification of Bridge Projects to be done by contract included in the 2011 to 2015 Capital Plan follows a similar process as the Highway program. The Division Bridge Engineer, utilizing Bridge Condition Ratings and review of Biennial Bridge Inspection Reports, recommends an appropriate treatment, budget and schedule for a particular structure. The Headquarters Bridge Management Bureau combines the programs from the various Divisions, reviews recommended treatments, budgets and schedules. The Headquarters Bridge Management Bureau prioritizes and adjusts treatments and/or schedules to meet available funding goals. Annually, the Headquarters Bridge Management Bureau staff, Design staff and Division Maintenance staff review in the field all proposed projects to reach a consensus on treatment, budget and schedule for a particular structure.

As part of the Authority's continuing review of the needs for maintaining the integrity of all major structures, this Capital Program includes the funding of \$66.5 million for capital projects to keep the Tappan Zee Bridge in a state of good repair, but it does not provide funds for the design and/or construction of the proposed new, replacement bridge.

The capital program is periodically reviewed for changes in priorities and to address new information and data generated from pavement survey and bridge inspection programs. The capital program is also reviewed and modified as necessary to account for accelerated inflation rates for construction materials, which may result in a

change of scope or deferment of the respective project, or the project may be delayed and moved from the current program altogether.

Given the age of the majority of the Thruway's infrastructure, the Authority recognizes that routine maintenance programs will not keep the pavement and bridge structures at the current condition levels. To maintain and improve the condition system-wide, an ongoing program of maintenance, rehabilitation and replacement projects will continue to be needed in the future. The Authority's overall strategy is to maintain the facility in good condition – a cost-effective approach that minimizes the need for major repair/replacement projects.

## **7. BASELINE TRAFFIC, REVENUE, EXPENSES AND NET REVENUE PROJECTIONS WITH PRESENT TOLL SCHEDULE**

### **a. Traffic and Revenue Model**

HDR's Thruway Traffic and Revenue Model (Thruway Model) is econometric in structure and Figure 6 illustrates the overall methodology. This class of model is based on the statistical relationships between travel demand and various drivers (including economic activity such as employment, industrial production, trade and personal income), and provides a separate estimate of the influence of each of the various factors on travel demand. These relationships are then used to simulate the impacts of future economic growth on travel demand.

Econometric models are particularly well-suited for a facility such as the Thruway, where decades of traffic data are available, and where the past relationships can be estimated with precision. The economic drivers can be specified to the particular local market or markets of interest, incorporating the differences that characterize various locations. Additionally, the models estimate the effects of prices (including tolls or fuel prices) on travel demand in a precise manner. Finally, statistically-based models also provide a rich array of tools to evaluate the fit of the model, in particular with respect to how well the model can be expected to perform as a forecasting tool.<sup>3</sup>

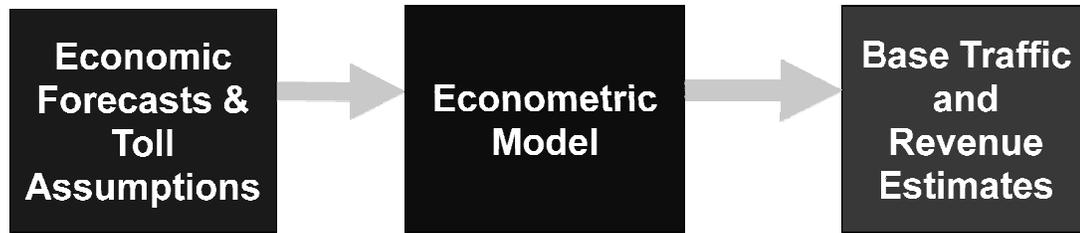
Econometric models have proven to be flexible and well-adapted to capture the impacts of economic fluctuations on traffic.<sup>4</sup> Recent economic conditions, in particular the downturn and slow growth of 2008 and 2009, have highlighted the potential impact of economic cycles on traffic volumes in general, and for numerous toll facilities in particular. In 2008, vehicle miles traveled on rural and urban interstates nationally dropped 5% and 3%, respectively. While these trends were roughly consistent with those of the Thruway, other toll facilities in areas more severely affected by the economy were far more impacted: I-75 in Florida lost nearly 10% of its traffic, and the Ambassador Bridge between Detroit and Windsor, Ontario lost nearly 18% of its traffic.

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<sup>3</sup> For details see Vilain, P., T. Muhammad, C. Li and M. Hallissey, "Hybrid Econometric and Network Forecasting Models", *Transportation Research Record*, No. 2187, 2010.

<sup>4</sup> One area that econometric models do not address explicitly is incorporating network changes or capacity constraints on individual links. One option is the development of hybrid models that incorporate simplified network effects within the solution. Another, adopted for the Thruway modeling, is to monitor future capacity and volume changes to ensure that these effects, if present, will not bias the econometric model forecasts. HDR's analysis revealed that there are no changes in network capacity of link volumes (either on the Thruway or on alternative routes) that suggest that network type of effects would impact forecast to 2020.

**Figure 6: Input and Output Structure of an Econometric Forecasting Model**



The Thruway Model and forecasts actually consist of two distinct modeling steps, with each step itself built up from a series of distinct models. In the first step, several traffic models are used to develop forecasts of traffic (here represented by transactions at the ticket system and the bridge and barrier system). Transactions at specific interchanges are linked to economic factors such as real personal consumption expenditures and the price of gasoline for passenger vehicles and industrial production for commercial vehicles. As discussed in the report these models were econometric in nature and were developed based on the historical relationship between the traffic and economic variables.

The second step involved modeling the actual revenues generated by the forecast transactions. Revenues per transactions at specific toll plazas are evolving over time in response to changing E-ZPass usage, discount program usage, and changing composition of trips in the case of ticket system plazas. To forecast revenues per transaction, separate revenue models were developed for cash and E-ZPass paying customers and those customers that have signed up for particular discount programs (permit program for the ticket sections or the commuter program for the barrier sections). Revenue models were based on the historical relationship between revenues per transaction and the appropriate toll index as well as E-ZPass usage.

The Thruway Model contains separate models for passenger and commercial vehicles on both the ticket system and the bridge and barrier system. The Thruway Model structure also provides great flexibility in terms of developing even more fine-grained sub-models for more specific markets of the Thruway. As discussed, the Thruway is a unique facility that serves several distinct markets. The Thruway Model is therefore developed in such a way as to allow various sub-markets to be modeled separately, thereby incorporating the different characteristics of various locations into the models. Local conditions (including land use, employment structure, incomes, and modal alternatives) will all have some effect on how traffic evolves over time on the Thruway. By segmenting the Thruway Model into a series of smaller sub-models that specificity is accounted for. The different sub-markets are built up from detailed segments for both the ticket system, bridge and barrier system. These segments and their component toll plazas are detailed in Table 21 and Table 22.

The final segmentation of the Thruway Model follows some of the descriptions of the facility's market from previous sections. Specifically, the ticket system was found to be quite different in terms of its trends and responses to economic cycles in the southern sections, mid-state sections and western sections. For the ticket system, passenger and commercial models were divided into sub-models with segments 1 – 3 part of a single model and similarly segments 4-6 and 7 and 9 were combined and estimated simultaneously.

The bridge and barrier traffic models were estimated separately from the ticket models. For passenger vehicles Grand Island Bridges, Tappan Zee Bridge, Yonkers Barrier, New Rochelle and Harriman Barrier were estimated simultaneously while Spring Valley barrier was estimated separately since toll paying passenger traffic consists of passenger vehicles towing a trailer. For commercial vehicles, Grand Island Bridge traffic was estimated separately since the economic drivers are expected to be different from the other bridge and barriers. The Tappan Zee Bridge, Yonkers Barrier, New Rochelle Barrier, Spring Valley Barrier and Harriman Barrier were estimated simultaneously as part of a single model for commercial vehicles (see Appendix for details).

**Table 21: Thruway Model Segments and Component Toll Plazas, Ticket System**

Segment / Interchange Name	Interchange	Mile Post	Segment / Interchange Name	Interchange	Mile Post
<b>Segment 1:</b>			<b>Segment 4:</b>		
Woodbury	15	45	Canastota	34	262
Harriman-Rte 17	16	45.2	Syracuse I-481	34 A	277
Newburgh (I-84)	17	60	Syracuse (East)	35	279
New Paltz	18	76	Syracuse I-81	36	283
Kingston	19	91	Electronics Pkwy	37	284
Saugerties-East and West	20	101	Syracuse-Liverpool	38	286
Catskill	21	114	Syracuse / State Fair	39	290
<b>Segment 2:</b>			<b>Segment 5:</b>		
Coxsackie	21 B	124	Weedsport	40	304
Selkirk	22	135	Waterloo	41	320
Albany (Downtown) I-787	23	142	Geneva	42	327
Albany(Northway) I-87,I-90	24	162	Manchester	43	340
Schenectady (East) I-890	25	154	Canandaigua	44	347
Schenectady I-88	25 A	159	<b>Segment 6:</b>		
Schenectady (West) I-890	26	162	Rochester (East) I-490	45	351
Amsterdam	27	174	Rochester I-390	46	362
Fultonville	28	182	Leroy I-490	47	379
Canajoharie	29	194	<b>Segment 7:</b>		
Post Road	B1	B7	Batavia	48	390
Taconic	B2	B15	Pembroke	48 A	402
Canaan-Mass	B3	B18	Depew	49	417
<b>Segment 3:</b>			<b>Segment 9:</b>		
Little Falls	29 A	211	Lackawanna	55	429
Herkimer	30	220	Blasdell	56	432
Utica	31	233	Hamburg	57	436
Westmoreland	32	243	Eden-Angola	57A	445
Verona	33	253	Silver Creek	58	456
			Dunkirk-Fredonia	59	468
			Westfield	60	485
			Ripley (Pennsylvania Line)	61	496

**Note:**

Segment 8 includes only untolled sections of the Thruway and is not included in the modeling or the above table.

**Table 22: Thruway Model Segments, Barrier System**

<b>Segment 1:</b>	Grand Island Bridges
<b>Segment 2:</b>	Tappan Zee Bridge
<b>Segment 3:</b>	Yonkers Barrier
<b>Segment 4:</b>	New Rochelle Barrier
<b>Segment 5:</b>	Spring Valley Barrier
<b>Segment 6:</b>	Harriman Barrier

## b. Model Variables and Estimation Results

Econometric models, such as the Thruway Model, contain a series of variables that are “drivers” in the sense that they generate traffic or price variables. For passenger traffic models on the ticket and bridge and barrier systems, the following driver and price variables are included:

- U.S. Personal Consumption Expenditures
- Price of Gasoline, all Grades
- Tolls on the Thruway

For commercial traffic models on the ticket and bridge and barrier systems, the following driver and price variables are included.<sup>5</sup>

- Industrial Production Index
- Business Inventories
- Value of Trade Between Canada and the United States
- Price of Diesel Fuel
- Tolls on the Thruway

The various models are then built upon the statistical relationship between these variables and observed transactions at each of the toll plazas that comprise the segments. As described in the appendix to this report, the estimation of the models indicates very strong relationships between these variables and observed traffic. Various statistical measures of significance further indicate that the estimated models are extremely robust and “forecast” the past very well. Some key results include the following:

**Passenger Vehicles:** U.S. Personal Consumption is a strong predictor of car traffic on the various segments of the ticket system, with elasticity<sup>6</sup> measures in the range of 0.3 to 1.3, depending on the segments. Passenger vehicles on the ticket system are relatively in-elastic (less sensitive) to toll changes, with elasticity measures in the -0.04 to -0.1 range. Elasticity measures with respect to fuel prices are similar in magnitude. Passenger vehicles on the barrier system also respond to Personal Consumption changes, with an elasticity of roughly 0.2, and elasticity measures to tolls and fuel prices at -0.2 and -0.03, respectively.

**Commercial Vehicles:** Commercial traffic on the ticket and barrier systems is primarily driven by Industrial Production (with elasticity measures ranging from 0.6 to 1.2). Inventories also figure prominently, with elasticity measures in the -0.6 to -1 range (with the negative effect reflecting that when inventories build up, deliveries slowdown). Toll elasticities are consistently in the -0.2 to -0.4 range, which is somewhat high (in absolute terms) for commercial traffic.

All of the Thruway models used for forecasting generate strong results in terms of statistical significance:  $R^2$  measures<sup>7</sup> are usually over 0.98, explanatory variables are all highly statistically significant, and models reproduce past trends with a Mean Absolute Percent Error (MAPE) of 2% to 4%, which is considered a very good indication of forecast reliability.

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<sup>5</sup> The models are estimated on monthly data from 2005 and in certain instances since 2000 to December 2010. Since the various models are pooled “panels” of segments, each model typically contains hundreds of data points, which is a more than acceptable sample size. The monthly models are estimated with “controls” for monthly seasonality included, as well as controls for specific events (notably construction) that have affected traffic over the past.

<sup>6</sup> Elasticity is a measure of how one variable changes with respect to another variable. If the elasticity of demand with respect to tolls is -0.1, this means an increase in tolls of 10% will lead to a decrease in demand of 1%.

<sup>7</sup> A statistical measure of how closely two data series resemble each other.

### c. Baseline Assumptions

Forecasts for traffic using the Thruway Model required forecasts for the various explanatory variables. Extreme care is required in selecting the source of forecasts, as these will have a decisive effect on traffic and revenue forecasts. The forecast sources for U.S. Personal Consumption Expenditures, Industrial Production Index, Business Inventories and Value of Trade between Canada and the United States is *Moody's Economy.Com*, which is also compared to other sources as appropriate. Forecasts for the Price of Gasoline and Price of Diesel Fuel come from the Energy Information Administration (EIA).

Table 23 shows the Compound Annual Growth Rate (CAGR) for forecast variables. It is clear that forecasts for growth to 2015 reflect an economy that is growing far faster than the 2005 to 2010 period. Key to the forecast growth on the Thruway is growth in Industrial Production, Personal Income and Trade. The growth in these key drivers more than offsets the effects of higher fuel price increases over the forecast period, as well as a build-up of inventories.

**Table 23: Comparison of Past and Forecast Economic Trends**

Compound Annual Growth Rate:	Industrial Production	Business Inventories	Personal Consumption	Canada-US Trade	Real Price of Diesel	Real Price of Gasoline
2005-2010	-0.5%	-0.7%	1.1%	-1.3%	2.2%	1.9%
2010-2015	3.5%	2.0%	3.3%	7.8%	6.7%	8.6%

The Moody's and EIA forecasts are in step with other forecast sources, notably the Organization for Economic Co-operation and Development (OECD). The forecast for Thruway traffic and revenue that is based on these economic forecasts is shown below.

Baseline historical economic assumptions and data sources that were used to develop the traffic models are presented in Table 24. Important factors for passenger vehicles are Real Personal Consumption expenditures and the US Gas Price. The Consumer Price Index is used to convert nominal toll rates to real toll rates. Economic factors are used to develop the commercial traffic models include Industrial Production, Inventories, US-Canada Trade and Diesel Fuel Price.

**Table 24: Historical Data Sources and Rates of Growth**

Historical Data Sources and Rates of Growth						
Economic Driver	Description	Data Source	Frequency	CAGR 05-10	CAGR 08-10	CAGR 05-07
Real Personal Consumption	2005 Chain \$, Billions SAAR	Bureau of Economic Analysis	Monthly	1.1%	0.3%	2.6%
US Consumer Price Index	US City Average, Index 1982-84 =100, Rebased 2009, Seasonally Adjusted	Bureau of Labor Statistics	Monthly	2.2%	0.7%	3.0%
US Gas Price	U.S. All Grades All Formulations Retail Gasoline Prices (Dollars per Gallon)	Energy Information Administration	Monthly	4.2%	-7.4%	10.9%
US Gas Price Real	US Gas Price, deflated by CPI, 2009 \$	Energy Information Administration, Bureau of Labor Statistics and HDR	Monthly	1.9%	-7.9%	7.7%
US Diesel Price	U.S. No 2 Diesel Retail Sales by All Sellers (Dollars per Gallon)	Energy Information Administration	Monthly	4.5%	-11.4%	9.6%
US Diesel Price Real	US Diesel Price, Dollars per Gallon, deflated by CPI, 2009 \$	Energy Information Administration	Monthly	2.2%	-11.9%	6.4%
Industrial Production	Industrial Production Index 2007=100, Seasonally Adjusted	Federal Reserve Board	Monthly	-0.5%	-2.1%	2.5%

<b>Inventories</b>	Total Business Inventories, End of Period, \$ Billions SA	Census Bureau	Monthly	1.5%	-4.7%	6.3%
<b>Real Inventories</b>	Inventories, deflated by CPI, 2009 \$	Energy Information Administration, Bureau of Labor Statistics and HDR	Monthly	-0.7%	-5.3%	3.2%
<b>US Canada Total Trade</b>	\$ Million, Seasonally Adjusted, Exports FAS Basis, Imports Customs Basis	Census Bureau	Monthly	0.9%	-6.5%	6.1%
<b>US Canada Total Real Trade</b>	US Canada Total Trade, deflated by CPI, 2009 \$	Census Bureau, HDR	Monthly	-1.3%	-7.1%	3.0%

Base case economic forecast assumptions are outlined in detail in Table 25. In the near term relatively robust economic recovery is forecast, becoming slower in 2014 and 2015. While the Thruway Model does not explicitly use real GDP forecasts in our models, implicitly all economic variables are related to the outlook in growth captured by a broad measure like GDP. The growth assumptions underlying our traffic forecasts are strong recovery in overall economic conditions with real GDP expanding at 3.7% during 2011 followed by robust 4% growth in 2012, 3.8% growth in 2013, 3.2% in 2014 and 2.3% in 2015.

The table identifies the forecast assumptions for all the economic variables in the various models. During the forecast horizon diesel prices in real terms are expected to increase 34.8% by 2015 and gasoline prices are expected to increase 50.9%. Most of the increase however takes place in 2011 due to the gas price hikes taking place in 2011 Q1. Industrial production is expected to make a strong recovery in near term as well with strong growth in 2011 and 2012 and more steady recovery at 2.0% per annum during 2014-15 consistent with the GDP outlook and historical growth (in particular Industrial production was revised by HDR to reflect GDP growth assumptions). Real Inventory levels increased rapidly during the recession and have been reduced significantly as the economy has continued to recover. Inventory levels are expected to increase as firms restock and replenish their inventories reaching pre-recession (2007) inventory levels in 2014. Inventories have been assumed to remain constant (thereafter by HDR) in real terms at 2007 (pre-recession) levels.

**Table 25: Base Case Economic Assumptions**

	Near Term					Medium Term					
	Actual	Actual	Forecast	Forecast	Forecast	Actual	Forecast	Forecast	Forecast	Forecast	Forecast
Period	2010 Q4	2011 Q1	2011 Q2	2011 Q3	2011 Q4	2010	2011	2012	2013	2014	2015
Real GDP (\$ 2005 Billion)	13,380.7	13,438.8	13,579.2	13,717.3	13,870.3	13,248.2	13,651.4	14,200.4	14,742.3	15,212.3	15,567.9
% Change AR		1.7%	4.2%	4.1%	4.5%		3.0%	4.0%	3.8%	3.2%	2.3%
US CPI (Index 1982-84=100)	219.4	222.3	224.1	225.1	226.0	218.1	224.4	229.7	236.7	243.2	249.0
% Change AR		5.2%	3.3%	1.7%	1.7%		2.9%	2.4%	3.1%	2.7%	2.4%
<b>Passenger Vehicles</b>											
Personal Consumption (\$ 2005 Bn)	9,426	9,497	9,582	9,669	9,758	9,314	9,626	9,957	10,331	10,681	10,953
% Change AR		3.0%	3.5%	3.6%	3.7%		3.3%	3.4%	3.8%	3.4%	2.5%
US Gas Price (Dollars / Gallon, \$ 09)	2.87	3.23	3.71	3.75	3.79	2.79	3.62	3.81	3.93	4.09	4.20
% Change		12.3%	14.9%	1.1%	1.1%		29.8%	5.5%	3.0%	4.1%	2.8%
<b>Commercial Vehicles</b>											
US Diesel Price (Dollars / Gallon, \$ 09)	3.08	3.50	3.91	3.96	4.00	2.94	3.84	3.94	3.92	3.99	4.07
% Change		13.8%	11.8%	1.2%	1.2%		30.7%	2.5%	-0.6%	2.0%	1.9%
Industrial Production (Index2007=100)	94.4	95.6	97.0	98.4	99.9	92.7	97.7	103.0	105.6	107.8	109.9
% Change AR		5.3%	5.8%	5.6%	6.1%		5.4%	5.4%	2.5%	2.1%	1.9%
Inventories, 2009 \$ Bn	1,394	1,406	1,413	1,422	1,432	1,356	1,418	1,456	1,486	1,494	1,494
% Change AR		3.5%	1.8%	2.7%	2.8%		4.6%	2.6%	2.1%	0.6%	0.0%
US Canada Trade, 2009 \$ M	43,251	46,464	46,874	47,831	48,936	43,046	47,526	52,200	56,929	60,503	62,745
% Change AR		29.7%	3.5%	8.2%	9.2%		10.4%	9.8%	9.1%	6.3%	3.7%

Another variable that is included in commercial forecasts are Imports and Exports from Canada. These declined rapidly during the most recent recession that ended in 2009. US imports from Canada in real terms declined 10.3% CAGR during 2008-10 while US exports to Canada declined 3% CAGR in real terms during 2008-10. Total trade with Canada is expected to go robustly during 2011 – 2013 and at lower sustainable rate during 2014 -2015. The forecasts of commercial traffic primarily rely on industrial production and inventories and trade with Canada is only used to forecast traffic for a very small proportion of commercial traffic.

**d. Traffic and Revenues**

Traffic and revenues forecasts were developed in two sequential steps. The traffic model, as discussed above, was developed to forecast total traffic on the ticket, bridge and barrier sections linking traffic to economic indicators and seasonal variations. In the second step, another econometric model was developed to forecast revenue per transaction based on the historical relationship between revenue per transaction, toll rates and seasonal variations.

**i. Passenger Cars**

Passenger traffic forecasts are expected to grow slowly in the near term and recover faster during the period 2012 – 2015. Ticket traffic is expected to grow much faster than traffic on the bridge and barrier system. Table 26 shows that passenger traffic is forecast to grow from 222.8 million transactions in 2010 to 238.6 million transactions in 2015 at a CAGR of 1.4%. The ticket sections are expected to grow much faster at 1.8% during 2010 – 2015 while the barrier sections are expected to grow much slower at 0.8% for 2010 – 2015.

While the economic drivers behind the two forecasts are similar, traffic on the ticket system has shown greater sensitivity to changes in personal consumption expenditures. However, permit traffic is expected to stay relatively stable, staying approximately at current levels. Overall, permit traffic is expected to decline as a percent of total passenger traffic for the ticket system from 7.4% in 2010 to 6.8% in 2015. The economy is expected to make a strong recovery during 2012 – 2013 (with the Gross Domestic Product expanding at 4% per annum) explaining the faster growth in the traffic during 2012 – 2013.

**Table 26: Total Passenger Traffic Forecast (in '000s)**

Total Passenger Traffic						
Year	Ticket	Permits	Total Ticket	Bridges & Barriers	Total Passenger	% Growth
<b>2010 Actual</b>	119,394	9,561	128,955	93,850	222,805	
<b>2011</b>	119,523	9,560	129,083	93,657	222,740	0.0%
<b>2012</b>	122,424	9,552	131,976	94,539	226,515	1.7%
<b>2013</b>	125,862	9,604	135,466	95,687	231,153	2.0%
<b>2014</b>	129,007	9,607	138,614	96,682	235,296	1.8%
<b>2015</b>	131,538	9,556	141,094	97,516	238,610	1.4%

Total revenues from passenger traffic are expected to grow to \$442.4 million in 2015 from the \$413.1 million in 2010, an overall CAGR of 1.4%. Table 27 shows the detailed breakdown of revenues from passenger traffic. Compared to growth rates of traffic revenues grow slightly slower, which is a combination of increasing E-ZPass adoption (which tends to reduce revenues per transaction slightly), as well as increasing share of commuter traffic on some barriers (which reduce revenues as well). Overall the share of revenues from the ticket section is expected to increase from the 54.9% in 2010 to 55.9% in 2015.

**Table 27: Total Passenger Revenue Forecast (in \$ '000s)**

<b>Total Passenger Revenues</b>						
<b>Year</b>	<b>Ticket</b>	<b>Permits</b>	<b>Total Ticket</b>	<b>Bridges &amp; Barriers</b>	<b>Total Passenger</b>	<b>% Growth</b>
<b>2010 Actual</b>	\$ 222,061	\$ 4,533	\$ 226,594	\$ 186,492	\$ 413,086	
<b>2011</b>	224,098	4,533	228,631	186,105	414,736	0.4%
<b>2012</b>	229,018	4,529	233,547	187,960	421,507	1.6%
<b>2013</b>	234,583	4,554	239,137	190,376	429,513	1.9%
<b>2014</b>	239,598	4,555	244,153	192,505	436,658	1.7%
<b>2015</b>	243,511	4,531	248,042	194,320	442,362	1.3%

**ii. Commercial Vehicles**

Commercial traffic has started to recover during 2010, growing at 2.4% compared to 2009. Total commercial traffic is forecast to grow from 24.8 million transactions in 2010 to 28.8 million transactions in 2015 at 3.0% per annum. Table 28 shows the detailed breakdowns by the ticket, bridge and barrier sections. Commercial traffic is expected to recover strongly in 2011 and 2012 primarily as a result of a rebound in Industrial Production and to a lesser extent trade with Canada. However, forecasts of commercial traffic are dampened by expected increases in inventory levels which have a negative impact on traffic. Commercial traffic, on the bridge and barrier system is expected to grow similar to the ticket system, with the exception of the Grand Island Bridges, traffic on which is expected to grow slightly faster as trade volumes with Canada recover. The share of commercial traffic as a percent of total traffic is expected to grow slightly from 10.0% in 2010 to 10.8% in 2015.

**Table 28: Total Commercial Traffic (in '000s)**

<b>Total Commercial Traffic</b>				
<b>Year</b>	<b>Ticket</b>	<b>Bridges &amp; Barriers</b>	<b>Total Commercial</b>	<b>% Growth</b>
<b>2010 Actual</b>	15,671	9,121	24,792	
<b>2011</b>	16,055	9,310	25,365	2.3%
<b>2012</b>	16,852	9,759	26,611	4.9%
<b>2013</b>	17,282	10,051	27,333	2.7%
<b>2014</b>	17,758	10,312	28,070	2.7%
<b>2015</b>	18,235	10,542	28,777	2.5%

Revenues from commercial vehicle transactions are shown in Table 29. Total revenues from commercial vehicles are expected to grow from \$228.1 million in 2010 to \$266.1 million in 2015 at CAGR of 3.1% per annum (inclusive of volume discount). The volume discount was 9.1% of total commercial toll transactions in 2010 and is expected to decline to 8.6% in 2015 (consistent with the declining historical trend). Commercial revenues grow slightly slower than traffic due to expected increases in the E-ZPass share that tends to reduce revenues per transaction (because of the E-ZPass discount). In 2010 commercial revenues accounted for 35.6% of total revenues (inclusive of the commercial discount) and that percentage is expected to increase to 37.6% in 2015.

**Table 29: Total Commercial Revenue Forecast (in \$ '000s)**

Total Commercial Revenues					
Year	Ticket	Bridges & Barriers	Volume Discount	Total Commercial	% Growth
<b>2010 Actual</b>	\$ 194,912	\$ 55,986	\$ (22,769)	\$ 228,129	
<b>2011</b>	201,018	57,339	(22,753)	235,604	3.3%
<b>2012</b>	210,807	59,959	(23,314)	247,452	5.0%
<b>2013</b>	216,007	61,468	(23,909)	253,566	2.5%
<b>2014</b>	221,378	62,836	(24,683)	259,531	2.4%
<b>2015</b>	227,181	64,063	(25,122)	266,122	2.5%

**iii. Total Toll Revenue**

Total traffic forecasts are shown in Table 30 and total traffic is expected to grow from 247.6 million transactions in 2010 to 267.4 million transactions in 2015, at a CAGR of 1.5%. Total traffic on the ticket system is expected to grow much faster at a CAGR of 2.0% during 2010 – 2015 while on the bridge and barrier system, total traffic is expected to grow at 1.0% annually during 2010 – 2015. The difference is mainly due to slower growing passenger traffic on the barriers.

**Table 30: Total Traffic Forecast (in '000s)**

Total Traffic				
Year	Ticket	Bridges & Barriers	Total	% Growth
<b>2010 Actual</b>	144,626	102,971	247,597	
<b>2011</b>	145,138	102,967	248,105	0.2%
<b>2012</b>	148,828	104,298	253,126	2.0%
<b>2013</b>	152,748	105,738	258,486	2.1%
<b>2014</b>	156,372	106,994	263,366	1.9%
<b>2015</b>	159,329	108,058	267,387	1.5%

Total toll revenue growth is shown in Table 31 and total toll revenues are expected to increase from \$641.2 million in 2010 to \$708.5 million in 2015, growing at a CAGR of 2.0% per annum. Total revenues from the bridge and barrier system are expected to increase at 1.3% per annum during 2010 – 2015, slightly faster than traffic (at 1.0% per annum). This difference exists because of the declining share of lower toll paying commuter traffic at certain locations and the increasing share of higher toll paying commercial traffic. On the ticket system, total toll revenues are expected to increase at 2.4% per annum during 2010 – 2015 reflecting the faster growth in commercial traffic. Overall, the share of toll revenue receipts from the bridge and barrier system is expected to decline from 36.5% in 2010 to 35.2% in 2015.

**Table 31: Total Toll Revenues (in '000s)**

Total Toll Revenues					
Year	Ticket	Bridges & Barriers	Volume Discount	Total	% Growth
<b>2010 Actual</b>	\$ 421,506	\$ 242,478	\$ (22,769)	\$ 641,215	
<b>2011</b>	429,649	243,444	(22,753)	650,340	1.4%
<b>2012</b>	444,354	247,919	(23,314)	668,959	2.9%
<b>2013</b>	455,144	251,844	(23,909)	683,079	2.1%
<b>2014</b>	465,531	255,341	(24,683)	696,189	1.9%
<b>2015</b>	475,223	258,383	(25,122)	708,484	1.8%

**iv. Concession Revenues**

Concession revenues (fuel and food service) from the rents received for the 27 Thruway service areas were projected by the Authority based on historical receipts. Concession revenues were \$12.7 million in 2010 and 12.6 million in 2009. Approximately 20% of the total concession revenues were generated from gasoline stations and with the remaining approximately 80%, or \$10.1 million, in rent generated from restaurants.

**v. Other Revenues**

In addition to the toll and concession rental revenues, the Authority also receives annual income from special hauling permits, sale of real and surplus property, E-ZPass fees, rental and lease income, fiber optic contracts, business and commercial tag lease fees, investment interest and other miscellaneous sources. Other revenues amounted to \$18.5 million in 2010 and \$13.9 million in 2009. The Authority estimates that combined concession and other revenues will range from \$29.5 million in 2011 to \$31.4 million in 2015.

**vi. Total Revenues**

Total revenues, which include toll revenue receipts and other revenues as discussed above, are expected to increase at 2.0% during 2010 – 2015. Total revenues were \$672.5 million in 2010 and are expected to increase to \$739.9 million in 2015, as shown in Table 32.

**Table 32: Projected Total Revenues (\$ Millions)**

Total Revenues							
Year	Passenger	Commercial	Total Toll Revenue <sup>(1)</sup>	Other Revenue	Total Revenue	% Growth Toll Revenue	% Growth Total Revenue
<b>2010 Actual</b>	\$413.1	\$228.1	\$641.2	\$31.3	\$672.5		
<b>2011</b>	414.7	235.6	650.3	29.5	679.9	1.4%	1.1%
<b>2012</b>	421.5	247.5	669.0	30.9	699.9	2.9%	2.9%
<b>2013</b>	429.5	253.6	683.1	30.9	714.0	2.1%	2.0%
<b>2014</b>	436.7	259.5	696.2	31.3	727.5	1.9%	1.9%
<b>2015</b>	442.4	266.1	708.5	31.4	739.9	1.8%	1.7%

**Notes:**

(1) Inclusive of the commercial volume discount

### e. Operating Expenses

As shown below, Table 33 details operating and maintenance expenses for the Thruway's maintenance of highway, bridges, buildings, equipment including snow and ice removal, toll collections, policing, traffic operations and administrative costs. These projections, developed by the Authority for 2011 – 2015, are based on current costs increased for expected inflation for labor contracts, materials and supplies. These projections also reflect health insurance, pension funding requirements, and operating reserve requirements for legal claims and environmental liabilities.

Maintenance expenses on the Thruway system are expected to grow from \$385.5 million in 2011 to \$431.2 million in 2015. Additional operating and maintenance expenses for the canal system are projected to increase from \$55.7 million in 2011 to \$62.6 million in 2015. The Authority projects, for Thruway and Canal system, operating and maintenance expenditures to rise to \$493.8 million by 2015, with increases of 2.5 to 3% annually during the period. **In our opinion, the estimates provided by the Authority are reasonable, and consistent with our projections for inflation and economic recovery in the US.**

**Table 33: Projected Operating and Maintenance Expenses (\$ Millions)**

Year	Thruway	Canal System	Total Operating Expenses
2011	\$385.5	\$55.7	\$441.2
2012	395.1	57.2	452.3
2013	406.7	59.0	465.7
2014	418.7	60.7	479.4
2015	431.2	62.6	493.8

### f. Capital Plan Projections

The Authority's projected Multi-Year Capital Program for 2011-2015 is summarized below in Table 34. This \$2.2 billion Capital Program has been and will continue to be funded both by bonds and by annual revenues generated principally from tolls. The last toll increase in January 2010 is expected to provide enough revenues through year 2012 to meet debt service obligations and coverage tests, but will not likely provide enough additional revenues to fund the entire Multi-Year Capital Plan to 2015 as it is currently estimated. The needed additional funds could be obtained through additional toll rate increases in the future.

The Multi-Year Capital Program includes 1,337 lane miles of new or rehabilitated highway and 70 new or rehabilitated bridges.

The capital program includes expenditures planned by the Authority, segmented into three categories: Highways and Bridges; Facilities, Traveler's Plaza and Equipment; Canal System Projects. The capital program is expected to increase significantly during 2011 (16.5%), however during 2012 – 2015 the expected increase will be very slow at 0.9% per year.

The primary objectives for the Thruway Authority are to maintain its infrastructure in a state of good repair and to maintain the overall safety of the system. Our assessments have shown the subject projects of the 2011-2015 Multi-Year Capital Plan to be consistent with the overall mission of the Authority to keep the system in a state of good repair. It would be anticipated that this plan would contribute to maintaining and/or improving the overall level of safety on the system.

**Table 34: Projected Total Capital Program Expenditures (\$ Millions)**

Year	Highways & Bridges	Facilities, Travel Plazas and Equipment	Canal System Projects	Total Capital Expenses
2011	\$351.5	\$60.7	\$27.6	\$439.8
2012	365.5	52.2	26.2	443.9
2013	325.3	45.5	39.8	410.6
2014	354.1	42.2	47.9	444.2
2015	371.5	41.9	42.6	456.0

**g. Debt Service Requirements**

Debt service projections are outlined in Table 35. These include new interest debt service for Bond Anticipation Notes (BANs) and additional debt that will be issued to meet capital program needs and would eventually be refunded and long term debt issued. By 2015, total debt service will have increased to nearly \$329 million from a level of nearly \$185 million for debt service on outstanding bonds and notes in 2011.

**Table 35: Projected Debt Service (\$ Millions)**

Year	Debt Service on Outstanding Bonds & Notes	Debt service on New Debt issued	Total Debt Service
2011	\$184.8	\$0.0	\$184.8
2012	167.6	38.2	205.8
2013	167.6	102.9	270.5
2014	167.6	131.2	298.8
2015	167.6	161.2	328.8

**h. Net Revenues and Fund Requirements**

Projected net revenues and distribution of funds are presented in Table 36, the figures are calculated in the format consistent with the flow of funds set forth in the Authority's Bond Resolution. The estimates include net revenues of \$294.4 million in 2011, increasing to \$308.7 million by 2015. The current forecasts suggest a shortfall in the funds available for the reserve maintenance fund provision, canal operating and capital program by 2013 of \$51.0 million, and the shortfall is expected to grow to \$120.4 million by 2015. As the Authority's fiscal management guidelines of a Debt Service Coverage Ratio above 1.5x is not met in 2012 and thereafter, a review of the Authority's needed actions are currently taking place.

**Table 36: Projected Revenues, Operating Expenses and Reserve Fund Requirements (\$ Millions)<sup>(1)</sup>**

Revenues, Operating Expenses and Reserve Fund Requirements								
	Actual	Actual	Revised Estimates	Projected	Projected	Projected	Projected	
	2009	2010	2011	2012	2013	2014	2015	Total
<b>Total Revenues</b>	\$ 638.3	\$ 672.5	\$ 679.9	\$ 699.9	\$ 714.0	\$ 727.5	\$ 739.9	\$ 4,871.9
<b>CWE Debt Service &amp; Reserve</b>								
<b>Available Revenues</b>	638.3	672.5	679.9	699.9	714.0	727.5	739.9	4,871.9
<b>Less:</b>								
<b>Operating Expenses</b>	339.3	358.2	381.2	391.1	402.7	414.7	427.2	2,714.5
<b>Operating Reserves</b>	<u>7.3</u>	<u>6.0</u>	<u>4.2</u>	<u>4.0</u>	<u>4.0</u>	<u>4.0</u>	<u>4.0</u>	<u>33.6</u>
<b>Total</b>	346.7	364.2	385.5	395.1	406.7	418.7	431.2	2,748.0
<b>Net Revenues</b>	291.7	308.3	294.4	304.8	307.2	308.8	308.7	2,123.8
<b>Less: Debt Service</b>	<u>166.3</u>	<u>167.3</u>	<u>167.2</u>	<u>205.8</u>	<u>270.5</u>	<u>298.8</u>	<u>328.8</u>	<u>1,604.8</u>
<b>Net Revenues After Debt Service</b>	125.4	141.0	127.2	98.9	36.7	9.9	(20.1)	519.1
<b>Less: Retained for Operating Reserves</b>	<u>(1.8)</u>	<u>2.3</u>	<u>4.7</u>	-	-	-	-	<u>5.1</u>
<b>Remaining Revenues</b>	123.5	143.2	131.9	98.9	36.7	9.9	(20.1)	524.2
<b>Less:</b>								
<b>Reserve Maintenance Provisions<sup>(2)</sup></b>	34.5	31.0	36.1	15.3	-	-	-	116.9
<b>Other Authority Projects<sup>(3)</sup></b>	48.7	46.0	55.7	57.2	59.0	60.7	62.5	389.9
<b>General Reserve Fund</b>	25.1	21.2	22.4	21.9	28.8	36.1	37.8	193.3
<b>General Reserve Fund - CP1, CP 2 &amp; BAN's</b>	<u>10.6</u>	<u>23.8</u>	<u>17.7</u>	<u>4.5</u>	-	-	-	<u>56.6</u>
<b>Balance After Reserve Maintenance Provisions, Canal Operating and General Reserve Fund</b>	4.7	21.1	0.0	0.0	(51.0)	(86.9)	(120.4)	(232.4)
<b>Adjustments for Cash Basis</b>	0.2	-	-	-	-	-	-	0.2
<b>Net Balance Available for Working Capital</b>	\$ 5.0	\$ 21.1	\$ 0.0	\$ 0.0	\$ (51.0)	\$ (86.9)	\$ (120.4)	\$ (232.2)
<b>Debt Service Coverage Ratio</b>	<b>1.75</b>	<b>1.84</b>	<b>1.76</b>	<b>1.48</b>	<b>1.14</b>	<b>1.03</b>	<b>0.94</b>	

**Notes:**

(1) Totals may not add due to rounding.

(2) Shows the Reserve Maintenance Fund provision will be funded from Debt proceeds when sufficient revenues are not available.

(3) For the period October 31, 2007 to October 11, 2010 expenditures for I-84 were funded by NYSDOT. After October 2010, operating and funding responsibilities were returned to NYSDOT.

**i. Conclusion**

The current report outlines our comprehensive review of past and projected revenues, expenses and debt service for the Authority through 2015. Our forecasts for future traffic and toll revenues are predicated on an assumption of constant nominal toll rates to 2015. Our comprehensive traffic modeling approach incorporates economic drivers directly, as well the different economic growth prospects for different markets served by the Thruway. Our modeling also accounts for other factors that will affect revenues from transactions, such as changing shares of E-ZPass usage, commuter discounts and even trip length. We conclude that the economic recession is already segueing into modest growth, and this growth should be sustained through 2015. Our resulting revenue forecasts for the Authority include growth of 1.1% in 2011, 2.9% in 2012, 2.0% in 2013, 1.9% in 2014 and 1.7% in 2015. Note that our estimates of past responses to toll increases shows traffic to be fairly inelastic, and that revenues can be increased with higher toll rates.

Our review of the Authority's operating, maintenance and capital activities and our evaluation of the facility lead us to conclude that the Thruway has been maintained to a good condition over the years. Further, the Authority's capital program should ensure that the conditions of the facilities will continue to be maintained to this level in the future. We are also of the opinion that sufficient additional toll revenues can be generated by toll increases as needed.

## **A. APPENDIX: Traffic and Revenue Model and Forecast Details**

This appendix presents the details of the modeling assumptions and methodology used to develop the Thruway Model. The Thruway Model and forecasts actually consist of two distinct modeling steps, with each step itself built up from a series of distinct models. In the first step, several traffic models are used to develop forecasts of traffic (here represented by transactions at the ticket system and the barrier system. Transactions at specific interchanges are linked to economic factors such as real personal consumption expenditures and the price of gasoline for passenger vehicles and industrial production for commercial vehicles. As discussed in the report these models were econometric in nature and were developed based on the historical relationship between the traffic and economic variables.

The second step involved modeling the actual revenues generated by the forecast transactions. Revenues per transactions at specific toll plazas are evolving over time in response to changing E-ZPass usage, discount program usage, and changing composition of trips in the case of ticket system plazas. To forecast revenues per transaction separate revenue models were developed for cash and E-ZPass paying customers and those customers that have signed up for particular discount programs (permit program for the ticket sections or the commuter program for the barrier sections) Revenue models were based on the historical relationship between revenues per transaction and the appropriate toll index as well as E-ZPass participation.

We have described the Thruway Model in detail below. As detailed, the various sub-models had excellent estimation results, confirming the strong statistical basis for the inclusion of the various explanatory variables. Further, the models replicate past traffic data quite well, suggesting that we have successfully captured the underlying economic drivers behind the traffic and the models are rigorous enough to be used for forecasting purposes.

### **A1.Data and Forecast Sources**

Most of economic factor forecasts are based on forecasts from Moody's economy.com. Gas and diesel prices are based on the 2011 Short Term Economic Outlook from Energy Information Administration. HDR has reviewed these forecasts and revised some of them (in particular, Industrial Production and Inventories) based on historical trends. Industrial Production was revised by HDR for the years 2014-2015 based on the historical relationship between real GDP growth and Industrial Production. Growth in real inventory levels for 2014 – 2015 was revised by HDR and constrained to real inventory levels prior to the 2008 – 2009 recession.

Another variable that is included in commercial traffic forecasts are Imports and Exports from Canada which developed by HDR based on Moody's forecast of total US trade. These declined rapidly during the most recent recession that ended in 2009. US imports from Canada in real terms declined 10.3% CAGR during 2008-10 while US exports to Canada declined 3% CAGR in real terms during 2008-10. Total trade with Canada is expected to go robustly during 2011 – 2013 and at lower sustainable rate during 2014 -2015. The forecasts of commercial traffic primarily rely on industrial production and inventories and trade with Canada is only used to forecast traffic for a very small proportion of commercial traffic.

## A2. Historical Toll Changes and Assumptions

The estimation (or calibration) of the traffic models also requires a precise measure of toll changes over time to capture the effects these have had on traffic and to estimate the response to the toll changes by passenger and commercial vehicles. Table A37 shows the actual and percentage changes in toll on the ticket system. The percentage changes were used to construct an index for toll changes on the ticket system for passenger, commercial and commuter traffic.

**Table A37: Historical Toll Increases on the Ticket System**

Ticket									
	Cents Per Mile Rate				Percentage Increase				
	Cash		E-ZPass		Cash		E-ZPass		
	Passenger	Commercial	Passenger	Commercial	Passenger	Commercial	Passenger	Commuter	Commercial
<b>May-05</b>	\$3.88	\$19.71	\$3.49	\$18.72	25%	35%	12.50%	12.50%	28.30%
<b>Jan-08</b>	4.27	21.68	3.49	18.72	10%	10%	0	0	0
<b>Jul-08</b>	4.27	21.68	4.06	20.6	0	0	16%	16%	10%
<b>Jan-09</b>	4.48	22.76	4.26	21.63	5%				
<b>Jun-09</b>				S- Discount partially Eliminated					S - Discount partially Eliminated
<b>Jan-10</b>	4.70	23.90	4.47	22.71	5%				

Table A38 and Table A39 present the historical toll changes on the bridge and barrier system. Changes in toll rates were used to develop a toll index for the bridge and barrier system. Rates on the bridge and barrier represent the toll charged and do not represent tolls on a per-mile basis like those calculated for the ticket system.

**Table A38: Historical Passenger Toll Changes on the Bridge and Barrier System**

Historical Passenger Toll Increases											
Recent Toll Increases On Bridge & Barrier System		Jan-07		Jan-08		Jul-08		Jan-09		Jan-10	
		Rate	% Change								
Grand Island	Cash	\$0.75	-	\$1.00	33.3%	\$1.00	-	\$1.00	-	\$1.00	-
	E-ZPass	0.68	-	0.68	-	0.95	39.7%	0.95	-	0.95	-
	Commuter	0.25	-	0.25	-	0.25	-	0.26	4.0%	0.28	7.7%
Tappan Zee	Cash	4.00	-	4.50	12.5%	4.50	-	5.00	11.1%	5.00	-
	E-ZPass	3.60	-	3.60	-	4.28	18.9%	4.75	11.0%	4.75	-
	Commuter	2.00	-	2.00	-	2.00	-	3.00	50.0%	3.00	-
Yonkers	Cash	0.75	-	1.00	33.3%	1.00	-	1.25	25.0%	1.25	-
	E-ZPass	0.68	-	0.68	-	0.95	39.7%	1.19	25.3%	1.19	-
	Commuter	0.50	-	0.50	-	0.50	-	0.53	6.0%	0.55	3.8%
New Rochelle	Cash	1.25	-	1.50	20.0%	1.50	-	1.75	16.7%	1.75	-
	E-Z Pass	1.13	-	1.13	-	1.43	26.5%	1.66	16.1%	1.66	-
	Commuter	1.00	-	1.00	-	1.00	-	1.05	5.0%	1.10	4.8%
Harriman	Cash	0.75	-	1.00	33.3%	1.00	-	1.25	25.0%	1.25	-
	E-ZPass	0.68	-	0.68	-	0.95	39.7%	1.19	25.3%	1.19	-
	Commuter	0.50	-	0.50	-	0.50	-	0.53	6.0%	0.55	3.8%

Toll changes took place on the bridge and barrier system in varying amounts during January 2008, with cash tolls for passenger vehicles increasing by \$0.25 to \$0.50. In July 2008 the discount between E-ZPass and cash rates was reduced to 5% of January 2008 cash rate, thus E-ZPass rates for passenger vehicles increased between 19%-40%. In January 2009 toll rates were increased by \$0.25 at the barriers and by \$0.50 at the Tappan Zee Bridge. Commuter rates were increased as well, most notably for the Tappan Zee Bridge that experiences a significant proportion of commuter traffic. In January 2010 cash and commuter rates were increased by 4% - 8% except at the Tappan Zee Bridge.

Historical toll changes for trucks on the bridge and barrier system are presented in Table A39. In addition to the toll changes identified on the toll schedule, in July 2009 the Authority eliminated special discounts for vehicles in classes 5H, 6H and 7H for non New York Customer Service Center (NYSCSC) accounts. This change was not explicitly incorporated into the toll rate index rather it was controlled for separately in the traffic and revenue models (see section on traffic and revenue models for details).

**Table A39: Historical Truck Toll Changes on the Bridge and Barrier System**

Historical Truck Toll Increases											
Recent Toll Increases On Bridge & Barrier System		Jan-07		Jan-08		Jul-08		Jan-09		Jan-10	
		\$ Rate	% Change								
Grand Island	Cash	3.50	-	4.00	14.3%	4.00	-	4.25	6.3%	4.25	-
	E-Z Pass	3.33	-	3.33	-	3.80	14.1%	4.04	6.3%	4.04	-
Tappan Zee	Cash	27.00	-	29.50	9.3%	29.50	-	31.25	5.9%	32.75	4.8%
	E-Z Pass	13.5	-	13.5	-	14.88	10.2%	15.63	5.0%	16.38	4.8%
Yonkers	Cash	3.50	-	4.00	14.3%	4.00	-	4.25	6.3%	4.25	-
	E-Z Pass	3.33	-	3.33	-	3.80	14.1%	4.04	6.3%	4.04	-
New Rochelle	Cash	6.75	-	7.50	11.1%	7.50	0.0%	8.00	6.7%	8.00	-
	E-Z Pass	6.41	-	6.41	-	7.13	11.2%	7.60	6.6%	7.60	-
Spring Valley	Cash	11.00	-	12.25	11.4%	12.25	-	13.00	6.1%	13.50	3.8%
	E-Z Pass	5.50	-	5.50	-	6.13	11.5%	6.50	6.0%	6.75	3.8%
Harriman	Cash	3.50	-	4.00	14.3%	4.00	-	4.25	6.3%	4.25	-
	E-Z Pass	3.33	-	3.33	-	3.80	14.1%	4.04	6.3%	4.04	-

### A3. Traffic Econometric Model

Econometric models can be developed based on as much temporal detail as allowed by available data, with monthly, quarterly or yearly being the most common. For most road facilities, data allows for the segmenting of the facility into separate links (or segments) containing groups of adjacent toll plazas. These links are essentially separate markets and can be treated as individual observations over time, producing a longitudinal panel. The panel structure allows the inclusion of very powerful techniques to control for location-specific “fixed effects” to be controlled consistently across all the component segments. Formally the models will have the following structure:

$$(1) Y_{ijt} = X_{ijt} \beta_j + \text{Fixed Effects}_{ij} + \varepsilon_{ijt}$$

In this model, the exiting transactions at interchange i of vehicle type j at time t is a function of a series of economic and demographic independent variables (gas prices, tolls, regional employment, leisure/tourism spending) – the matrix X.  $\beta_j$  is a vector of coefficients that detail the influence of the various explanatory variables on the volume of vehicles in a given period. If there is more than one link the panel structure of the data allows location-specific fixed effects to be controlled for. The variable  $\varepsilon$  is a random error term. The benefits of grouping facility data into longitudinal panels are significant, and doing so will almost always improve the econometric

model. For one, this allows the development of fairly large data sets, even if one is constrained to annual data: data for  $t$  periods observed over  $n$  links generates a  $t \times n$  data set, which, depending on the facility, can become quite significant. The benefits in terms of increasing model reliability are considerable<sup>8</sup>.

Beyond the benefit of generating an expanded data set, the longitudinal grouping allows for several approaches to control for heterogeneity. A major source of heterogeneity could include relative attractiveness of alternative routes or modes that varies across sub-regions. To the degree these are relatively constant over time, fixed effects controls offer an efficient tool to essentially control for different network attributes across a facility.

When the model in equation 1 is estimated successfully (i.e. the model parameters are statistically significant and conform in sign and magnitude to the underlying theory of transportation demand), the resulting model can be used to forecast vehicles on the facility. The forecasting process entails a reliance on forecasts for the various explanatory variables which, when combined with estimated parameters of the model, will produce forecasts for the relevant links or markets. As described in standard econometric texts, given certain underlying assumptions the resulting forecasts are unbiased and have minimum standard error.

The resulting facility forecasts will be considered unconstrained forecasts in the sense that no network effects are assumed to affect the future growth on the facility. Here only economic variables and prices such as fuel and tolls enter into the development of future facility vehicle volume. The underlying transportation network is assumed stable: No significant changes in the network are considered, and the relative attractiveness of the facility relative to alternative routes or modes, while different across sub-regions, are implicitly assumed to remain constant over time.

#### **a. Ticket System**

Using the technical framework outlined above in equation (1), econometric models were estimated separately for ticket and barrier sections of the Thruway and in particular separate models were developed by vehicle type (passenger and commercial vehicles).

#### **i. Model Results**

Results of passenger models are illustrated in Table A40. For the purpose of developing the traffic models and in-line with the technical approach outlined in equation (1) the Thruway ticket sections were aggregated. These aggregations are outlined by milepost and interchange in Table 21. For example Segment 1 starts from Interchange 15 (Woodbury) to Interchange 21 (Catskill) and all exiting traffic for these interchanges is aggregated over time. For the passenger model

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<sup>8</sup> While fixed effect controls are not always present in the econometric models, as they require that the facility can be segmented into at least two distinct segments, they are a very useful technique for this type of exercise. When estimating a model such as that in equation (1), it is difficult to account for all the factors that determine traffic on a specific link, particularly if the facility is characterized by significant heterogeneity. For example, an inter-urban road might cross several distinct markets, with different population densities, land use controls and modal alternatives. As long as these characteristics are time-invariant and constant in the sample period, fixed effects controls remove the bias they might cause in the econometric estimation.

segments with the most similar traffic profiles in terms of proximity, seasonality and economic factors are then estimated simultaneously as outline in equation (1).

Table A40 shows the results for passenger vehicle models. Estimated models have high  $R^2$  and low standard errors, which confirm the model fit to past data is excellent. Primary economic factors behind the passenger vehicle models are growth in personal consumption expenditures and the real price of gasoline and changes in the toll index. Gas price elasticities and toll rate elasticities are in line with expectations for a facility like the Thruway. A 10% change in tolls is expected to cause a decline in traffic of 0.4% to 0.8% depending on the particular segment. It is interesting to note that sections of the Thruway in rural areas are more sensitive to changes in personal consumption. These sections of the highway experience a greater proportion of leisure based traffic, and typically one finds this associated with a great sensitivity to both income changes and toll changes. These sections of the Thruway that are more sensitive to personal consumption expenditures are also experience greater seasonal variation in traffic.<sup>9</sup>

Results for commercial vehicle traffic models for the ticket are shown in Table A41. Primary economic factors for commercial vehicles are changes in Industrial Production and US Inventory in real dollars. Estimated models have high  $R^2$  and low standard errors, again indicating very good model fit. The model estimation confirms the relationship between traffic and inventories, thereby increasing inventory levels with lower Thruway commercial traffic, as firms tend to reduce shipments.

Traffic is more sensitive to industrial production for Segments 1 – 3 (near New York City and Albany including the Berkshire Connector) primarily due to Port traffic through Port of New York and Segments 7 – 9 (near Buffalo) due to trade flow with Canada. Toll sensitivity is high for the Thruway, with a 10% increase in tolls leading to a 2% - 4.5% decrease in traffic. Prices of fuel tend to decrease traffic between 0.3 – 0.5 % for every 10% increase in the real price of fuel.

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<sup>9</sup> For Segments 7 – 9, at the western end of the Thruway, special controls using dummy variables were used to control for changes that occurred when tolls from Black rock and City line barriers were removed (October 2006). In addition construction impacts were also controlled for.

**Table A40: Ticket System Passenger Traffic Models**

Dependent Variable		Log (Passenger Traffic)		
Period		July 2005 - Dec 2010		
Frequency		Monthly		
Traffic Sections		Ticket, Segments 1 - 3		
Independent Variables	Coefficient	t-Statistic	Prob.	
Constant	9.563	4.3	0.00	
Log (Pers. Consumption Real \$)	0.277	2.0	0.05	
Log (US Gas Price Real \$)	-0.044	-2.8	0.01	
Log(Real Toll Index)	-0.083	-3.3	0.00	
Seasonality				
Jan	0.055	5.6	0.00	
March	0.136	13.8	0.00	
April	0.150	15.0	0.00	
May	0.226	22.1	0.00	
June	0.226	21.9	0.00	
July	0.325	33.0	0.00	
Aug	0.380	38.8	0.00	
Sep	0.224	22.9	0.00	
Oct	0.251	26.3	0.00	
Nov	0.163	17.3	0.00	
Dec	0.109	11.6	0.00	
Statistics				
R-Sq	0.999			
Adj R-Sq	0.999			
Std. Error	0.027			
Durbin Watson	1.219			

Dependent Variable		Log (Passenger Traffic)		
Period		Jan 2000 - Dec 2010		
Frequency		Monthly		
Traffic Sections		Ticket, Segments 4 - 6		
Independent Variables	Coefficient	t-Statistic	Prob.	
Constant	-0.006	0.0	0.99	
Log (Pers. Consumption Real \$)	0.843	23.4	0.00	
Log (US Gas Price Real \$)	-0.027	-2.7	0.01	
Log(Real Toll Index)	-0.040	-2.2	0.03	
Seasonality				
Jan	0.029	4.4	0.00	
March	0.158	24.4	0.00	
April	0.176	26.9	0.00	
May	0.265	40.1	0.00	
June	0.263	39.7	0.00	
July	0.351	53.4	0.00	
Aug	0.405	61.9	0.00	
Sep	0.250	38.1	0.00	
Oct	0.266	41.0	0.00	
Nov	0.185	28.6	0.00	
Dec	0.126	19.5	0.00	
Statistics				
R-Sq	0.989			
Adj R-Sq	0.988			
Std. Error	0.027			
Durbin Watson	1.400			

Dependent Variable		Log (Passenger Traffic)		
Period		Jan 2005 - Dec 2010		
Frequency		Monthly		
Traffic Sections		Ticket, Segments 7 - 9		
Independent Variables	Coefficient	t-Statistic	Prob.	
Constant	-7.602	-2.4	0.02	
Log (Pers. Consumption Real \$)	1.342	6.7	0.00	
Log (US Gas Price Real \$)	-0.096	-4.1	0.00	
Log(Real Toll Index)	-0.042	-1.4	0.17	
Seasonality				
Jan	0.052	4.0	0.00	
March	0.197	15.0	0.00	
April	0.223	16.7	0.00	
May	0.330	24.1	0.00	
June	0.352	25.4	0.00	
July	0.479	34.6	0.00	
Aug	0.520	37.8	0.00	
Sep	0.317	23.2	0.00	
Oct	0.317	23.5	0.00	
Nov	0.228	17.1	0.00	
Dec	0.148	11.2	0.00	
Special Controls				
Construction	-0.114	-8.2	0.00	
Removal of Black Rock Toll	-0.055	-2.1	0.04	
Statistics				
R-Sq	0.974			
Adj R-Sq	0.970			
Std. Error	0.032			
Durbin Watson	1.275			

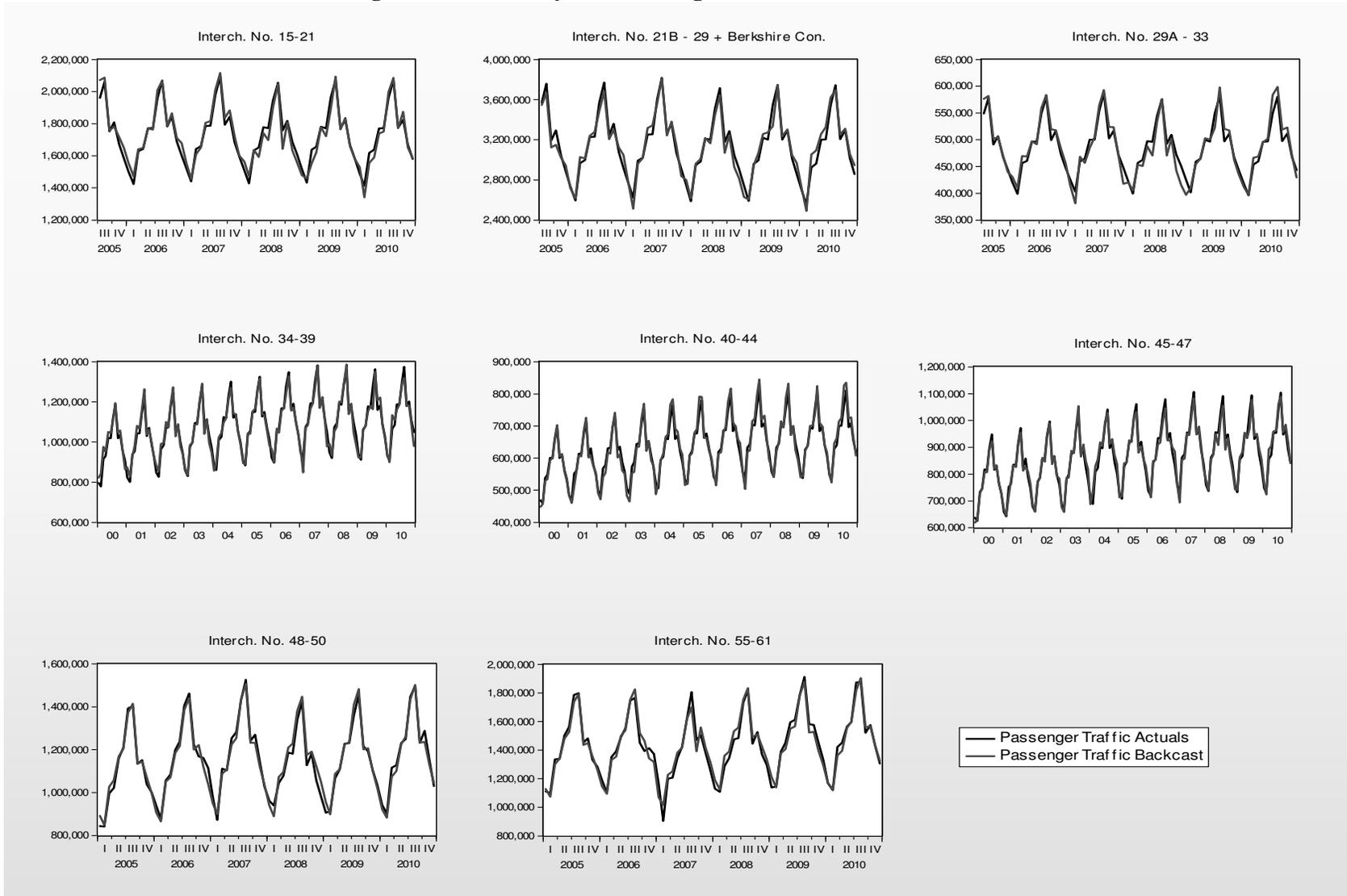
**Table A41: Ticket System Commercial Vehicle Traffic Models**

Dependent Variable		Log (Commercial Traffic)		
Period		July 2005 - Dec 2010		
Frequency		Monthly		
Traffic Sections		Ticket, Segments 1 - 3		
Independent Variables	Coefficient	t-Statistic	Prob.	
Constant	16.492	11.5	0.00	
Log(Industrial Production)	1.080	11.1	0.00	
Log (US Inventory Real \$)	-0.665	-6.1	0.00	
Log (US Diesel Price Real \$)	-0.043	-2.2	0.03	
Log(Real Toll Index)	-0.229	-2.2	0.03	
Seasonality				
Jan	0.079	6.9	0.00	
March	0.134	11.6	0.00	
April	0.149	12.8	0.00	
May	0.207	17.6	0.00	
June	0.215	18.0	0.00	
July	0.213	19.0	0.00	
Aug	0.252	22.4	0.00	
Sep	0.210	18.6	0.00	
Oct	0.235	20.9	0.00	
Nov	0.137	12.3	0.00	
Dec	0.096	8.6	0.00	
Special Controls				
S-Veh. Discount Elimination	-0.069	-5.7	0.000	
Statistics				
R-Sq	0.999			
Adj R-Sq	0.999			
Std. Error	0.032			
Durbin Watson	2.320			

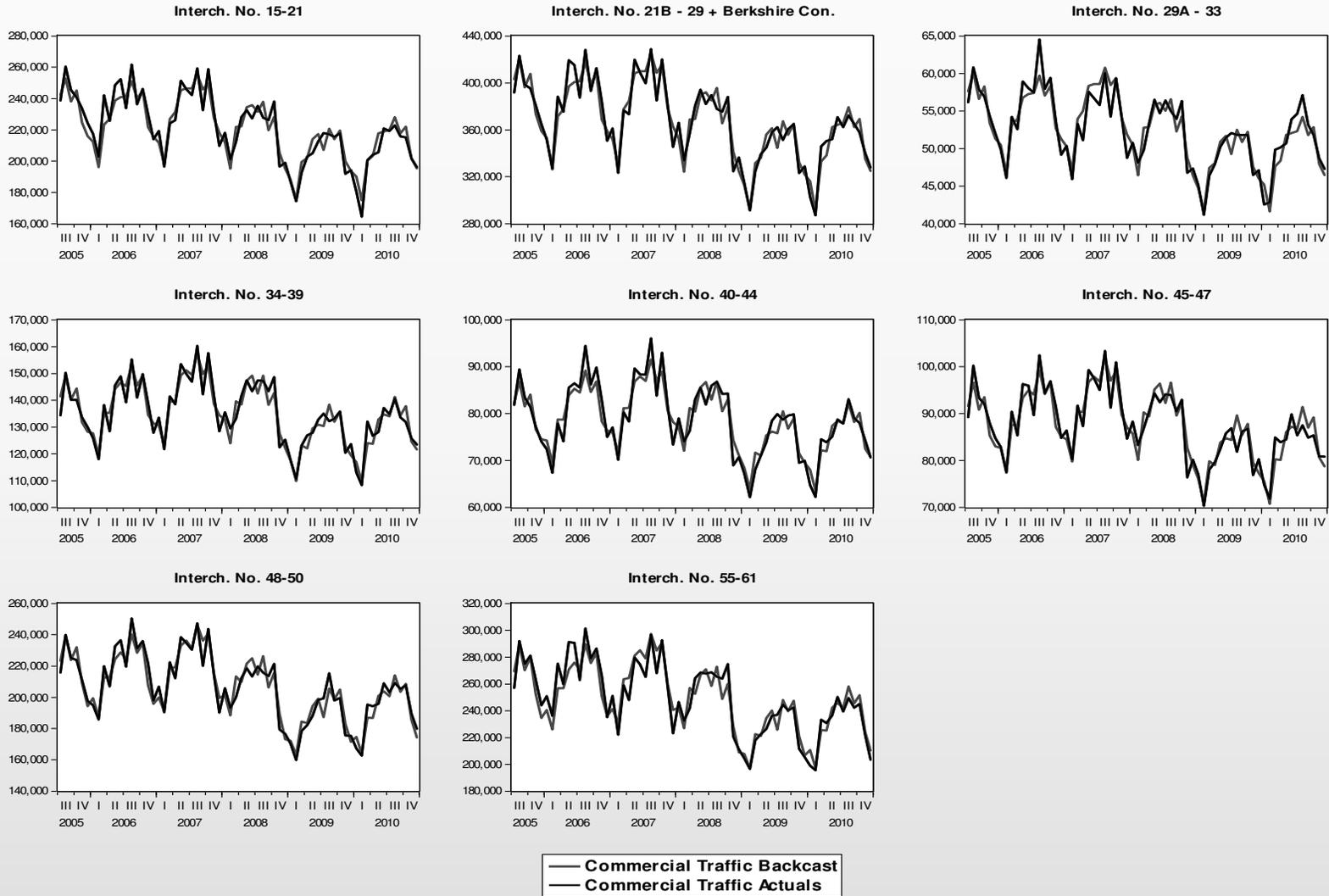
Dependent Variable		Log (Commercial Traffic)		
Period		July 2005 - Dec 2010		
Frequency		Monthly		
Traffic Sections		Ticket, Segments 4 - 6		
Independent Variables	Coefficient	t-Statistic	Prob.	
Constant	8.672	21.2	0.00	
Log(Industrial Production)	0.630	7.3	0.00	
Log (US Diesel Price Real \$)	-0.031	-1.8	0.07	
Log(Real Toll Index)	-0.451	-6.5	0.00	
Seasonality				
Jan	0.067	5.9	0.00	
March	0.124	10.9	0.00	
April	0.120	10.4	0.00	
May	0.185	16.0	0.00	
June	0.197	16.9	0.00	
July	0.184	16.6	0.00	
Aug	0.236	21.3	0.00	
Sep	0.183	16.5	0.00	
Oct	0.208	18.8	0.00	
Nov	0.106	9.7	0.00	
Dec	0.073	6.7	0.00	
Statistics				
R-Sq	0.986			
Adj R-Sq	0.985			
Std. Error	0.031			
Durbin Watson	2.466			

Dependent Variable		Log (Commercial Traffic)		
Period		July 2005 - Dec 2010		
Frequency		Monthly		
Traffic Sections		Ticket, Segments 7 - 9		
Independent Variables	Coefficient	t-Statistic	Prob.	
Constant	15.794	8.0	0.00	
Log(Industrial Production)	1.276	9.4	0.00	
Log (US Inventory Real \$)	-0.650	-4.3	0.00	
Log (US Diesel Price Real \$)	-0.050	-1.8	0.07	
Log(Real Toll Index)	-0.361	-2.4	0.02	
Seasonality				
Jan	0.061	3.9	0.00	
March	0.131	8.3	0.00	
April	0.129	8.0	0.00	
May	0.189	11.7	0.00	
June	0.205	12.6	0.00	
July	0.182	11.8	0.00	
Aug	0.248	16.1	0.00	
Sep	0.202	13.0	0.00	
Oct	0.231	15.0	0.00	
Nov	0.113	7.4	0.00	
Dec	0.037	2.4	0.02	
Special Controls				
S-Veh. Discount Elimination	-0.063	-3.701	0.000	
Statistics				
R-Sq	0.946			
Adj R-Sq	0.938			
Std. Error	0.036			
Durbin Watson	1.987			

**Figure A7: Ticket System Passenger Car Traffic Backcasts**



**Figure A8: Ticket System Commercial Traffic Model Backcasts**



**ii. Backcasts**

Figure A7 and Figure A8 illustrate “back-casts” for passenger and commercial traffic models for each segment of the Thruway. Back-casts check the ability of the model to reproduce historical traffic. This is usually a good indication of how well a model will forecast the future, and a good check to see if the model is not systematically under or overestimating the historical data. For passenger vehicle back-casts the models perform extremely well, with mean average percent error (MAPE) of 2-3%. For commercial vehicles models perform equally well with MAPE between 2.5 – 3%. A MAPE of 5% or less is typically considered an indication of a robust and accurate forecasting model.

**b. Bridge and Barrier System**

**i. Model Results**

**Table A42: Bridge and Barrier System Commercial Traffic Models**

Dependent Variable	Log (Commercial Traffic)		
Period	Jan 2005 - Dec 2010		
Frequency	Monthly		
Traffic Sections	Tappan Zee, Yonkers, New Rochelle, Harriman, Spring Valley		
Independent Variables	Coefficient	t-Statistic	Prob.
Constant	9.887	7.9	0.00
Log(Industrial Production)	0.879	7.2	0.00
Log (US Inventory Real \$)	-0.145	-1.7	0.09
Log (US Diesel Price Real \$)	-0.036	-1.8	0.08
Log(Real Toll Index)	-0.181	-2.1	0.04
Seasonality			
Jan	0.082	6.6	0.00
March	0.181	14.4	0.00
April	0.199	15.7	0.00
May	0.271	20.6	0.00
June	0.288	22.2	0.00
July	0.257	19.9	0.00
Aug	0.286	22.1	0.00
Sep	0.217	16.7	0.00
Oct	0.244	18.9	0.00
Nov	0.170	13.3	0.00
Dec	0.124	9.7	0.00
Special Controls			
2005 Toll Reclassification	-0.132	-4.862	0.000
Statistics			
R-Sq	0.972		
Adj R-Sq	0.971		
Std. Error	0.049		
Durbin Watson	1.150		

Dependent Variable	Log (Commercial Traffic)		
Period	July 2005 - Dec 2010		
Frequency	Monthly		
Traffic Sections	Grand Island Bridge		
Independent Variables	Coefficient	t-Statistic	Prob.
Constant	18.806	6.7	0.00
Log(US Canada Trade Real \$)	0.842	9.4	0.00
Log (US Inventory Real \$)	-1.113	-6.1	0.00
Log (US Diesel Price Real \$)	-0.380	-7.8	0.00
Log(Real Toll Index)	-0.472	-2.8	0.01
Seasonality			
Jan	0.082	3.9	0.00
March	0.157	7.5	0.00
April	0.187	8.7	0.00
May	0.263	12.0	0.00
June	0.281	12.5	0.00
July	0.268	13.1	0.00
Aug	0.349	16.6	0.00
Sep	0.288	13.7	0.00
Oct	0.307	14.7	0.00
Nov	0.186	9.1	0.00
Dec	0.088	4.4	0.00
Special Controls			
S-Veh. Discount Elimination	-0.153	-7.956	0.00
Statistics			
R-Sq	0.961		
Adj R-Sq	0.949		
Std. Error	0.033		
Durbin Watson	1.147		

Using the technical framework identified in equation (1), models were estimated for the bridge and barrier system. Bridge and Barrier system models were estimated simultaneously considering factors such as similar economic drivers, proximity and seasonal variations. Table A42 shows results for the commercial traffic on different sections of the barrier. The panel on the left in Table A42 shows the model used to estimate and forecast traffic for the Tappan Zee Bridge, Yonkers, New Rochelle, Spring Valley and Harriman barriers while the panel on the right shows the model used to estimate traffic on Grand Island Bridge. Primary economic factors for the former are industrial production, US inventory in real dollars and diesel prices while the primary economic factors for the Grand Island Bridge commercial traffic model are US trade with Canada and US Inventory in real dollars.

**Table A43: Bridge and Barrier System Passenger Traffic Models**

Dependent Variable		Log (Passenger Traffic)		
Period		Jan 2005 - Dec 2010		
Frequency		Monthly		
Traffic Sections		Grand Island, Tappan Zee, Yonkers, New Rochelle, Harriman		
Independent Variables	Coefficient	t	t-Statistic	Prob.
Constant	11.195		6.1	0.00
Log (Pers. Consumption )	0.188		1.6	0.11
Log (US Gas Price Real \$)	-0.031		-2.1	0.04
Log(Real Toll Index)	-0.200		-15.4	0.00
Seasonality				
Jan	0.067		7.9	0.00
March	0.152		17.9	0.00
April	0.185		21.5	0.00
May	0.254		28.9	0.00
June	0.234		25.8	0.00
July	0.296		32.6	0.00
Aug	0.301		33.4	0.00
Sep	0.205		23.2	0.00
Oct	0.221		25.7	0.00
Nov	0.168		19.7	0.00
Dec	0.139		16.4	0.00
Special Controls				
Summer*(Grand Island)	0.070		6.523	0.00
Statistics				
R-Sq	0.959			
Adj. R-Sq	0.957			
Std. Error	0.035			
Durbin Watson	1.259			

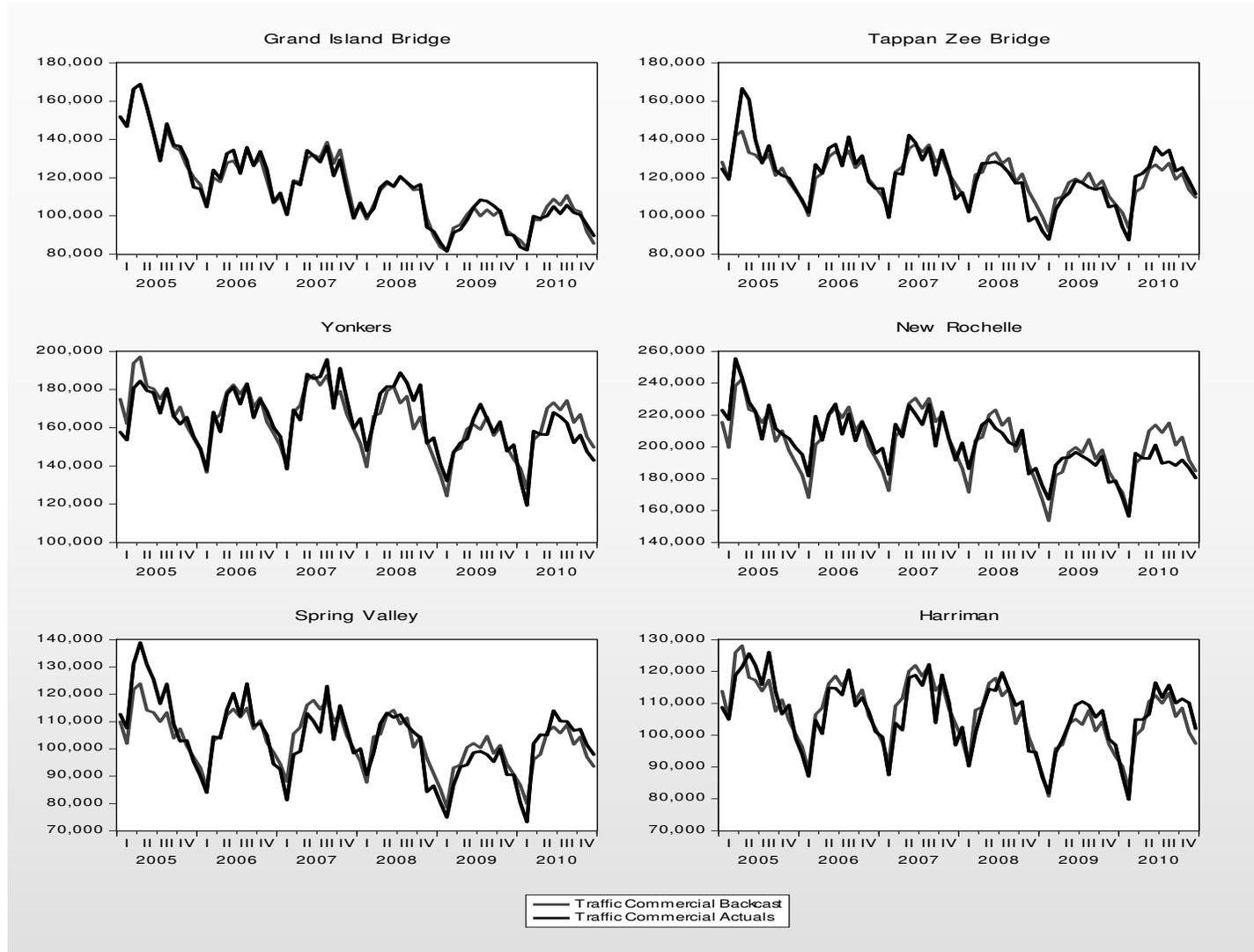
Dependent Variable		Log (Passenger Traffic)		
Period		July 2005 - Dec 2010		
Frequency		Monthly		
Traffic Sections		Spring Valley		
Independent Variables	Coefficient	t	t-Statistic	Prob.
Constant	69.974		2.9	0.0
Log (US Gas Price Real \$)	-0.068		-1.2	0.22
Log(Real Toll Index)	-0.435		-1.6	0.12
Seasonality				
Feb	0.025		0.7	0.47
March	0.286		8.4	0.00
April	0.441		10.5	0.00
May	0.573		8.0	0.00
June	0.477		4.6	0.00
July	0.761		6.9	0.00
Aug	0.635		4.3	0.00
Sep	0.154		1.0	0.32
Oct	0.340		3.7	0.00
Nov	0.102		1.2	0.24
Dec	-0.190		-3.5	0.00
Special Controls				
Log(Past Month Traffic)	0.514		3.9	0.00
Trend	-0.033		-2.9	0.01
Statistics				
R-Sq	0.990			
Adj. R-Sq	0.987			
Std. Error	0.052			
Durbin Watson	2.051			

Results for passenger vehicle model estimation are shown in Table A43. The primary economic factor for the passenger traffic is personal consumption expenditures. Grand Island Bridge because of its proximity to the Canadian border receives a significantly higher share of seasonal traffic and is controlled for separately, and traffic during summer is much higher at Grand Island than at other barriers. The panel on the right shows estimates for Spring Valley Barrier. At Spring Valley barrier passenger vehicles with two axles do not pay any tolls and only those passenger vehicles which are towing a vehicle and thus have three or more axles are required to pay a toll. These passenger vehicles towing a trailer have been modeled as a function of gasoline price, tolls and incorporate a trend component. As can be seen from the model the share of traffic from this segment is declining at this barrier.

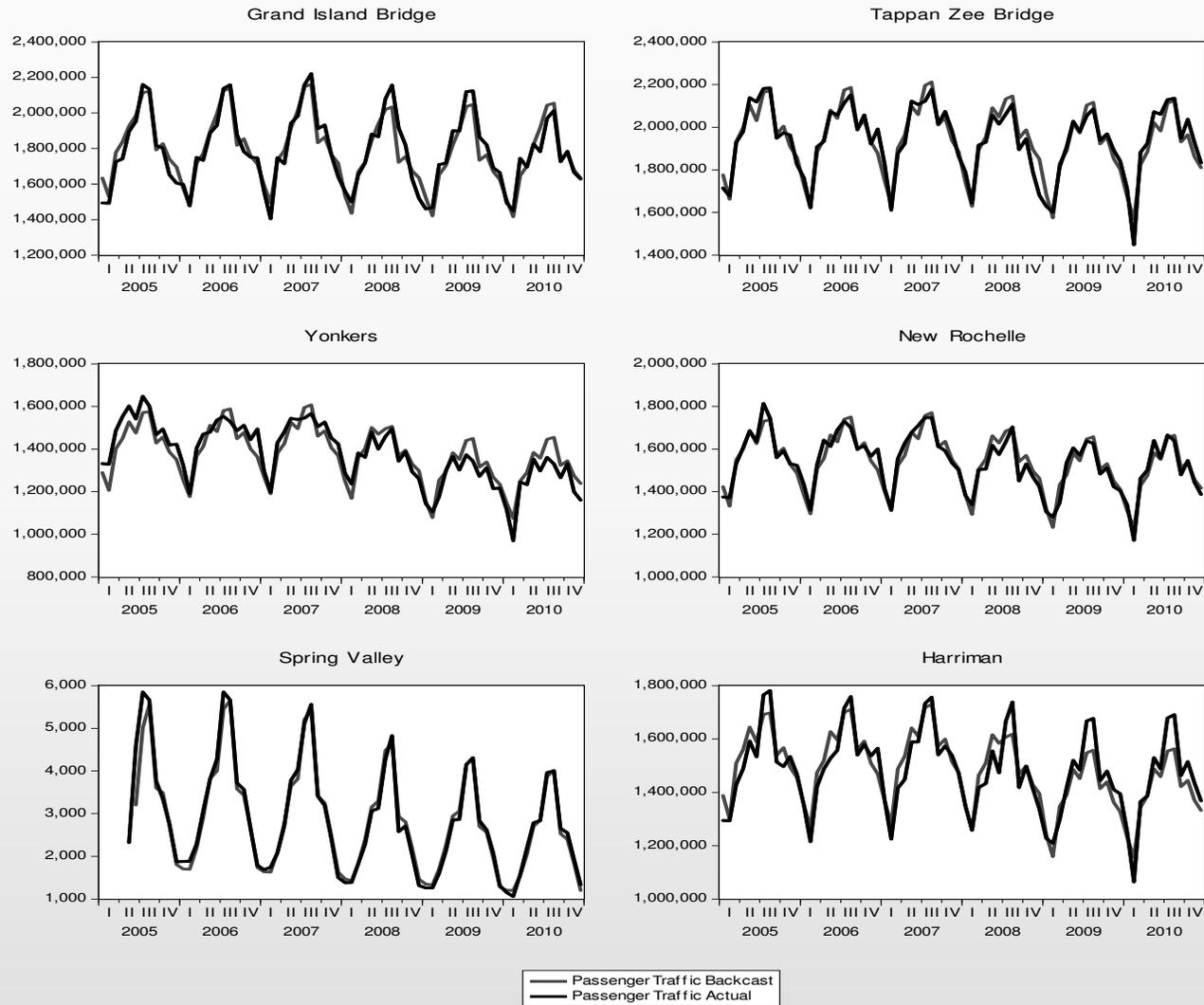
## **ii. Backcasts**

Figure A9 and Figure A10 show how the models back cast and the model performs very well when compared to historical data. For passenger vehicles models MAPE is less than 3% while for commercial vehicle model MAPE is less than 4%.

**Figure A9: Bridge and Barrier System Commercial Traffic Backcast**



**Figure A10: Bridge and Barrier System Passenger Traffic Backcast**



## A4.Revenue Econometric Model

The revenue econometric model utilizes essentially the same technical framework outlined in equation (1). The dependent variable of interest in this case is revenue per exit transaction. In addition developing forecasts for revenues per transaction the revenue model forecasts the share and tolls paid by commuter and permit based traffic. Commuter and permit based traffic pay significantly lower tolls than cash or E-ZPass vehicles and to the extent that the commuter share of traffic changes revenues collected would change even if overall volume of traffic remains unchanged. Similarly, the Authority offers a discount to E-ZPass users and to the extent that E-ZPass use increases on the Authority facilities revenues per transaction will decline even if overall level of traffic remains unchanged. Table A44 presents actual (2010) and forecasts (2011-15) for rates per transactions based on the assumption of no general toll increases during 2011 – 2015. Revenues per transaction decline slightly over the forecasts horizon because of increasing EZ-Pass participation. For example for passenger cars on going from Woodbury to Buffalo on the ticket revenue per transaction in 2015 is 1.6% lower than 2010 levels.

**Table A44: Revenue Per Transaction Forecasts**

Revenue Per Transaction (Cash and E-ZPass)						
	2010	2011	2012	2013	2014	2015
<b>Passenger Car</b>						
<b>Mainline System</b>						
Woodbury - Buffalo	\$ 1.958	\$ 1.952	\$ 1.947	\$ 1.942	\$ 1.937	\$ 1.932
Erie Section	\$ 1.270	\$ 1.266	\$ 1.261	\$ 1.257	\$ 1.253	\$ 1.249
Permits						
<b>Bridge and Barrier System</b>						
Grand Island Bridges	\$ 0.987	\$ 0.987	\$ 0.987	\$ 0.987	\$ 0.987	\$ 0.986
Tappan Zee Bridge	\$ 4.843	\$ 4.843	\$ 4.842	\$ 4.842	\$ 4.842	\$ 4.842
Yonkers	\$ 1.209	\$ 1.209	\$ 1.209	\$ 1.209	\$ 1.209	\$ 1.208
New Rochelle	\$ 1.695	\$ 1.695	\$ 1.695	\$ 1.695	\$ 1.695	\$ 1.695
Spring Valley	\$ 3.352	\$ 3.332	\$ 3.323	\$ 3.312	\$ 3.301	\$ 3.290
Harriman	\$ 1.210	\$ 1.210	\$ 1.209	\$ 1.209	\$ 1.209	\$ 1.209
<b>Commercial</b>						
<b>Mainline System</b>						
Woodbury - Buffalo	\$ 12.758	\$ 12.749	\$ 12.743	\$ 12.737	\$ 12.731	\$ 12.726
Erie Section	\$ 10.931	\$ 10.908	\$ 10.893	\$ 10.880	\$ 10.867	\$ 10.854
<b>Bridge and Barrier System</b>						
Grand Island Bridges	\$ 2.949	\$ 2.940	\$ 2.933	\$ 2.927	\$ 2.921	\$ 2.915
Tappan Zee Bridge	\$ 17.183	\$ 17.150	\$ 17.118	\$ 17.087	\$ 17.057	\$ 17.029
Yonkers	\$ 2.526	\$ 2.524	\$ 2.520	\$ 2.516	\$ 2.513	\$ 2.510
New Rochelle	\$ 5.440	\$ 5.428	\$ 5.418	\$ 5.408	\$ 5.399	\$ 5.390
Spring Valley	\$ 6.180	\$ 6.164	\$ 6.147	\$ 6.130	\$ 6.114	\$ 6.099
Harriman	\$ 2.956	\$ 2.951	\$ 2.946	\$ 2.942	\$ 2.938	\$ 2.933

**a. Revenue Model**

The above revenue per transaction rates were developed econometrically. The models and associated statistical results are discussed briefly below. Models were developed separately for passenger and commercial vehicles and were generally segregated by ticket system and barrier system models.

**i. Ticket Section**

**Table A45: Passenger Ticket Revenue Model**

Dependent Variable	Log (Avg. Pass. Revenue/ Transaction)		
Period	May 2005 – December 2010		
Frequency	Monthly		
Traffic Sections	Passenger Ticket		
Independent Variables	Coefficient	t-Statistic	Prob.
Constant	0.511	2.1	0.04
Log(Toll Nominal Index)*(Erie)	0.590	13.3	0.00
Log (Toll Nominal Index)*(Woodbury-Williamsville)	0.836	20.6	0.00
Log (E-ZPass Participation)	-0.118	-1.8	0.08
Seasonality			
Jan	-0.067	-9.6	0.00
Feb	-0.037	-3.6	0.00
March	-0.023	-2.1	0.04
April	0.040	2.9	0.01
May	0.064	6.9	0.00
June	0.086	11.2	0.00
July	0.200	14.5	0.00
Aug	0.189	23.6	0.00
Sep	0.086	7.1	0.00
Oct	0.056	6.1	0.00
Nov	0.051	5.7	0.00
Construction Erie	0.114	11.2	0.00
R-Sq	0.990		
Adj R-Sq	0.988		
Std. Error	0.026		
Durbin Watson	1.333		

For the ticket sections the revenue model is more aggregate in terms of the interchanges that are modeled. For the ticket system, the sections modeled are Woodbury to Williamsville (Interchanges 15-50 including the Berkshire Connector) and the Erie Section (Interchanges 55 – 61). The primary factors of interest for these models are the nominal toll index, E-Z Pass participation and seasonality (which primarily proxies as a control for changing trip length throughout the year). Table A45 shows the passenger revenue model used for the ticket system. Model coefficients have expected signs. Changes in the nominal toll index are the most important factor determining changes in revenue per transaction. Increases in E-ZPass participation tend to decrease revenue per transaction. Revenue models for Commercial vehicles on the ticket system are presented in Table A46. The model variables are similar to the passenger models and include the nominal toll index, E-ZPass participation and seasonal controls. The model for the Erie Section includes additional controls for construction (as toll

barriers were removed in October 2006 and certain construction works were carried out) as well as some repaving work which was conducted in 2009 that had an impact on truck toll revenue collections.

**Table A46: Commercial Ticket Revenue Models**

Dependent Variable	Log (Avg. Comm. Revenue / Transaction)		
Period	July 2005 - Dec 2010		
Frequency	Monthly		
Traffic Sections	Ticket, Woodbury - Williamsville		
Independent Variables	Coefficient	t-Statistic	Prob.
Constant	2.387	6.3	0.00
Log(Toll Nominal Index)	0.823	30.2	0.00
Log (E-Zpass Participation)	-0.050	-0.6	0.57
Seasonality			
Fall	0.002	0.5	0.63
Summer	-0.002	-0.5	0.62
Winter	0.003	0.9	0.38
Special Controls			
Statistics			
R-Sq	0.975		
Adj R-Sq	0.973		
Std. Error	0.011		
Durbin Watson	1.401		

Dependent Variable	Log (Avg. Comm. Revenue / Transaction)		
Period	July 2005 - Dec 2010		
Frequency	Monthly		
Traffic Sections	Ticket, Erie Section		
Independent Variables	Coefficient	t-Statistic	Prob.
Constant	2.371	10.3	0.00
Log(Toll Nominal Index)	0.883	24.9	0.00
Log (E-Zpass Participation)	-0.092	-1.6	0.11
Seasonality			
Fall	-0.009	-1.7	0.09
Summer	-0.009	-1.7	0.09
Winter	-0.002	-0.4	0.71
Special Controls			
Construction	0.037	8.447	0.000
Repaving	-0.042	-8.807	0.000
Statistics			
R-Sq	0.963		
Adj R-Sq	0.958		
Std. Error	0.013		
Durbin Watson	1.563		

**ii. Bridge and Barrier System**

Revenue models were developed for the Bridge and Barrier system as well. Passenger revenue models for the bridge and barrier system have similar structure to the models for the ticket system. The changes in revenue are primarily accounted for by the changing toll rate. Spring Valley barrier is modeled separately since it has different characteristics than the other barriers for passenger vehicles (no tolls for 2 axle passenger vehicles) since only passenger vehicles towing a trailer pay a toll. Model results are shown in Table A47 which show strong statistical significance for E-ZPass participation particularly since a reduction of the E-ZPass discount in July 2008.

**Table A47: Passenger Revenue Models for Bridge and Barrier Sections**

Dependent Variable	Log( Avg. Pass. Revenue/ Transaction)		
Period	May 2005 – December 2010		
Frequency	Monthly		
Traffic Sections	Grand Island, Tappan Zee, Yonkers, New Rochelle, Harriman		
Independent Variables	Coefficient	t-Statistic	Prob.
Constant	-0.080	-29.2	0.00
Log(Toll Nominal Index)	1.004	73.8	0.00
Log(E-ZPass Participation)*(Yonkers)*(Jul 08 Toll Change)	-0.005	-2.7	0.01
Log(E-ZPass Participation)*(Harriman)*(Jul 08 Toll Change)	-0.007	-4.2	0.00
Log(E-ZPass Participation)*(Grand Island)*(Jul 08 Toll Change)	-0.005	-3.4	0.00
Log(E-ZPass Participation)*(Tappan Zee)*(Jul 08 Toll Change)	-0.003	-3.1	0.00
Log(E-ZPass Participation)*(New Rochelle)*(Jul 08 Toll Change)	-0.003	-2.6	0.01
Seasonality			
Summer	0.002	1.6	0.12
Winter	-0.003	-2.0	0.04
Fall	-0.001	-1.3	0.21
<b>R-Sq</b>	<b>1.000</b>		
<b>Adj R-Sq</b>	<b>1.000</b>		
<b>Std. Error</b>	<b>0.004</b>		
<b>Durbin Watson</b>	<b>2.005</b>		

Dependent Variable	Log( Avg. Pass. Revenue/ Transaction)		
Period	May 2005 – December 2010		
Frequency	Monthly		
Traffic Sections	Spring Valley		
Independent Variables	Coefficient	t-Statistic	Prob.
Constant	1.084	67.1	0.00
Log(Toll Nominal Index)	1.040	35.1	0.00
Log (E-ZPass Participation)	-0.089	-13.1	0.0
Seasonality			
Summer	-0.014	-2.952	0.005
Winter	0.019	3.336	0.002
Fall	0.004	0.842	0.403
<b>R-Sq</b>	<b>0.967</b>		
<b>Adj R-Sq</b>	<b>0.964</b>		
<b>Std. Error</b>	<b>0.014</b>		
<b>Durbin Watson</b>	<b>2.528</b>		

Models for commercial vehicles on the bridge and barrier system are shown in Table A48 and have similar structure to other revenue models. The panel on the left shows specific impact of the toll index for all the different toll barriers. Toll increases on the barriers typically occur in \$0.25 increments and depending on toll vehicle class percentage of toll increase vary. The toll indices are developed for the representative vehicle classes (5H for commercial vehicles) and in cases where the coefficient on the toll index is greater than 1 suggests that other vehicles classes form a larger proportion of commercial traffic. In summer of 2009 the Authority eliminated discounts for certain special vehicles which resulted in increased revenue collections and were explicitly incorporated into the models (through dummy variables). For example on Grand Island Bridges this change led to a 2.3% increase in revenue collected per transaction.

**Table A48: Commercial Revenue Models for Bridge and Barrier System**

Dependent Variable	Log( Avg. Comm. Revenue/ Transaction)		
Period	May 2005 – December 2010		
Frequency	Monthly		
Traffic Sections	Grand Island, Tappan Zee, Yonkers, New Rochelle, Harriman		
Independent Variables	Coefficient	t-Statistic	Prob.
Constant	1.861	10.2	0.00
Log (E-ZPass Participation)	-0.194	-4.6	0.00
Log(Toll Nominal Index)*(Grand Island)	1.030	37.4	0.00
Log(Toll Nominal Index)*(Harriman and Yonkers)	1.143	72.2	0.00
Log(Toll Nominal Index)*(New Rochelle)	1.130	65.3	0.00
Log(Toll Nominal Index)*(Tappan Zee)	0.865	32.8	0.00
S-Veh. Disc. Elimination*(Grand Island)	0.023	4.1	0.00
S-Veh. Disc. Elimination*(Harriman and Yonkers)	0.028	9.7	0.00
S-Veh. Disc. Elimination*(New Rochelle)	0.021	9.5	0.00
S-Veh. Disc. Elimination*(Tappan Zee)	0.006	1.6	0.11
Seasonality			
Fall	0.028	9.7	0.00
Winter	0.021	9.5	0.00
Summer	0.006	1.6	0.11
R-Sq	1.000		
Adj R-Sq	1.000		
Std. Error	0.009		
Durbin Watson	0.923		

Dependent Variable	Log( Avg. Comm. Revenue/ Transaction)		
Period	May 2005 – December 2010		
Frequency	Monthly		
Traffic Sections	Spring Valley		
Independent Variables	Coefficient	t-Statistic	Prob.
Constant	3.222	9.2	0.00
Log (E-ZPass Participation)	-0.411	-5.0	0.00
Log(Toll Nominal Index)	0.856	26.6	0.00
Special Controls			
Construction	0.042	14.1	0.00
R-Sq	0.932		
Adj R-Sq	0.928		
Std. Error	0.018		
Durbin Watson	2.812		

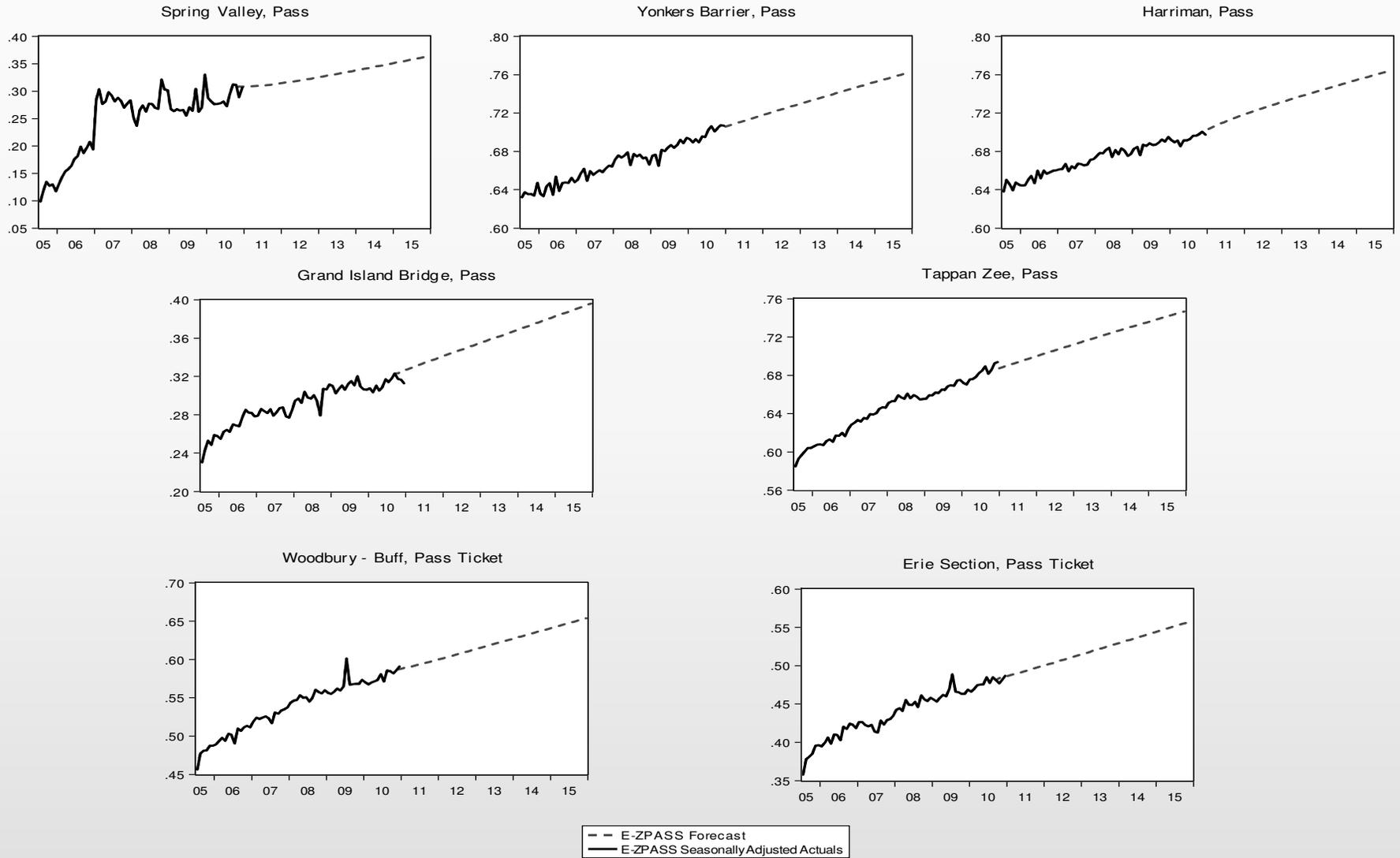
**b. E-ZPass Participation Forecast**

Since E-ZPass participation forms an important part of the revenue models, models were developed to forecast E-ZPass participation which were used in the revenue forecasts. E-ZPass participation models for passenger and commercial vehicles are quite similar in structure. Models are estimated in logarithms using a logistic share structure. In econometrics this is standard technique to constraint the growth of a forecast (also known as S-shaped curves). E-ZPass participation was first seasonally adjusted and then models were estimated using monthly data from 2005 to 2010.

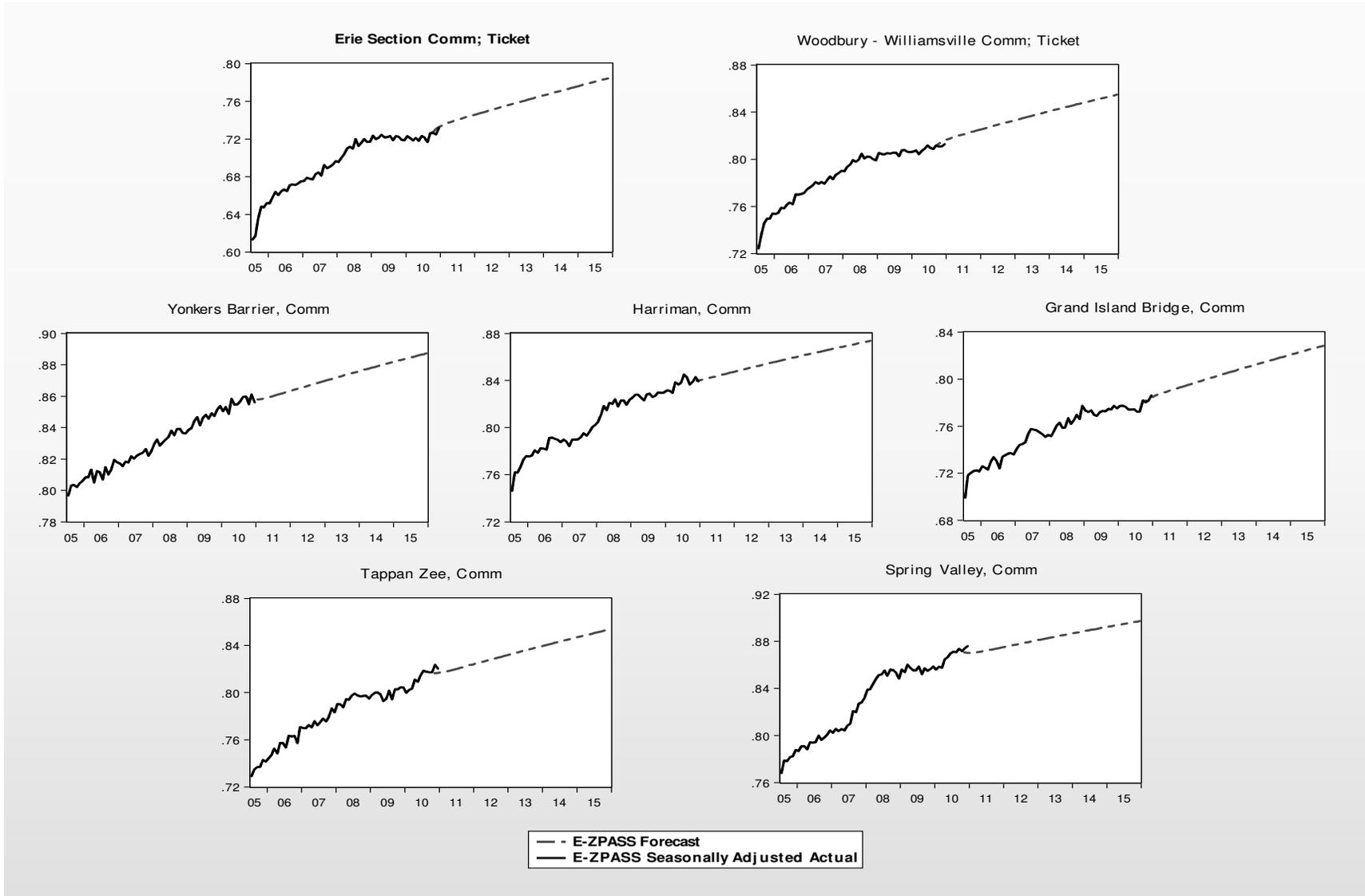
**i. Passenger Vehicles**

E-ZPass participation forecasts for passenger vehicles both ticket and barriers are presented in Figure A11. Passengers that signup for the Commuter discount plan on the Permit discount plan are not included here and are considered separately (even though a E-ZPass account is required to sign-up for the discount plan). E-ZPass share has increased throughout the Thruway system with shares on the ticket system around 55%. This share is expected to increase steadily during the forecast horizon (2011 – 2015).

**Figure A11: E-ZPass Participation for Passenger Vehicles (Seasonally Adjusted)**



**Figure A12: Commercial Vehicle E-ZPass Participation Forecast (Seasonally Adjusted)**



## ii. Commercial Vehicles

Commercial vehicle E-ZPass participation forecasts are presented in Figure A12. Historical data have been seasonally adjusted to remove any seasonal variations. Commercial vehicle participation in E-ZPass is much greater typically around 80%. E-ZPass participation for commercial vehicles has increased significantly since 2005. This trend is expected to continue steadily during 2011 – 2015.

## c. Commuter Revenue and Share Models

Commuter share and commuter revenue per transaction models were developed to forecast the share of commuters and commuter revenue per transaction. Separate models for commuter share and revenue were developed primarily for two reasons: (1) The traffic model relates total passenger traffic to economic variables and does not consider commuter traffic separately (2) Commuter (and Permit) vehicles pay significantly reduced toll rates and their impact on revenues needs to be modeled separately. Table A49 presents the revenue per

**Table A49: Commuter Revenue and Share Forecasts**

Commuter Revenue and Share Forecast						
	2010	2011	2012	2013	2014	2015
<b>Commuter Revenue</b>						
<b>Passenger Car</b>						
<b>Mainline System</b>						
Tickets Permits	\$ 0.474	\$ 0.474	\$ 0.474	\$ 0.474	\$ 0.474	\$ 0.474
<b>Bridge and Barrier System</b>						
Grand Island Bridges	\$ 0.244	\$ 0.244	\$ 0.244	\$ 0.244	\$ 0.244	\$ 0.244
Tappan Zee Bridge	\$ 3.654	\$ 3.654	\$ 3.654	\$ 3.654	\$ 3.654	\$ 3.654
Yonkers	\$ 0.550	\$ 0.550	\$ 0.550	\$ 0.550	\$ 0.550	\$ 0.550
New Rochelle	\$ 1.100	\$ 1.100	\$ 1.100	\$ 1.100	\$ 1.100	\$ 1.100
Spring Valley	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Harriman	\$ 0.550	\$ 0.550	\$ 0.550	\$ 0.550	\$ 0.550	\$ 0.550
<b>Commuter Share</b>						
<b>Mainline System</b>						
Woodbury - Buffalo	7.9%	7.9%	7.7%	7.6%	7.4%	7.2%
Erie Section	4.3%	4.3%	4.2%	4.1%	4.0%	3.9%
Total Permit	7.4%	7.4%	7.2%	7.1%	6.9%	6.8%
<b>Bridge and Barrier System</b>						
Grand Island Bridges	43.4%	44.1%	44.0%	43.8%	43.5%	43.3%
Tappan Zee Bridge	26.4%	25.7%	25.1%	24.4%	23.7%	23.0%
Yonkers	2.8%	3.0%	3.2%	3.3%	3.5%	3.7%
New Rochelle	1.2%	1.3%	1.4%	1.5%	1.6%	1.7%
Spring Valley	-	-	-	-	-	-
Harriman	6.5%	7.0%	7.5%	7.9%	8.3%	8.7%

transaction forecasts for commuter vehicles which are not expected to change and the proportion of total passenger traffic that are commuters (or permit bearing). The proportion of commuter traffic is expected to increase on certain barriers such as Yonkers barrier, Harriman barrier and New Rochelle barrier inline with recent trends. On the ticket system the proportion on commuter traffic is expected to decline from 7.4% in 2010 to 6.8% in 2015 and for the Tappan Zee Bridge the proportion is expected to decline from 26.4% to 23% in 2015.

Models used to develop the proportion of commuter (and permit) vehicles are presented in Table A50. Commuter share is positively correlated with increasing toll rates for cash and E-ZPass (non-commuter) customers. Commuter also increases as the overall level of E-ZPass participation increases. A time trend or past trends are incorporated in the model as well.

**Table A50: Commuter Share Models**

Dependent Variable	Log (Commuter Share)		
Period	Jan 2007 – Dec 2010		
Frequency	Monthly		
Traffic Sections	Ticket, Grand Island and Tappan Zee		
Independent Variables	Coefficient	t-Statistic	Prob.
Constant	-0.602	-4.6	0.00
Log (Toll Nominal Index)	0.090	2.0	0.05
Log (Non Commuter E-ZPass Share)	1.048	7.1	0.00
<b>Seasonality</b>			
Jan	0.057	4.0	0.00
Feb	0.038	2.6	0.01
March	0.027	1.6	0.10
April	-0.022	-1.5	0.14
May	-0.083	-5.7	0.00
June	-0.087	-6.8	0.00
July	-0.224	-14.9	0.00
Aug	-0.251	-17.2	0.00
Sep	-0.081	-4.3	0.00
Oct	-0.033	-2.2	0.03
Nov	-0.040	-3.1	0.00
<b>Additional Controls</b>			
Trend	-0.004	-7.2	0.00
<b>Statistics</b>			
R-Sq	0.998		
Adj R-Sq	0.998		
Std. Error	0.031		
Durbin Watson	1.476		

Dependent Variable	Log (Commuter Share)		
Period	Jan 2006 – Dec 2010		
Frequency	Monthly		
Traffic Sections	Yonkers, Harriman, New Rochelle		
Independent Variables	Coefficient	t-Statistic	Prob.
Constant	-0.612	-3.2	0.0
Log (Toll Nominal Index)	0.191	3.4	0.0
Log (Non Commuter E-ZPass Share)	0.595	1.9	0.1
<b>Seasonality</b>			
Jan	0.142	4.9	0.0
Feb	0.079	2.5	0.0
March	0.027	1.0	0.3
April	-0.073	-1.9	0.1
May	-0.069	-2.0	0.0
June	-0.019	-0.7	0.5
July	-0.179	-6.4	0.0
Aug	-0.130	-3.6	0.0
Sep	0.111	3.6	0.0
Oct	0.120	3.8	0.0
Nov	0.008	0.2	0.8
<b>Additional Controls</b>			
Log(Commuter Share 1 Lag)	0.329	3.8	0.0
Log(Commuter Share 2 Lag)	0.467	6.6	0.0
<b>Statistics</b>			
R-Sq	0.995		
Adj R-Sq	0.995		
Std. Error	0.051		
Durbin Watson	2.450		

**AUDITED FINANCIAL STATEMENTS OF THE AUTHORITY FOR THE  
YEARS ENDED DECEMBER 31, 2010 AND 2009**

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NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)

Audited Financial Statements

December 31, 2010 and 2009

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)

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\* \* \* \* \*

**TOSKI, SCHAEFER & CO., P.C.**  
CERTIFIED PUBLIC ACCOUNTANTS

555 INTERNATIONAL DR.  
WILLIAMSVILLE, NY 14221  
(716) 634-0700

14 CORPORATE WOODS BLVD.  
ALBANY, NY 12211  
(518) 935-1059

INDEPENDENT AUDITORS' REPORT

Members of the Board  
New York State Thruway Authority:

We have audited the accompanying basic 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, 2010 and 2009 as listed in the table of contents. These financial statements are the responsibility of the Authority's management. 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 of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the New York State Thruway Authority as of December 31, 2010 and 2009, and the changes in its net assets and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

In accordance with Government Auditing Standards, we have also issued our report dated March 23, 2011, 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, grants and other matters. The purpose of that report is 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 internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards and should be considered in assessing the results of our audit.

The Management's Discussion and Analysis information, as listed in the foregoing table of contents, is not a required part of the basic financial statements, but is supplementary information required by accounting principles generally accepted in the United States of America. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the supplementary information. However, we did not audit the information and express no opinion on it.

*Toski, Schaefer & Co, P.C.*

Williamsville, New York  
March 23, 2011

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)  
Management's Discussion and Analysis  
December 31, 2010 and 2009

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 calendar years ended December 31, 2010 and 2009. 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.

**2010 Financial Highlights**

- Toll revenue for the year was \$641.2 million, an increase of \$29.6 million or 4.8% compared to 2009. This increase is primarily due to toll adjustments implemented in 2010.
- Total operating expenses for the New York State Thruway, the Canal Corporation, Interstate 84 and other Authority projects for the year, excluding depreciation and amortization, were \$464.0 million, an increase of \$1.2 million or 0.3% compared to 2009.
- Total net assets as of December 31, 2010 were approximately \$2.09 billion, a decrease of \$127.3 million or 5.7% compared to December 31, 2009.
- Total capital assets (net of depreciation) as of December 31, 2010 were approximately \$4.71 billion, an increase of \$150.2 million or 3.3% compared to December 31, 2009.

**2009 Financial Highlights**

- Toll revenue for the year was \$611.6 million, an increase of \$48.9 million or 8.7% compared to 2008. This increase is primarily due to toll adjustments implemented in 2009.
- Total operating expenses for the New York State Thruway, the Canal Corporation, Interstate 84 and other Authority projects for the year, excluding depreciation and amortization, were \$462.8 million, an increase of \$9.5 million or 2.1% compared to 2008.
- Total net assets as of December 31, 2009 were approximately \$2.22 billion, a decrease of \$129.3 million or 5.5% compared to December 31, 2008.
- Total capital assets (net of depreciation) as of December 31, 2009 were approximately \$4.56 billion, an increase of \$98.9 million or 2.2% compared to December 31, 2008.
- Total liabilities as of December 31, 2009 were approximately \$3.54 billion, an increase of \$826.2 million or 30.5% compared to December 31, 2008. This increase is primarily due to the issuance of General Revenue Bond Anticipation Notes, Series 2009A in July, 2009.

**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 assets and related changes. The notes provide explanation and additional disclosures about the financial statements.

NEW YORK STATE THRUWAY AUTHORITY  
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Management's Discussion and Analysis

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 accordance with generally accepted accounting principles (GAAP). Revenues are recognized in the period in which they are earned and expenses are recognized in the period in which they are incurred.

**Financial Analysis of the Authority**

Net Assets

The Authority's total net assets at December 31, 2010 (See Table A-1) were approximately \$2.09 billion, a 5.7% decrease compared to December 31, 2009. Total assets decreased 2.0% to \$5.64 billion and total liabilities increased 0.3% to \$3.54 billion. The Authority's total net assets at December 31, 2009 were approximately \$2.22 billion, a 5.5% decrease compared to December 31, 2008. In 2009, total assets increased 13.8% to \$5.75 billion and total liabilities increased 30.5% to \$3.54 billion.

Table A-1  
Net Assets  
December 31, 2010, 2009 and 2008  
(In millions of dollars)

	<u>2010</u>	<u>2009</u>	<u>2008</u>	Percentage Change <u>2010-2009</u>
Unrestricted current assets	\$ 298.3	\$ 249.4	\$ 207.1	19.6
Restricted current assets	599.7	911.6	355.6	(34.2)
Capital assets	4,705.3	4,555.1	4,456.2	3.3
Noncurrent assets	<u>33.0</u>	<u>37.8</u>	<u>38.2</u>	<u>(12.7)</u>
Total assets	<u>5,636.3</u>	<u>5,753.9</u>	<u>5,057.1</u>	<u>(2.0)</u>
Current liabilities	1,058.6	345.5	259.2	206.4
Noncurrent liabilities	<u>2,486.2</u>	<u>3,189.6</u>	<u>2,449.7</u>	<u>(22.1)</u>
Total liabilities	<u>3,544.8</u>	<u>3,535.1</u>	<u>2,708.9</u>	<u>0.3</u>
Net assets:				
Invested in capital assets, net of related debt	1,935.6	2,039.2	2,193.0	(5.1)
Restricted for debt service	128.2	125.9	86.1	1.8
Restricted for reserve maintenance	65.4	69.5	78.2	(5.9)
Restricted for construction	26.4	24.4	17.4	8.2
Unrestricted	<u>(64.1)</u>	<u>(40.2)</u>	<u>(26.6)</u>	<u>59.5</u>
Total net assets	<u>\$ 2,091.5</u>	<u>\$ 2,218.8</u>	<u>\$ 2,348.1</u>	<u>(5.7)</u>

NEW YORK STATE THRUWAY AUTHORITY  
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Management's Discussion and Analysis

Restricted current assets decreased \$311.9 million or 34.2% and Capital assets increased \$150.2 million or 3.3% in 2010 compared to 2009. The decrease in Restricted current assets and increase in Capital assets is primarily due to the use of restricted General Revenue Bond Anticipation Note proceeds to fund a majority of the Authority's investment in infrastructure improvements based on its Multi-Year Capital Plan. More detailed information regarding Capital assets and Restricted current assets is presented in Notes 4 and 5, respectively.

Current liabilities increased \$713.1 million or 206.4% compared to 2009. This increase is primarily due to the reclassification of the General Revenue Bond Anticipation Notes, Series 2009A from a non-current liability as of December 31, 2009 to a current liability as of December 31, 2010. These notes mature on July 15, 2011.

Non-current liabilities decreased \$703.4 million or 22.1% compared to 2009. This decrease is primarily due to the reclassification of the General Revenue Bond Anticipation Notes, Series 2009A as mentioned above. This decrease is partially offset by liabilities related to postemployment health care benefits which continue to increase. More detailed information regarding non-current liabilities and postemployment health care benefits is presented in Notes 6 and 9, respectively.

Net assets invested in capital assets, net of related debt consists of capital assets net of accumulated depreciation reduced by the amount of outstanding indebtedness attributable to the acquisition, construction, rehabilitation, or improvement of those assets. Net assets invested in capital assets, net of related debt decreased \$103.6 million or 5.1 % compared to 2009. This decrease is primarily due to the continued use of debt proceeds to fund the majority of the Authority's Multi-Year Capital Plan.

Unrestricted net assets decreased by \$23.9 million or 59.5% compared to 2009. This decrease is primarily due to the increase in non-current liabilities related to postemployment health care benefits.

Changes in Net Assets

Net assets decreased by \$127.3 million in 2010 compared to 2009 (See Table A-2). The Authority's total operating revenues for 2010 were \$674.3 million, an increase of \$33.7 million or 5.3% compared to 2009. Total operating expenses including depreciation and amortization were \$716.1 million, an increase of \$14.3 million or 2.0% compared to 2009. Net assets decreased by \$129.3 million in 2009 compared to 2008. The Authority's total operating revenues for 2009 were \$640.6 million, an increase of \$41.8 million or 7.0% compared to 2008. Total operating expenses including depreciation and amortization were \$701.8 million, an increase of \$25.5 million or 3.8% compared to 2008.

NEW YORK STATE THRUWAY AUTHORITY  
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Management's Discussion and Analysis

Table A-2

Changes in Net Assets

Years ended December 31, 2010, 2009 and 2008  
(In millions of dollars)

	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>Percentage Change 2010-2009</u>
Operating revenue:				
Tolls	\$ 641.2	\$ 611.6	\$ 562.7	4.8
Concessions	12.7	12.6	12.5	0.8
Other	<u>20.4</u>	<u>16.4</u>	<u>23.6</u>	<u>24.4</u>
Total operating revenue	<u>674.3</u>	<u>640.6</u>	<u>598.8</u>	<u>5.3</u>
Operating expenses:				
Administrative	19.9	19.5	20.8	2.1
Engineering services	6.0	6.6	6.7	(9.1)
Maintenance	109.9	109.0	105.5	0.8
Finance and accounts	8.5	8.3	8.2	2.4
Operations	84.7	85.2	85.1	(0.6)
General charges	164.7	160.4	155.7	2.7
Canals	61.6	62.6	59.0	(1.6)
Interstate 84	8.6	11.2	10.9	(23.2)
Other Authority projects	-	-	1.4	-
Depreciation and amortization	<u>252.2</u>	<u>239.0</u>	<u>223.0</u>	<u>5.5</u>
Total operating expenses	<u>716.1</u>	<u>701.8</u>	<u>676.3</u>	<u>2.0</u>
Operating loss	<u>(41.8)</u>	<u>(61.2)</u>	<u>(77.5)</u>	<u>(31.7)</u>
Non-operating items:				
Interest expense	(110.4)	(98.7)	(95.7)	11.9
Non-operating revenue	<u>23.6</u>	<u>18.6</u>	<u>25.4</u>	<u>26.9</u>
Net non-operating items	<u>(86.8)</u>	<u>(80.1)</u>	<u>(70.3)</u>	<u>8.4</u>
Loss before capital contributions and special item	(128.6)	(141.3)	(147.8)	(9.0)
Capital contributions	14.7	12.0	17.9	22.5
Special item - retirement incentive	<u>(13.4)</u>	<u>-</u>	<u>-</u>	<u>100.0</u>
Change in net assets	(127.3)	(129.3)	(129.9)	(1.6)
Total net assets, beginning of the year	<u>2,218.8</u>	<u>2,348.1</u>	<u>2,478.0</u>	<u>(5.5)</u>
Total net assets, end of the year	<u>\$ 2,091.5</u>	<u>\$ 2,218.8</u>	<u>\$ 2,348.1</u>	<u>(5.7)</u>

Toll revenue increased \$29.6 million or 4.8% compared to 2009. This increase is primarily due to a toll rate increase implemented in January 2010.

NEW YORK STATE THRUWAY AUTHORITY  
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General charges increased by \$4.3 million or 2.7% compared to 2009. This increase is primarily due to higher retirement, E-ZPass account management and health insurance costs. Those increases were partially offset by lower environmental remediation costs.

Interstate 84 expenses decreased \$2.6 million or 23.2% compared to 2009. This decrease is due to the transfer of maintenance and operating responsibilities for Interstate 84 from the Authority to the New York State Department of Transportation (DOT) in October, 2010. Prior to the October, 2010 transfer the Authority maintained and operated Interstate 84 under the terms of an agreement with DOT which called for DOT to fully reimburse the Authority's costs. This reimbursement is reflected as non-operating revenue on the Statement of Revenue, Expenses and Changes in Net Assets.

Depreciation and amortization increased \$13.2 million or 5.5% compared to 2009. This increase is primarily due to the Authority's significant investment in bridge and highway improvement projects. Bridge improvement projects include substructure and superstructure repairs, replacement of bridge joints, installation of bridge fencing and bridge painting. Highway improvement projects include pavement rehabilitation, primarily in the form of resurfacing and milling. The Authority's significant investment in these types of projects, which have relatively short useful lives (ten to fifteen years), has resulted in an increase in depreciation expense.

Interest expense increased \$11.7 million or 11.9% compared to 2009. This increase is primarily due to a full year of interest expense on the General Revenue Bond Anticipation Notes, Series 2009A in 2010 compared to a partial year in 2009. These notes were issued in July, 2009.

Non-operating revenues increased \$5.0 million or 26.9% compared to 2009. This increase is primarily due to the receipt of a federal grant to partially fund the operations of the Canal System. This grant was not received in 2009.

In 2010, the Authority offered a Retirement Incentive Program to employees who met certain eligibility requirements. Approximately 10% of the Authority's total workforce elected to retire from service under this program. The Authority is responsible for contributing a surcharge to the New York State and Local Employee's Retirement System for each employee who participated in the program. The surcharge of approximately \$13.4 million is reflected as a Special Item on the Statement of Revenues, Expense and Changes in Net Assets.

### **Capital Assets and Debt Administration**

#### Capital Assets

As of December 31, 2010, the New York State Thruway Authority had invested approximately \$8.52 billion in capital assets, including roads, bridges, canal structures, buildings, land and equipment. Net of accumulated depreciation, the Authority's capital assets at December 31, 2010, totaled approximately \$4.71 billion (See Table A-3) representing a net increase (including additions, disposals and depreciation) of approximately \$150.2 million or 3.3% compared to December 31, 2009.

NEW YORK STATE THRUWAY AUTHORITY  
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As of December 31, 2009, the New York State Thruway Authority had invested approximately \$8.15 billion in capital assets, including roads, bridges, canal structures, buildings, land and equipment. Net of accumulated depreciation, the Authority's capital assets at December 31, 2009, totaled approximately \$4.56 billion (See Table A-3) representing a net increase (including additions, disposals and depreciation) of approximately \$98.9 million or 2.2% compared to December 31, 2008.

Table A-3  
Capital Assets  
December 31, 2010, 2009 and 2008  
(In millions of dollars)

	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>Percentage Change 2010-2009</u>
Land and land improvements	\$ 810.6	\$ 808.5	\$ 807.3	0.3
Construction work in progress	694.4	577.5	529.0	20.2
Thruway System	6,357.8	6,143.2	5,899.1	3.5
Canal System	430.8	394.6	371.1	9.2
Equipment	221.7	224.5	225.0	(1.2)
Less accumulated depreciation	<u>(3,810.0)</u>	<u>(3,593.2)</u>	<u>(3,375.3)</u>	<u>6.0</u>
Total net capital assets	<u>\$ 4,705.3</u>	<u>\$ 4,555.1</u>	<u>\$ 4,456.2</u>	<u>3.3</u>

In 2010, Construction work in progress increased \$116.9 million as the Authority continued to invest in infrastructure improvements based on its Multi-Year Capital Plan. Significant projects in progress as of December 31, 2010 include re-decking and other improvements to the Tappan Zee Bridge, re-decking of the South Grand Island Bridge, the Tappan Zee Bridge/I-287 Environmental Review, the full-depth replacement of 15 miles of pavement near Syracuse and several other pavement rehabilitation projects at various locations. The Thruway System capital asset value increased by \$214.6 million compared to 2009. This increase was primarily due to the completion of a number of projects including reconstruction of the Woodbury Toll Plaza and several multi-million dollar pavement and bridge rehabilitation projects. The Canal System asset value increased \$36.2 million primarily due to the completion of a rehabilitation project for moveable dams near Amsterdam and Canajoharie.

In 2009, Construction work in progress increased \$48.5 million as the Authority continued to invest in infrastructure improvements based on a Multi-Year Capital Plan. Significant projects in progress as of December 31, 2009 include the re-decking of the Tappan Zee Bridge and South Grand Island Bridges, reconstruction of the Woodbury toll plaza, the Tappan Zee/I-287 Environmental Review, rehabilitation of movable dams near Amsterdam and Canajoharie, and several pavement rehabilitation projects at various locations. The Thruway System capital asset value increased by \$244.1 million compared to 2008. This increase was primarily due to the completion of a number

NEW YORK STATE THRUWAY AUTHORITY  
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Management's Discussion and Analysis

of projects including reconstruction of Interchange 17, replacement of the Buckley Road Bridge over the Thruway, and several multi-million dollar pavement and bridge rehabilitation projects. The Canal System asset value increased \$23.5 million primarily due to the completion of the Cranesville Movable Dam rehabilitation project.

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 State Senate. They must comply with rules and regulations of the United States Treasury Department and the United States Securities and Exchange Commission. The terms and conditions of Authority bond and note sales must also be approved by the New York State Office of the State Comptroller.

Long-term debt includes general revenue bonds of varying rates and maturities issued primarily to fund a portion of the cost of the Authority's Multi-Year Capital Plan. General Revenue Bond Anticipation Notes have also been issued as an additional source of funds for the Authority's Multi-Year Capital Plan. At December 31, 2010, the Authority had approximately \$2,341.2 million in general revenue bonds and \$687.0 million in bond anticipation notes outstanding, a 2.2% decrease from December 31, 2009 (See Table A-4). Of the \$2,341.2 million in general revenue bonds outstanding, approximately \$736.6 million are insured by Financial Security Assurance Inc. and rated Aa3 by Moody's and AA+ by Standard and Poor's (S&P). The remaining general revenue bonds are rated A1 by Moody's and A+ by S&P. The bond anticipation notes are rated MIG-1 and SP-I+ by Moody's and S&P respectively.

At December 31, 2009, the Authority had approximately \$2,397.8 million in general revenue bonds and \$697.9 million in bond anticipation notes outstanding, an increase of \$695.6 million or 29% from December 31, 2008.

During 2009, the Authority received \$702.4 million in proceeds from the issuance of General Revenue Bond Anticipation Notes, Series 2009A. These notes mature on July 15, 2011.

Table A-4  
Outstanding Debt  
Year ended December 31, 2010  
(In millions of dollars)

	<u>Beginning</u>	<u>Additions</u>	<u>Reductions</u>	<u>Ending</u>
	<u>Balance</u>			<u>Balance</u>
General Revenue Bonds	\$ 2,397.8	-	(56.6)	\$ 2,341.2
Bond Anticipation Notes	<u>697.9</u>	<u>-</u>	<u>(10.9)</u>	<u>687.0</u>
Total bonds and notes	<u>\$ 3,095.7</u>	<u>-</u>	<u>(67.5)</u>	<u>\$ 3,028.2</u>

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Year ended December 31, 2009  
(In millions of dollars)

	Beginning			Ending
	<u>Balance</u>	<u>Additions</u>	<u>Reductions</u>	<u>Balance</u>
General Revenue Bonds	\$ 2,400.1	-	(2.3)	\$ 2,397.8
Bond Anticipation Notes	<u>-</u>	<u>702.4</u>	<u>(4.5)</u>	<u>697.9</u>
Total bonds and notes	<u>\$ 2,400.1</u>	<u>702.4</u>	<u>(6.8)</u>	<u>\$ 3,095.7</u>

More detailed information about the Authority's debt is presented in note 6.

**Contacting the New York State Thruway Authority's Financial Management**

This financial report is designed to provide our bondholders, patrons, 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.

NEW YORK STATE THRUWAY AUTHORITY  
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Statements of Net Assets  
December 31, 2010 and 2009

	2010	2009
	(In thousands)	
<b>Assets:</b>		
<b>Current assets:</b>		
Cash and cash equivalents	\$ 203,501	\$ 161,039
Investments	23,707	16,467
Accrued interest receivable	210	798
Accounts receivable, net	46,009	47,807
Material and other supplies	18,563	19,078
Prepaid insurance and deferred items	6,346	4,144
<b>Restricted:</b>		
Cash and cash equivalents	216,350	244,950
Investments	353,027	632,054
Accrued interest receivable	101	51
Accounts receivable, net	27,355	25,806
Other	2,865	8,760
Total current assets	<u>898,034</u>	<u>1,160,954</u>
<b>Non-current assets:</b>		
Capital assets, net of accumulated depreciation	4,705,312	4,555,140
Investment in State Infrastructure Bank	-	2,140
Bond issuance costs, less accumulated amortization	32,975	35,642
Total non-current assets	<u>4,738,287</u>	<u>4,592,922</u>
Total assets	<u>\$ 5,636,321</u>	<u>\$ 5,753,876</u>
<b>Liabilities:</b>		
<b>Current liabilities:</b>		
Accounts payable and accrued expenses	164,160	148,121
Accrued wages and employee benefits	21,390	7,822
Deferred revenue	57,526	52,402
Accrued interest payable	67,447	67,311
Current amount due on bonds, notes and other long-term liabilities	748,059	69,840
Total current liabilities	<u>1,058,582</u>	<u>345,496</u>
<b>Non-current liabilities:</b>		
Bonds and notes payable	2,282,328	3,028,225
Other long-term liabilities	203,930	161,356
Total non-current liabilities	<u>2,486,258</u>	<u>3,189,581</u>
Total liabilities	<u>\$ 3,544,840</u>	<u>\$ 3,535,077</u>
<b>Net assets:</b>		
Invested in capital assets, net of related debt	1,935,557	2,039,226
<b>Restricted for:</b>		
Debt service	128,219	125,848
Reserve maintenance	65,409	69,483
Construction	26,442	24,399
Unrestricted (deficiency)	(64,146)	(40,157)
Total net assets	<u>\$ 2,091,481</u>	<u>\$ 2,218,799</u>

See notes to financial statements.

NEW YORK STATE THRUWAY AUTHORITY  
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Statements of Revenue, Expenses and Changes in Net Assets  
Years ended December 31, 2010 and 2009

	<u>2010</u>	<u>2009</u>
	(In thousands)	
Operating revenue:		
Tolls	\$ 641,216	\$ 611,642
Concessions	12,698	12,553
Other	<u>20,395</u>	<u>16,415</u>
Total operating revenue	<u>674,309</u>	<u>640,610</u>
Operating expenses:		
Administrative	19,941	19,507
Engineering services	5,959	6,577
Maintenance engineering:		
Thruway maintenance	80,699	80,461
Equipment maintenance	29,203	28,553
Finance and accounts	8,479	8,297
Operations:		
Traffic and services	7,584	7,145
State police	35,485	36,310
Toll collection	41,656	41,718
General charges	164,745	160,353
Canals	61,601	62,639
Interstate 84	8,616	11,195
Other Authority projects	1	15
Depreciation and amortization	<u>252,172</u>	<u>239,040</u>
Total operating expenses	<u>716,141</u>	<u>701,810</u>
Operating loss	<u>(41,832)</u>	<u>(61,200)</u>
Non-operating items:		
Interest revenue on investments	420	1,057
Interest expense	(110,379)	(98,744)
Federal and other aid	<u>23,186</u>	<u>17,508</u>
Net non-operating items	<u>(86,773)</u>	<u>(80,179)</u>
Loss before capital contributions and special item	(128,605)	(141,379)
Capital contributions	14,666	12,042
Special item - retirement incentive	<u>(13,379)</u>	<u>-</u>
Change in net assets	(127,318)	(129,337)
Total net assets, beginning of the year	<u>2,218,799</u>	<u>2,348,136</u>
Total net assets, end of the year	<u>\$ 2,091,481</u>	<u>\$ 2,218,799</u>

See notes to financial statements.

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)  
Statements of Cash Flows  
Years ended December 31, 2010 and 2009

	<u>2010</u>	<u>2009</u>
	(In thousands)	
Cash flows from operating activities:		
Cash received from toll collections	\$ 658,129	\$ 626,758
Cash received from concession sales	12,494	12,581
Other operating cash receipts	18,421	16,448
Personal service payments	(172,979)	(175,067)
Fringe benefits payments	(88,564)	(81,499)
E-ZPass account management payments	(26,446)	(15,259)
Cash payments to vendors and contractors	<u>(132,688)</u>	<u>(150,118)</u>
Net cash provided by operating activities	<u>268,367</u>	<u>233,844</u>
Cash flows from non-capital financing activities:		
Federal aid and other reimbursements	25,529	18,010
Payments related to SIB	(8,562)	-
Other items	-	26
Net cash provided by non-capital financing activities	<u>16,967</u>	<u>18,036</u>
Cash flows from capital and related financing activities:		
Proceeds from issuance of debt	-	702,429
Federal aid and other capital contributions	11,974	9,604
Acquisition/construction of capital assets	(369,531)	(321,854)
Principal paid on capital debt	(54,195)	-
Interest paid on capital debt	(134,790)	(59,106)
Proceeds from sale of capital assets	<u>665</u>	<u>606</u>
Net cash provided by (used in) capital and related financing activities	<u>(545,877)</u>	<u>331,679</u>
Cash flows from investing activities:		
Purchase of investments	(750,975)	(901,992)
Proceeds from sale and maturities of investments	1,022,762	399,944
Interest and dividends on investments	<u>2,618</u>	<u>2,386</u>
Net cash provided by (used in) investing activities	<u>274,405</u>	<u>(499,662)</u>
Net increase in cash and cash equivalents	13,862	83,897
Cash and cash equivalents, beginning of the year	<u>405,989</u>	<u>322,092</u>
Cash and cash equivalents, end of the year	<u>\$ 419,851</u>	<u>\$ 405,989</u>

(Continued)

See notes to financial statements.

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)  
Statements of Cash Flows, Continued

	<u>2010</u>	<u>2009</u>
	(In thousands)	
Reconciliation of operating loss to net cash provided by operating activities:		
Operating loss	\$ (41,832)	\$ (61,200)
Adjustments to reconcile operating loss to net cash provided by operating activities:		
Depreciation and amortization expense	252,172	239,040
Special expense - early retirement surcharge	(13,379)	-
Capitalized interest	273	398
Net changes in assets and liabilities:		
Receivables	(284)	(2,198)
Inventories	515	(873)
Other assets	(2,202)	426
Accounts payables and accrued expenses	55,603	52,758
Accrued wages and benefits	12,377	(2,789)
Deferred revenue	<u>5,124</u>	<u>8,282</u>
Net cash provided by operating activities	<u>\$ 268,367</u>	<u>\$ 233,844</u>
Reconciliation to statements of net assets:		
Cash and cash equivalents	203,501	161,039
Restricted cash and cash equivalents	<u>216,350</u>	<u>244,950</u>
Total cash and cash equivalents	<u>\$ 419,851</u>	<u>\$ 405,989</u>

See notes to financial statements.

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)

Notes to Financial Statements

December 31, 2010 and 2009

(1) Financial Reporting Entity

The New York State Thruway Authority (the Authority) is a Public Benefit Corporation created by the New York State Legislature in 1950 to build, operate and maintain the Thruway System. The New York State Canal Corporation (the Canal Corporation), a subsidiary public corporation of the Authority, was created by the New York State Legislature in August 1992 to accept jurisdiction and control over the New York State Canal System from New York State (the State). The Boards of both the Authority and the Canal Corporation each consist 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) and I-84 were added to the Thruway in 1991 and 1992, respectively. Under the 1991 legislation, the Authority is prohibited from imposing any tolls or other charges for the use of the CWE or I-84. The 1992 legislation, which transferred responsibility for maintenance of the Canal System to a subsidiary corporation of the Authority, also authorized and directed the Authority to assist in the financing of certain transportation related projects and facilities under the category of "Other Authority Projects." In October 2006, in accordance with the 1991 legislation, the Authority provided the State with one year's notice of its intent to return the operations of I-84 to the State. Additional legislation in 2007 authorized the Authority and the State's Department of Transportation (NYSDOT) to annually enter into agreements under which the Authority continued to maintain and operate I-84 through October 10, 2010 at NYSDOT's expense. As of October 11, 2010, I-84 operations and maintenance was transferred back to NYSDOT. Similarly, the Authority entered into an agreement with the Division of State Police (DSP) to maintain Troop T services on I-84 with the costs to be funded by DSP, which continued until the transfer back on October 11, 2010.

The accounts and activities of the Canal Corporation and the "Other Authority Projects" are included in the financial statements of the Authority. Revenues of the Canal System are to be credited to the New York State Canal Development Fund (the Fund), created by the 1992 legislation, and held by the State where they are available, subject to appropriation, only for purposes of the Canal System as directed by the Canal Recreationway Commission. 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 7.

The accompanying financial statements include the accounts and transactions of the New York State Thruway Authority, the New York State Canal Corporation and the Canal Development Fund, henceforth referred to as the "Authority."

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)  
Notes to Financial Statements, Continued

(1) Financial Reporting Entity, Continued

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 Government Accounting Standards Board Statement (GASB) No. 14, 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.

(2) Summary of Significant Accounting Policies

The accompanying financial statements have been prepared in conformity with generally accepted accounting principles as applied to governmental units. The GASB is the accepted standard-setting body for establishing governmental accounting and financial reporting principles. In accordance with the provisions of GASB Statement No. 20 - "Accounting and Financial Reporting for Proprietary Funds and Other Governmental Entities that use Proprietary Fund Accounting," the Authority has elected to apply all Financial Accounting Standards Board statements and interpretations issued before November, 1989, unless these standards and interpretations conflict with or contradict GASB pronouncements. The more significant accounting policies are described below:

(a) 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, net assets, revenues, and expenses are accounted for through a single enterprise fund with revenues recorded when earned and expenses recorded at the time liabilities are incurred.

The principal revenues of the Authority are toll revenues received from patrons. The Authority also recognizes as operating revenue the rental fees 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 for the Authority include maintenance costs, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as non-operating items.

The New York State Office of the State Comptroller requires that the Authority report in accordance with generally accepted accounting principles as it is a component unit of the State. The Authority's bond resolution, however, requires that certain funds and accounts be established and maintained. The Authority consolidates these funds and accounts for the purpose of providing an enterprise fund presentation in its basic financial statements.

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)  
Notes to Financial Statements, Continued

(2) Summary of Significant Accounting Policies, Continued

(b) Cash, Cash Equivalents and Investments

Cash includes amounts in demand deposits. Cash equivalents include all highly liquid deposits with an original maturity of three months or less when purchased. These deposits are fully collateralized or covered by federal deposit insurance.

Investments include financial instruments with an original maturity of more than three months and are recorded at amortized cost. These investments are not included in cash and cash equivalents in the Statements of Cash Flows.

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 mitigates 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 a 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. Consequently, the Authority's investments have maturities of 12 months or less.

(c) Accounts Receivable

Accounts receivable consist primarily of receivables from commercial transportation companies and Federal and State governments under various Federal and State grant programs. All commercial accounts receivable are guaranteed by surety bonds and/or cash deposits. The allowance for uncollectible receivables amounted to \$1,650,000 and \$1,550,000 at December 31, 2010 and 2009, respectively.

(d) Materials and Supplies

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

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)  
Notes to Financial Statements, Continued

(2) Summary of Significant Accounting Policies, Continued

(e) Deferred Revenue

Deferred revenue consists of prepaid deposits made by private and commercial customers into E-ZPass accounts held by the Authority and 2011 and 2010 annual permit revenues collected in 2010 and 2009, respectively.

(f) 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. Payments from restricted funds are governed by the bond resolutions and, as such, expenses which do not meet these standards are paid from unrestricted funds.

(g) Toll Revenues

Toll revenues are stated net of volume and other discounts approximating \$22.8 million and \$21.2 million in 2010 and 2009. During 2010 and 2009, the Authority implemented certain toll rate adjustments which impacted revenues. In both January 2010 and January 2009, the Authority implemented a 5% toll increase.

(h) Pensions

Substantially all Authority employees, as well as the State Police assigned to the Thruway System, are members of cost sharing multiple-employer public employee retirement systems. Expenses are based on billings which are paid currently.

(i) Other Postemployment Benefits

In accordance with GASB Statement No. 45, the Authority recognizes in its financial statements, the financial impact of postemployment benefits, principally employer funded health care costs. The impact on the Authority's financial position and results of operations is more fully disclosed under note 9.

(j) Compensated Absences

Vacation leave accumulates for all full-time employees of the Authority, ranging from 13 to 25 days per year, and any unused amounts up to 30 days are considered vested and paid upon retirement or termination. Authority employees also accumulate sick leave at the rate of 10 to 13 days per year and personal leave credits at the rate of 3 to 5 days per year. Employees may use the accumulated sick and personal leave credits according to the established policy; however, generally no cash is paid for these accumulated credits at the time of retirement or termination. The liability for vested compensated absences has been computed to approximate \$10,323,000 and \$11,514,000 at December 31, 2010 and 2009, respectively, and is classified as a long-term liability.

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)

Notes to Financial Statements, Continued

(2) Summary of Significant Accounting Policies, Continued

(k) Bond and Note Discounts/Premiums, Deferred Losses on Advanced and Current Refunding and Issuance Costs

Bond and note discounts/premiums and deferred losses on advanced and current refunding are presented as components of bonds payable and bond issuance costs are presented as a component of non-current assets on the statements of net assets. The discounts/premiums and issuance costs are amortized over the life of the bonds and notes on a method that approximates the effective interest method. Deferred losses on advanced and current refunding are amortized over the remaining life of the old debt or the life of the new debt, whichever is shorter. Net amortization related to bond and note discounts/premiums and deferred losses on advanced and current refundings were approximately \$13,257,000 and \$6,894,000 for 2010 and 2009, respectively, and was included as an offset of interest expense. Depreciation and amortization expense includes amortization of bond and note issuance costs and surety bond costs totaling approximately \$2,721,000 and \$2,012,000 in 2010 and 2009, respectively.

(l) Capital Contributions

Capital contributions consist primarily of federal, state and other grants that are provided to fund specific capital projects within the Authority's Multi-Year Capital Plan.

(m) 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, 2010 and 2009.

(n) 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.

(o) Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingencies at the date of the financial statements, and the reporting of revenues and expenses during the reporting period. Actual results could differ from those estimates.

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)

Notes to Financial Statements, Continued

(3) Cash and Investments

The Authority's cash and investments as of December 31, 2010 and 2009 were as follows (in thousands):

	<u>2010</u>		<u>2009</u>
	<u>Carrying</u>	<u>Fair</u>	<u>Carrying</u>
	<u>value</u>	<u>value</u>	<u>value</u>
<u>Cash and cash equivalents:</u>			
Unrestricted:			
Cash:			
Demand deposits	\$ 45,101	\$ 45,101	\$ 72,820
Toll change funds	<u>123</u>	<u>123</u>	<u>123</u>
Total unrestricted cash	<u>45,224</u>	<u>45,224</u>	<u>72,943</u>
Cash equivalents:			
Government discount notes	6,877	6,878	6,130
Repurchase agreements	11,389	11,616	38,132
Commercial paper	<u>140,011</u>	<u>140,006</u>	<u>43,834</u>
Total unrestricted cash equivalents	<u>158,277</u>	<u>158,500</u>	<u>88,096</u>
Total unrestricted cash and cash equivalents	<u>\$ 203,501</u>	<u>\$ 203,724</u>	<u>\$ 161,039</u>
Restricted:			
Cash:			
Demand deposits	\$ 3,136	\$ 3,136	\$ 15
Other deposits	<u>2,978</u>	<u>2,978</u>	<u>2,868</u>
Total restricted cash	<u>6,114</u>	<u>6,114</u>	<u>2,883</u>
Cash equivalents:			
Government discount notes	155,812	155,837	44,821
Repurchase agreements	7,571	7,723	20,208
Commercial paper	46,853	46,863	166,334
Other deposits	<u>-</u>	<u>-</u>	<u>10,704</u>
Total restricted cash equivalents	<u>210,236</u>	<u>210,423</u>	<u>242,067</u>
Total restricted cash and cash equivalents	<u>\$ 216,350</u>	<u>\$ 216,537</u>	<u>\$ 244,950</u>

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)

Notes to Financial Statements, Continued

(3) Cash and Investments, Continued

	2010		2009
	Carrying value	Fair value	Carrying value
<u>Cash and cash equivalents, continued:</u>			
<u>Investments:</u>			
Unrestricted:			
Government discount notes	\$ 11,993	\$ 11,999	\$ 4,714
Time deposits	<u>11,714</u>	<u>11,714</u>	<u>11,753</u>
Total unrestricted investments	<u>23,707</u>	<u>23,713</u>	<u>16,467</u>
Restricted:			
Government discount notes	316,130	316,286	256,776
Government agency notes	36,897	36,505	271,544
Treasury securities	<u>-</u>	<u>-</u>	<u>103,734</u>
Total restricted investments	<u>\$ 353,027</u>	<u>\$ 352,791</u>	<u>\$ 632,054</u>

At December 31, 2010 and 2009, the fair value of the Authority's cash and investments approximated the carrying value.

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 (or agent) 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 financial institution's trust department in the Authority's name. Bank balances, which are comprised of demand and other deposits, approximated \$51,215,000 and \$75,703,000 as of December 31, 2010 and 2009, respectively, and are fully insured or collateralized. Amounts are collateralized with securities transferred to and held by the Authority's trustee in the Authority's name.

As of December 31, 2010, the Authority had the following concentrations of investments:

<u>Security</u>	<u>Credit Exposure (Rating)</u>	<u>% of Total Investments</u>
<u>Agency Obligations:</u>		
Federal National Mortgage Association	AAA/Aaa	13.4%
Federal Home Loan Banks	AAA/Aaa	14.8%
Federal Home Loan Mortgage Corporation	AAA/Aaa	27.0%
Federal Agricultural Mortgage Corporation	nr	15.6%

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)  
Notes to Financial Statements, Continued

(3) Cash and Investments, Continued

<u>Security</u>	<u>Credit Exposure (Rating)</u>	<u>% of Total Investments</u>
<u>Commercial Paper:</u>		
Bank of Nova Scotia	A-1+/P-1	8.7%
Chevron Funding Corporation	A-1+/P-1	0.8%
Franklin Resources Inc.	A-1+/P-1	0.2%
General Electric Capital Corporation	A-1+/P-1	5.7%
General Electric Capital Services Corporation	A-1+/P-1	2.3%
Louis Dreyfuss Corporation	A-1+/P-1	4.5%
Proctor & Gamble Company	A-1+/P-1	1.0%
Proctor & Gamble International Fund	A-1+/P-1	1.2%
Rabobank USA Financial Corporation	A-1+/P-1	0.8%

(4) Capital Assets

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

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:

<u>Category</u>	<u>Useful life</u>	<u>Capitalization Threshold</u>
Bridges	45 years	\$ 50,000
Bridge Improvements	15 years	50,000
Highways	30 years	50,000
Highway Improvements	10 years	50,000
Buildings	30 years	20,000
Fiber Optic System	17 years	50,000
Canal Structures	100 years	50,000
Canal Improvements	30 years	50,000
Equipment	2-12 years	5,000 - 20,000

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)

Notes to Financial Statements, Continued

(4) Capital Assets, Continued

The following schedule summarizes the capital assets of the Authority and related changes from December 31, 2009 to December 31, 2010 (in thousands):

	December 31, 2009			December 31, 2010
	<u>Balance</u>	<u>Additions</u>	<u>Reductions</u>	<u>Balance</u>
Capital assets, not being depreciated:				
Land and land improvements	\$ 808,473	2,101	(11)	\$ 810,563
Construction in progress	<u>577,578</u>	<u>283,646</u>	<u>(166,773)</u>	<u>694,451</u>
Total capital assets, not being depreciated	<u>1,386,051</u>	<u>285,747</u>	<u>(166,784)</u>	<u>1,505,014</u>
Capital assets, being depreciated:				
Thruway System	6,143,217	218,515	(3,937)	6,357,795
Canal System	394,567	36,200	-	430,767
Equipment	<u>224,494</u>	<u>28,811</u>	<u>(31,596)</u>	<u>221,709</u>
Total capital assets, being depreciated	<u>6,762,278</u>	<u>283,526</u>	<u>(35,533)</u>	<u>7,010,271</u>
Less accumulated depreciation for:				
Thruway System	(3,404,439)	(222,903)	3,962	(3,623,380)
Canal System	(48,919)	(4,886)	-	(53,805)
Equipment	<u>(139,831)</u>	<u>(21,661)</u>	<u>28,704</u>	<u>(132,788)</u>
Total accumulated depreciation	<u>(3,593,189)</u>	<u>(249,450)</u>	<u>32,666</u>	<u>(3,809,973)</u>
Net value of capital assets, being depreciated	<u>3,169,089</u>	<u>34,076</u>	<u>(2,867)</u>	<u>3,200,298</u>
Net value of all capital assets	<u>\$ 4,555,140</u>	<u>319,823</u>	<u>(169,651)</u>	<u>\$ 4,705,312</u>

Depreciation expense related to capital assets was \$249,450,000 and \$237,028,000 for the years ended December 31, 2010 and 2009, respectively.

(5) Restricted Assets

Restricted assets are established pursuant to bond resolutions and other agreements. The related balances at December 31, 2010 and 2009 are as follows:

Senior Debt Service Fund: Established to receive funds from Authority revenues to make periodic payments of interest and principal. The amounts held in this restricted fund at December 31, 2010 and 2009 were \$98,195,000 and \$96,961,000, respectively.

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)

Notes to Financial Statements, Continued

(5) Restricted Assets, Continued

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 bonds secured by the Senior Debt Service Reserve Fund, Series F, Series G and Series H General Revenue Bonds. The amounts held in this restricted fund at December 31, 2010 and 2009 were \$85,546,000 and \$85,599,000, 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. Any remaining money upon completion or abandonment of such projects shall be transferred to other funds in accordance with the terms outlined in the bond resolutions. The amounts held in this restricted fund at December 31, 2010 and 2009 were \$347,462,000 and \$647,948,000, 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. The amounts held in this restricted fund at December 31, 2010 and 2009 were \$65,516,000 and \$67,542,000, 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 their Commercial Charge Account Credit Agreement. The amount held in the account at December 31, 2010 and 2009 was \$2,978,000 and \$2,865,000, respectively.

State Infrastructure Bank Fund (SIB): Established through a joint venture with the Federal Government, the NYS Department of Transportation and the Metropolitan Transportation Authority to hold funds and record transactions associated with an infrastructure funding program established by the National Highway System Designation Act of 1995. This funding program was created to provide states with the financial resources to make loans and provide other assistance to qualified public and private transportation projects. The amounts held in the SIB restricted fund at December 31, 2010 and 2009 were \$0 and \$10,706,000, respectively. Additional information regarding the State Infrastructure Bank can be found in note 11.

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)  
Notes to Financial Statements, Continued

(6) Long-Term Liabilities

The Authority's bond indebtedness and other long-term liabilities as of December 31, 2010 and 2009 are comprised of the following obligations (in thousands):

	Date of Issuance	December 31, 2009 Balance	Additions	Reductions	December 31, 2010 Balance	Due Within One Year
General Revenue Bonds:						
2005 Series F	3/05	\$ 591,965	-	(23,620)	\$ 568,345	\$ 24,700
2005 Series G	9/05	737,595	-	(475)	737,120	485
2007 Series H	10/07	998,515	-	(30,100)	968,415	31,390
Unamortized bond discounts/ premiums		101,196	-	(4,345)	96,851	4,345
Deferred loss on refundings		<u>(31,477)</u>	-	<u>1,997</u>	<u>(29,480)</u>	<u>(1,997)</u>
General revenue bonds, net of unamortized discounts/premiums and deferred losses		<u>2,397,794</u>	<u>-</u>	<u>(56,543)</u>	<u>2,341,251</u>	<u>58,923</u>
Bond Anticipation Notes:						
Series 2009A	7/09	680,610	-	-	680,610	680,610
Unamortized Series 2009A premium		<u>17,273</u>	<u>-</u>	<u>(10,909)</u>	<u>6,364</u>	<u>6,364</u>
Total bond anticipation notes and unamortized premium		<u>697,883</u>	<u>-</u>	<u>(10,909)</u>	<u>686,974</u>	<u>686,974</u>
Total bonds and notes, net of unamortized discounts/premiums and deferred losses		<u>\$ 3,095,677</u>	<u>-</u>	<u>(67,452)</u>	<u>\$ 3,028,225</u>	<u>745,897</u>
Other Long-Term Liabilities:						
Claims liability		1,620	-	(1,394)	226	222
Postemployment benefit obligation		143,279	72,916	(22,592)	193,603	-
Compensated absences		11,514	-	(1,191)	10,323	-
Environmental remediation obligation		<u>7,331</u>	<u>-</u>	<u>(5,391)</u>	<u>1,940</u>	<u>1,940</u>
Total other long-term liabilities		<u>\$ 163,744</u>	<u>72,916</u>	<u>(30,568)</u>	<u>\$ 206,092</u>	<u>2,162</u>
Total classified as current						<u>\$ 748,059</u>

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)

Notes to Financial Statements, Continued

(6) Long Term Liabilities, Continued

The debt service requirements for the Authority's bonds, net of unamortized discounts/premiums and deferred loss on advanced and current refunding, as of December 31, 2010 are as follows (in thousands):

<u>Due</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2011	\$ 56,575	\$ 109,790	\$ 166,365
2012	59,085	107,181	166,266
2013	61,795	104,306	166,101
2014	64,835	101,301	166,136
2015	67,805	98,358	166,163
2016 - 2020	388,210	440,654	828,864
2021 - 2025	492,800	332,985	825,785
2026 - 2030	628,865	193,676	822,541
2031 - 2035	386,565	47,675	434,240
2036 - 2037	67,345	3,408	70,753
Unamortized discounts/premiums	96,851	-	96,851
Deferred loss on refundings	(29,480)	-	(29,480)
	<u>\$ 2,341,251</u>	<u>\$ 1,539,334</u>	<u>\$ 3,880,585</u>

General Revenue Bonds - Series F: During March 2005, the Authority issued \$624,570,000 in General Revenue Bonds - Series F which provided funds to: (1) refund \$444,205,000 in outstanding Series B, D, and E Bonds (for a net present value savings of \$18,587,000); (2) refund \$150,000,000 in outstanding General Revenue Bond Anticipation Notes - Series CP-1; (3) provide funds for the Authority's Capital Plan; (4) make a deposit to the Senior Debt Service Reserve Fund; and (5) pay bond issuance costs.

The General Revenue Bonds Series F are comprised of both serial and term bonds, with varying rates and maturities. Amounts outstanding at December 31, 2010 are as follows:

<u>Type</u>	<u>Rates</u>	<u>Maturity</u>	<u>Amount (in thousands)</u>
Serial Bonds	3.30% to 5.25%	2011 - 2026	\$ 501,690
Term Bonds	4.5%	2030	2,915
Term Bonds	5.0%	2030	<u>63,740</u>
			<u>\$ 568,345</u>

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)

Notes to Financial Statements, Continued

(6) Long Term Liabilities, Continued

Principal payments under the Series F Serial Bonds began in January 2006. The Series F Term Bonds require sinking fund installments, beginning in the year 2027, through the year 2030, of amounts ranging from \$725,000 to \$31,105,000 annually. The Series F Bonds are callable at the option of the Authority, in whole or in part, beginning January 1, 2015 at par plus accrued interest.

General Revenue Bonds - Series G: During September 2005, the Authority issued \$738,925,000 in General Revenue Bonds - Series G which provided funds to: (1) pay (at maturity) \$525,000,000 in General Revenue Bond Anticipation Notes; (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.

The Series G Bonds are comprised of both Serial Bonds and Term Bonds, with varying rates and maturities. The amounts outstanding at December 31, 2010 are as follows:

<u>Type</u>	<u>Rates</u>	<u>Maturity</u>	<u>Amount</u> (in thousands)
Serial Bonds	3.25% to 5.25%	2010 - 2029	\$ 324,020
Term Bonds	4.75%	2030	80,000
Term Bonds	5.0%	2030	88,770
Term Bonds	5.0%	2032	244,330
			\$ <u>737,120</u>

Principal payments under the Series G Serial Bonds began in January 2007. The Series G Term Bonds require sinking fund installments, in 2028 and in 2030 through the year 2032, in amounts ranging from \$30,000,000 to \$125,145,000 annually. The Series G Bonds are callable at the option of the Authority, in whole or in part, beginning July 1, 2015 at par, plus accrued interest.

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.

NEW YORK STATE THRUWAY AUTHORITY  
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Notes to Financial Statements, Continued

(6) Long Term Liabilities, Continued

The Series H Bonds are comprised of both Serial Bonds and Term Bonds, with varying rates and maturities. The amounts outstanding at December 31, 2010 are as follows:

<u>Type</u>	<u>Rates</u>	<u>Maturity</u>	<u>Amount</u> (in thousands)
Serial Bonds	4.0% to 5.0%	2010 - 2030	\$ 758,835
Term Bonds	5.0%	2032	52,765
Term Bonds	5.0%	2037	<u>156,815</u>
			<u>\$ 968,415</u>

Principal payments under the Series H Serial Bonds began in January 2009. The Series H Term Bonds require 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 are callable at the option of the Authority, in whole or in part, beginning January 1, 2018 at par plus accrued interest.

General Revenue Bonds - Revenue Pledge and Security: The 2005 (Series F), 2005 (Series G) and 2007 (Series H) General Revenue Bonds are all direct obligations of the Authority, secured by a pledge of toll and other revenues 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, 2010 and 2009, 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 Bond Anticipation Notes: During July 2009, the Authority issued \$680,610,000 in General Revenue Bond Anticipation Notes - Series 2009A to provide funds to: (1) fund a portion of the Authority's Multi-Year Capital Plan; (2) make a deposit to the Reserve Maintenance Fund, if any; and (3) pay BAN Issuance costs. The Bond Anticipation Notes mature on July 15, 2011 and pay interest rates ranging from 2.5% to 4.0%.

(7) 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 following are descriptions of the Authority's special bond programs:

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)  
Notes to Financial Statements, Continued

(7) Special Bond Programs, Continued

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. There were no new series of Local Highway and Bridge Service Contract Bonds issued in 2010. The Authority receives funds from New York State for debt service on these bonds and to fund related administrative costs. Bonds outstanding under this program were \$1,255,200,000 and \$1,446,050,000 at December 31, 2010 and 2009, respectively.

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. In March 2010, a bond sale was issued with a total par of \$300,105,000 and a second bond sale was issued with a total par of \$276,970,000 for State Department of Transportation expenditures. The Authority receives funds from New York State for debt service on these bonds and to fund related administrative costs. Bonds outstanding under this program were \$7,267,105,000 and \$6,959,880,000 at December 31, 2010 and 2009, 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. In September 2010, the Authority issued \$463,070,000 in bonds for capital projects. The Authority receives funds from New York State for debt service on the bonds and related administrative costs. Bonds outstanding under this program were \$2,630,455,000 and \$2,364,265,000 at December 31, 2010 and 2009, respectively.

(8) Retirement Benefits

The Authority provides its retirees certain retirement benefits made available to participating employers by the New York State Retirement and Social Security Laws, including Chapters 1046 and 1047 of the Laws of 1973.

The Authority participates in the New York State and Local Employees' Retirement System (ERS) for Authority employees and the Police and Fire Retirement Systems (PFRS) for New York State Police assigned to the Authority. Both ERS and PFRS are cost-sharing multiple-employer retirement systems that provide retirement benefits as well as death and disability benefits. These benefits are provided in accordance with the New York State Retirement and Social Security Law (NYSRSSL), which also governs obligations of employers and employees to contribute. The benefits to employees are guaranteed under the State constitution. The Authority's election to participate in the State plans is irrevocable.

NEW YORK STATE THRUWAY AUTHORITY  
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Notes to Financial Statements, Continued

(8) Retirement Benefits, Continued

As set forth in the NYSRSSL, the Comptroller of the State of New York (Comptroller) serves as sole trustee and administrative head of ERS and PFRS. The Comptroller shall adopt and may amend rules and regulations for the administration and transaction of the business of ERS and PFRS and for the custody and control of their funds. ERS and PFRS issue a publicly available financial report that includes financial statements and required supplementary information. That report may be obtained by writing to the New York State and Local Retirement Systems, 110 State Street, Albany, New York 12244-0001.

ERS and PFRS Tiers 1 through IV are noncontributory except for employees with less than 10 years of service who contribute 3% of their salary, and Tier V employees who contribute 3% of their salary. Under the authority of the NYSRSSL, the Comptroller shall certify annually the rates, expressed as proportions of payroll of members, which shall be 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, 2010 ranged from 9.1% to 15.3% and during the year ended December 31, 2009 ranged from 7.0% to 9.3%. The PFRS is paid as part of a fringe benefit rate billed to the Authority for the State Police. The PFRS benefit rates billed were 12.78% for April through December 2010, 8.82% for April 2009 through March 31, 2010, and 10.50% for January through March 2009.

The approximate required contributions for the current year and two preceding years were as follows (in thousands):

	<u>ERS</u>	<u>PFRS</u>
2010	\$ 19,940	\$ 4,054
2009	13,135	3,409
2008	15,040	3,325

The Authority's contributions in 2010 and 2009 were equal to 100% of the contributions required for the period.

In 2010, the Authority offered a Retirement Incentive Program to employees who met certain eligibility requirements. Approximately 10% of the Authority's total workforce elected to retire from service under this program. The Authority is responsible for contributing a surcharge to the New York State and Local Employee's Retirement System for each employee who participated in the program. The surcharge of approximately \$13.4 million is reflected as a Special Item on the Statement of Revenues, Expense and Changes in Net Assets.

(9) Other Postemployment Benefits

The Authority reports its Other Postemployment Benefits in compliance with GASB Statement No. 45 - "Accounting and Financial Reporting by Employers for Postemployment Benefits Other than Pensions." Statement No. 45 requires governmental entities, including the Authority, to recognize in its financial statements the financial impact of postemployment benefits, principally employer funded health care and death benefits which the Authority provides for retired employees. Substantially all of the employees may become eligible for these benefits if they reach normal retirement age while working for the Authority.

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)

Notes to Financial Statements, Continued

(9) Other Postemployment Benefits, Continued

The following table summarizes the Authority's valuation of Other Postemployment Benefit (OPEB) costs and obligations at December 31, 2010 and 2009 (in thousands):

	2010			2009
	Thruway Authority	Canal Corporation	Total	Total
Present value of future benefit payments	\$ 1,117,488	\$ 209,337	\$ 1,326,825	\$ 1,281,121
Unfunded accrued liability	864,195	162,223	1,026,418	981,684
Annual required contribution (30 year amortization)	61,669	11,859	73,528	69,720
Annual OPEB cost	61,164	11,752	72,916	69,423
Valuation payroll	146,028	25,214	171,242	167,065
Annual OPEB expense (as % of payroll)	41.9%	46.6%	42.6%	41.6%
Expected benefit payment	19,667	2,925	22,592	20,201

Actuarial valuations, the most recent of which was completed as of December 31, 2009, 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.

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. The Authority's specific obligation to pay OPEB costs is dependent on the employee's date of hire and labor agreement. 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 Thruway Authority and Canal Corporation reimburse the retiree and his/her Medicare eligible spouse for the Medicare Part B premium.

NEW YORK STATE THRUWAY AUTHORITY  
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Notes to Financial Statements, Continued

(9) Other Postemployment Benefits, Continued

(b) Eligibility

At least 55 years old with 5 years of service if date of hire is before April 1, 1975 or 10 years of service if date of hire is after April 1, 1975.

(c) Benefit/Cost Sharing

The Authority contributes 80% - 100% of costs for retirees and 75% - 80% for a retiree's spouse.

(d) Spouse Benefit - Yes

(e) Surviving Spouse Benefit - Coverage continues

(f) Survivor Benefit - \$3,000 payable to retiree's designated beneficiary.

The following summary schedule presents the Annual OPEB Cost and Net OPEB Obligation for the years ended December 31, 2010 and 2009 (in thousands):

	<u>2010</u>	<u>2009</u>
Normal cost	\$ 25,691	\$ 25,065
Amortization of unfunded actuarial accrued liability	45,443	42,362
Interest	<u>2,394</u>	<u>2,293</u>
Annual required contribution (ARC)	73,528	69,720
Interest on net OPEB obligation	5,731	3,762
Adjustment to ARC	<u>(6,343)</u>	<u>(4,059)</u>
Annual OPEB cost	72,916	69,423
Contribution/expected benefit payment	<u>(22,592)</u>	<u>(20,201)</u>
Increase in net OPEB obligation	50,324	49,222
Net OPEB obligation at beginning of year	<u>143,279</u>	<u>94,057</u>
Net OPEB obligation at end of year	<u>\$ 193,603</u>	<u>\$ 143,279</u>

The annual OPEB costs are recorded in the Authority's 2010 and 2009 Statements of Revenue, Expenses, and Changes in Net Assets as a component of general charges in the amount of \$72,916,000 and \$69,423,000, respectively. The net OPEB obligation is recorded in the Authority's Statements of Net Assets as a component of other long-term liabilities in the amount of \$193,603,000 and \$143,279,000, at December 31, 2010 and 2009, respectively.

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)

Notes to Financial Statements, Continued

(9) Other Postemployment Benefits, Continued

The annual OPEB cost, the percentage of annual OPEB cost contributed to the plan, and the net OPEB obligation for 2009 and 2010 are as follows (in thousands):

Year Ending	Annual OPEB cost			Cost contributed			Net OPEB obligation		
	Thruway	Canal Corporation	Total	Thruway	Canal Corporation	Total	Thruway	Canal Corporation	Total
12/31/09	\$ 58,259	\$ 11,164	\$ 69,423	30.3%	22.6%	29.1%	\$ 117,867	\$ 25,412	\$ 143,279
12/31/10	61,164	11,752	72,916	32.2%	24.9%	31.0%	159,365	34,238	193,603

The following are the actuarial methods and assumptions used in calculating the obligations related to the Authority postemployment benefit plan:

Funding interest rate	4.0%
2009 Medical trend rate (Med/Rx)	8%/10%
2010 Medical trend rate (Med/Rx)	7%/9%
Ultimate trend rate (Med/Rx)	5%/5%
Year ultimate trend rate reached	2012/2014
Annual payroll growth rate	2.50%
Actuarial cost method	Attained age
Remaining amortization period at December 31, 2010	26 years
Amortization method	30 year level percentage of payroll

(10) Contingencies and Commitments

(a) 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 estimatable. If the range of the liability is probable and estimatable, the Authority accrues the minimum of such probable range.

Changes in the Authority's claims liability amounts in years 2008 through 2010 were as follows (in thousands):

	Beginning of Year <u>Liability</u>	Current-Year Claims and Changes in <u>Estimates</u>	Claim <u>Payments</u>	End of Year <u>Liability</u>
2008	\$ 14,661	2,468	(5,340)	\$ 11,789
2009	11,789	1,070	(11,239)	1,620
2010	1,620	(99)	(1,295)	226

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)

Notes to Financial Statements, Continued

(10) Contingencies and Commitments, Continued

(a) Claims and Litigation, Continued

In addition, there are claims where liability is not probable, but is possible and estimatable. The range of loss on these claims approximated \$7.5 million to \$10 million at December 31, 2010.

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 and an estimation of damages cannot be determined.

In recent years, the lands subject to certain Native American land claims in New York State have included parts of the Thruway right-of-way. The New York State Attorney General's Office defends these cases on behalf of the State and the Authority. At this time, the Authority is not a party to any litigation related to such cases.

(b) Insurance

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 \$9.1 million.

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 \$5.0 million). In addition, the Authority purchases insurance for workers' compensation benefits and various liability exposures.

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.

(c) Construction Commitments

At December 31, 2010, the amounts of remaining unexpended commitments for projects undertaken and the detail by type of contract are as follows:

<u>Project</u>	<u>Commitments</u> <u>(in thousands)</u>
Highway, bridge and facility, construction and design	\$ 517,200
Personal service and miscellaneous	219,100
Canal	<u>37,000</u>
Total	\$ <u>773,300</u>

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)  
Notes to Financial Statements, Continued

(10) Contingencies and Commitments, Continued

(d) Environmental Remediation

The Authority has adopted GASB Statement No. 49 - "Accounting and Financial Reporting for Pollution Remediation Obligations." Statement No. 49 requires governmental entities, including the Authority, to disclose the nature and estimated cost for environmental remediation obligations. At December 31, 2010, the Authority recorded in its financial statements a cost estimate for environmental remediation of a number of sites on Thruway Authority and Canal Corporation property. These sites 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 were 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, 2010. 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. Work has been completed at a few locations and progress payments at others have been made in 2010.

At December 31, 2010, the Authority has estimated its environmental remediation obligations, net of expected recoveries from other responsible parties, as follows (in thousands):

	Beginning of year <u>liability</u>	<u>Current year</u>		End of year <u>liability</u>
		<u>Estimate</u> <u>changes</u>	<u>Payments</u> <u>made</u>	
2009	\$ 4,867	5,124	(2,660)	\$ 7,331
2010	7,331	(1,604)	(3,787)	1,940

(e) 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.

NEW YORK STATE THRUWAY AUTHORITY  
(A Component Unit of the State of New York)  
Notes to Financial Statements, Continued

(10) Contingencies and Commitments, Continued

(e) Lease Revenue, Continued

The following schedule summarizes the future minimum rental revenues to be earned as of December 31, 2010:

<u>Year</u>	<u>Future Minimum Lease Revenue (in thousands)</u>
2011	\$ 12,800
2012	13,500
2013	13,300
2014	12,900
2015	13,200
Thereafter	<u>51,700</u>
Total	\$ <u>117,400</u>

(11) State Infrastructure Bank

The State Infrastructure Bank (SIB) is an infrastructure funding program established by the National Highway System Designation Act of 1995 to provide states with the financial resources to make loans and provide other assistance to qualified public and private transportation projects. The Authority cooperatively constitutes and administers the New York SIB under a Memorandum of Understanding (MOU) with the NYS Department of Transportation Authority (NYSDOT) and the Metropolitan Transportation Authority (MTA). The SIB was capitalized with 80% Federal Funds and a 20% match provided by the Authority. During 2009, the State of New York requested approval to have the Federal share of the SIB transferred to the NYS Dedicated Highway and Bridge Trust Fund (Trust Fund) without a requirement for repayment. This request was approved by the Federal Highway Administration, Federal Transit Administration, NYSDOT, MTA and the Authority. The return of the Authority's original investment was also authorized. During 2010, \$8.58 million was transferred to the Trust Fund and \$2.14 million was returned to the Reserve Maintenance Fund. Accordingly, as of December 31, 2010, the SIB has a zero balance.

**TOSKI, SCHAEFER & CO., P.C.**  
CERTIFIED PUBLIC ACCOUNTANTS

555 INTERNATIONAL DR.  
WILLIAMSVILLE, NY 14221  
(716) 634-0700

14 CORPORATE WOODS BLVD.  
ALBANY, NY 12211  
(518) 935-1069

INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL  
REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF  
FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH  
GOVERNMENT AUDITING STANDARDS

Members of the Board  
New York State Thruway Authority:

We have audited the financial statements of the New York State Thruway Authority (the Authority) as of and for the year ended December 31, 2010, and have issued our report thereon dated March 23, 2011. We conducted our audit 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.

Internal Control Over Financial Reporting

In planning and performing our audit, we considered the Authority's internal control over financial reporting as a basis for designing our auditing procedures for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of the Authority's internal control over financial reporting.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A material weakness is a deficiency, or combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented or detected and corrected on a timely basis.

Our consideration of internal control over financial reporting was for the limited purpose described in the first paragraph of this section and would not necessarily identify all deficiencies in internal control that might be deficiencies, significant deficiencies or material weaknesses. We did not identify any deficiencies in internal control over financial reporting that we consider to be material weaknesses, as defined above.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Authority's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under Government Auditing Standards.

This report is intended solely for the information and use of the Members of the Board of the New York State Thruway Authority, management of the Authority, United States Department of Transportation and the New York State Department of Transportation and is not intended to be and should not be used by anyone other than these specified parties.

*Toski, Schaefer & Co, P.C.*

Williamsville, New York  
March 23, 2011

**TOSKI, SCHAEFER & CO., P.C.**  
CERTIFIED PUBLIC ACCOUNTANTS

555 INTERNATIONAL DR.  
WILLIAMSVILLE, NY 14221  
(716) 634-0700

14 CORPORATE WOODS BLVD.  
ALBANY, NY 12211  
(518) 935-1069

INDEPENDENT AUDITORS' REPORT ON INVESTMENT COMPLIANCE

Members of the Board  
New York State Thruway Authority:

We have examined the New York State Thruway Authority's (the Authority) compliance with Section 201.3 of Title Two of the Official Compilation of Codes, Rules, and Regulations of the State of New York during the year ended December 31, 2010. Management is responsible for the Authority's compliance with those requirements. Our responsibility is to express an opinion on the Authority's compliance based on our examination.

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants and the standards applicable to attestation engagements contained in Government Auditing Standards, issued by the Comptroller General of the United States and, accordingly, included examining, on a test basis, evidence supporting the Authority's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances. We believe that our examination provides a reasonable basis for our opinion. Our examination does not provide a legal determination on the Authority's compliance with specified requirements.

In our opinion, the Authority complied, in all material respects, with the aforementioned requirements during the year ended December 31, 2010.

In accordance with Government Auditing Standards, we are required to report findings of deficiencies in internal control, violations of provisions of contracts or grant agreements, and abuse that are material to the Authority's compliance with Section 201.3 of Title Two of the Official Compilation of Codes, Rules, and Regulations of the State of New York and any fraud and illegal acts that are more than inconsequential that come to our attention during our examination. We are also required to obtain the views of management on those matters. We performed our examination to express an opinion on whether the Authority complied with the aforementioned requirements and not for the purpose of expressing an opinion on the internal control over compliance with those requirements or other matters; accordingly, we express no such opinion. The results of our tests disclosed no matters that are required to be reported under Government Auditing Standards.

This report is intended solely for the information and use of the Members of the Board of the New York State Thruway Authority, management of the Authority, the New York State Legislature, the New York State Office of the State Comptroller, the New York State Senate, the New York State Division of the Budget, and the New York State Authorities Budget Office and is not intended to be and should not be used by anyone other than those specified parties.

*Toski, Schaefer & Co., P.C.*

Williamsville, New York  
March 23, 2011

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**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<sup>1</sup>. 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 Offering Memorandum:

“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.

<sup>1</sup> 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).

“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.

“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 sections 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 others, 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.

### **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 not 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 100 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 and until the final payment or defeasance of the Restaurant Concession Bonds, the funds and

accounts relating thereto and the receipts therein and disbursements therefrom during such year and the amounts held therein at the end of such year.

### **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; and

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.

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 Offering Memorandum. 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.

**BOOK-ENTRY ONLY SYSTEM**

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## BOOK-ENTRY ONLY SYSTEM

THE INFORMATION IN THIS APPENDIX CONCERNING DTC AND DTC'S BOOK-ENTRY SYSTEM HAS BEEN OBTAINED FROM DTC'S WEBSITE AND IS PRESUMED TO BE RELIABLE, BUT NEITHER THE AUTHORITY, THE TRUSTEE NOR THE UNDERWRITERS TAKE ANY RESPONSIBILITY FOR THE ACCURACY THEREOF.

The Depository Trust Company ("DTC"), New York, New York will act as securities depository for the Series 2011A Notes. The Series 2011A Notes will be issued as fully-registered securities 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 2011A Note certificate will be issued for each maturity of the Series 2011A Notes, each in the aggregate principal amount of such maturity, and will be deposited with DTC.

Beneficial ownership interests in the Series 2011A Notes will be available in book-entry-only form, in the principal amount of \$5,000 or integral multiples thereof. Purchasers of beneficial ownership interests in the Series 2011A Notes will not receive certificates representing their interests in the Series 2011A Notes purchased.

DTC, the world's largest depository, 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"). DTC has Standard & Poor's highest rating: AAA. 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](http://www.dtcc.com) and [www.dtc.org](http://www.dtc.org).

Purchases of Series 2011A Notes under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series 2011A Notes on DTC's records. The ownership interest of each actual purchaser of each Series 2011A Note ("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 Participants through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Series 2011A Notes 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 2011A Notes, except in the event that use of the book-entry system for the Series 2011A Notes is discontinued.

To facilitate subsequent transfers, all Series 2011A Notes 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 2011A Notes with DTC and their registration in the name of Cede & Co. or such other nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Series 2011A Notes; DTC records reflect only the identity of the Direct Participants to whose accounts such Series 2011A Notes are credited, which may or may not be the Beneficial Owners. The Direct or 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.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Series 2011A Notes unless authorized by a Direct Participant in accordance with DTC's 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 the Series 2011A Notes are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal and interest payments on the Series 2011A Notes 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 Trustee 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 Authority, or the Trustee, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal 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 Trustee, and disbursement of such payments to Direct Participants shall 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 2011A Notes at any time by giving reasonable notice to the Authority and the Trustee. Under such circumstances, in the event that a successor securities depository is not obtained, Series 2011A Note 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 2011A Note certificates will be printed and delivered.

In the event that the book-entry only system is discontinued, the Issuing and Paying Agent shall keep the registration books for the Series 2011A Notes at its principal corporate trust office. The Authority and the Trustee shall be entitled to treat the registered owners of the Series 2011A Notes, as their names appear in the registration books as of the appropriate dates, as the owners of such Series 2011A Notes for all purposes under the Bond Resolution.

Portions of the information in this section concerning DTC and DTC's book-entry only system are based on information furnished by DTC to the Authority. No representation is made herein by the Authority or the Underwriters as to the accuracy or completeness thereof.

Under the Bond Resolution, payments made by the Trustee to DTC or its securities depository nominee shall satisfy the Authority's obligations under the Bond Resolution to the extent of such payments.

NEITHER THE AUTHORITY, THE UNDERWRITERS NOR THE TRUSTEE WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO DTC PARTICIPANTS OR THE PERSONS FOR WHOM THEY ACT WITH RESPECT TO THE PAYMENTS TO OR THE PROVIDING OF NOTICE TO THE DTC PARTICIPANTS, THE INDIRECT PARTICIPANTS OR BENEFICIAL OWNERS.

SO LONG AS CEDE & CO., AS SECURITIES DEPOSITORY NOMINEE OF DTC, IS THE REGISTERED OWNER OF THE SERIES 2011A NOTES, REFERENCES IN THIS OFFERING MEMORANDUM TO THE NOTEHOLDERS OR REGISTERED OWNERS OF THE SERIES 2011A NOTES (OTHER THAN UNDER THE CAPTION "TAX MATTERS" IN THIS OFFERING MEMORANDUM) SHALL MEAN CEDE & CO. AND SHALL NOT MEAN THE BENEFICIAL OWNERS OF THE SERIES 2011A NOTES.

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**FORM OF OPINION OF BOND COUNSEL**

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**Upon delivery of the Series 2011A Notes in definitive form, Hawkins Delafield & Wood LLP, Bond Counsel to the Authority, proposes to render its final opinion in substantially the following form:**

[Date of Closing]

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 \$868,045,000 aggregate principal amount of General Revenue Bond Anticipation Notes, Series 2011A (herein called the “Series 2011A Notes”), 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 Resolution (hereinafter defined).

The Series 2011A Notes 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 Thirteenth Supplemental Revenue Bond Resolution Authorizing General Revenue Bonds, Series I adopted by the Authority June 25, 2009, as amended May 18, 2011 (the “Series I Bond Resolution”) and the Resolution Authorizing General Revenue Bond Anticipation Notes, Series 2011A adopted by the Authority on May 18, 2011 (herein called the “Note Resolution”; the General Resolution as so supplemented and amended is herein called the “Resolution”). The Series 2011A Notes are being issued for the purposes set forth in the Note Resolution.

The Internal Revenue Code of 1986, as amended (the “Code”), establishes certain ongoing requirements that must be met subsequent to the issuance and delivery of the Series 2011A Notes in order that interest on the Series 2011A Notes be and remain excluded from gross income under Section 103 of the Code. These requirements include, but are not limited to, requirements relating to the use and expenditure of gross proceeds of the Series 2011A Notes, yield and other restrictions on investments of gross proceeds, and the arbitrage rebate requirement that certain excess earnings on gross proceeds be rebated to the Federal government. Noncompliance with such requirements may cause interest on the Series 2011A Notes to become included in gross income for Federal income tax purposes retroactive to their issue date, irrespective of when such noncompliance occurs or is discovered. The Authority has covenanted to comply with certain applicable requirements of the Code to assure the exclusion of interest on the Series 2011A Notes from gross income under Section 103 of the Code.

In rendering the opinion in paragraph 4 hereof, we have relied on certain representations, certifications of fact, and statements of reasonable expectation made by the Authority in connection with the Series 2011A Notes, and have assumed compliance by the Authority with certain ongoing covenants to comply with applicable requirements of the Code to assure the exclusion of interest on the Series 2011A Notes from gross income under Section 103 of the Code.

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.

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 Resolution and issue the Series 2011A Notes thereunder, and the 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 Resolution is required.
3. The Series 2011A Notes have been duly authorized, executed and delivered by the Authority and constitute valid and binding, special obligations of the Authority payable as provided in the Resolution and secured by a pledge of the following sources and only such sources (i) the proceeds of any renewals of the Series 2011A Notes issued to repay the Series 2011A Notes, (ii) the proceeds of the sale of a Series of Bonds authorized by the Series I Bond Resolution, or (iii) the proceeds of the Series 2011A Notes deposited in any Fund or account under the Resolution. The Series 2011A Notes are not secured by any other funds, accounts or amounts that are pledged to the payment of Bonds issued under the General Resolution. The Series 2011A Notes are enforceable against the Authority in accordance with their terms and the terms of the Resolution and entitled to the benefits of the Act and of the Resolution, and such Series 2011A Notes 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 Resolution.
4. Under existing statutes and court decisions, interest on the Series 2011A Notes is excluded from gross income for Federal income tax purposes pursuant to Section 103 of the Code and interest on the Series 2011A Notes is not treated as a preference item in calculating alternative minimum tax imposed on individuals and corporations under the Code; such interest, however, is included in the adjusted current earnings of such corporations for purposes of calculating the alternative minimum tax that may be imposed on such corporations.
5. Under existing statutes, the interest on the Series 2011A Notes is exempt from personal income taxes imposed by the State or any political subdivision thereof, including The City of New York and the City of Yonkers.

Except as stated in paragraphs 4 and 5 above, we express no opinion as to any Federal, state or local tax consequences arising with respect to the Series 2011A Notes or ownership or disposition thereof. Furthermore, we express no opinion as to the effect of any action taken or not taken in reliance upon an opinion of counsel other than ourselves on the exclusion from gross income for Federal income tax purposes of interest on the Series 2011A Notes, or under state and local tax law.

The foregoing opinions are qualified only to the extent that the enforceability of the Resolution and the Series 2011A Notes 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 2011A Notes.

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.

Very truly yours,



