

\$223,355,000
TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY
(MTA Bridges and Tunnels)
General Revenue Bonds, Series 2007A

DATED: Date of Delivery **DUE: November 15, as shown on the inside cover**

The Series 2007A Bonds are being issued to finance bridge and tunnel projects.

The Series 2007A Bonds –

- are general obligations of MTA Bridges and Tunnels, payable generally from the net revenues collected on the bridges and tunnels operated by MTA Bridges and Tunnels as described herein, and
- are not a debt of the State or The City of New York or any other local government unit.

MTA Bridges and Tunnels has no taxing power.

In the opinion of Hawkins Delafield & Wood LLP, Bond Counsel to MTA Bridges and Tunnels, under existing law and relying on certain representations by MTA Bridges and Tunnels and assuming the compliance by MTA Bridges and Tunnels with certain covenants, interest on the Series 2007A Bonds is

- *excluded from a bondholder's federal gross income under the Internal Revenue Code of 1986,*
- *not a preference item for a bondholder under the federal alternative minimum tax, and*
- *included in the adjusted current earnings of a corporation under the federal corporate alternative minimum tax.*

Also in Bond Counsel's opinion, under existing law, interest on the Series 2007A Bonds is exempt from personal income taxes of New York State or any political subdivisions of the State, including The City of New York.

The Series 2007A Bonds are subject to redemption prior to maturity as described herein.

The Series 2007A Bonds are offered when, as, and if issued, subject to certain conditions, and are expected to be delivered through the facilities of The Depository Trust Company, on or about June 20, 2007.

This cover page contains certain information for general reference only. It is not intended to be a summary of the security or terms of the Series 2007A Bonds. Investors are advised to read the entire official statement, including all portions hereof included by specific cross-reference, to obtain information essential to making an informed decision.

Lehman Brothers

Bear, Stearns & Co. Inc.

A.G. Edwards
Loop Capital Markets, LLC
M.R. Beal & Company
RBC Capital Markets
Siebert Brandford Shank & Co., LLC

Citi

Banc of America Securities LLC
Merrill Lynch & Co.
Ramirez & Co., Inc.

UBS Investment Bank

JPMorgan

First Albany Capital Inc.
Morgan Stanley
Raymond James & Associates, Inc.
Roosevelt & Cross, Inc.
Wachovia Bank, N.A.

\$223,355,000
Triborough Bridge and Tunnel Authority
(MTA Bridges and Tunnels)
General Revenue Bonds, Series 2007A

\$114,950,000 Serial Bonds

| <u>Maturity</u> <u>(November 15)</u> | <u>Principal</u> <u>Amount</u> | <u>Interest</u> <u>Rate</u> | <u>Price or</u> <u>Yield</u> | <u>CUSIP Number</u> <u>(89602N)⁽¹⁾</u> |
|---|---|--|---|--|
| 2008 | \$3,640,000 | 4.00 % | 3.68% | KA1 |
| 2009 | 3,785,000 | 4.00 | 3.75 | KB9 |
| 2010 | 3,940,000 | 4.00 | 3.85 | KC7 |
| 2011 | 4,095,000 | 4.25 | 3.95 | KD5 |
| 2012 | 4,270,000 | 4.00 | 4.05 | KE3 |
| 2013 | 4,440,000 | 4.00 | 4.10 | KF0 |
| 2014 | 4,620,000 | 5.00 | 4.13 | KG8 |
| 2015 | 4,850,000 | 4.25 | 4.16 | KH6 |
| 2016 | 5,055,000 | 4.125 | 4.20 | KJ2 |
| 2017 | 5,265,000 | 4.25 | 100 | KK9 |
| 2018 | 5,490,000 | 4.25 | 4.31 | KL7 |
| 2019 [†] | 5,720,000 | 5.00 | 4.42 | KM5 |
| 2020 [†] | 6,005,000 | 5.00 | 4.47 | KN3 |
| 2021 [†] | 6,305,000 | 5.00 | 4.51 | KP8 |
| 2022 [†] | 6,625,000 | 5.00 | 4.53 | KQ6 |
| 2023 | 6,955,000 | 4.50 | 4.64 | KR4 |
| 2024 [†] | 7,265,000 | 5.00 | 4.59 | KS2 |
| 2025 [†] | 7,630,000 | 5.00 | 4.61 | KT0 |
| 2026 [†] | 8,010,000 | 5.00 | 4.62 | KU7 |
| 2027 [†] | 8,410,000 | 5.00 | 4.63 | KV5 |
| 2028 | 2,575,000 | 4.60 | 4.71 | KW3 |

\$108,405,000 Term Bonds

\$46,185,000 5.00% Series 2007A Term Bonds Due November 15, 2032 priced to Yield 4.66%[†]
 CUSIP Number 89602NKX1⁽¹⁾

\$62,220,000 5.00% Series 2007A Term Bonds Due November 15, 2037 priced to Yield 4.70%[†]
 CUSIP Number 89602NKY9⁽¹⁾

The Series 2007A Bonds are subject to optional and mandatory redemption as described under the caption “DESCRIPTION OF SERIES 2007A BONDS – Redemption Prior to Maturity” in Part I. The following summarizes the optional redemption provisions: the Series 2007A Bonds maturing on and after November 15, 2018 are subject to redemption prior to maturity on any date on and after November 15, 2017, at the option of MTA Bridges and Tunnels, in whole or in part at 100% of the principal amount thereof, together with accrued interest thereon up to but not including the redemption date.

⁽¹⁾ CUSIP numbers have been assigned by an organization not affiliated with MTA Bridges and Tunnels and are included solely for the convenience of the holders of the Series 2007A Bonds. MTA Bridges and Tunnels is not responsible for the selection or uses of these CUSIP numbers, nor is any representation made as to their correctness on the Series 2007A Bonds or as indicated above.

[†] Priced at the stated yield to the November 15, 2017 optional redemption date at a redemption price of 100%.

Triborough Bridge and Tunnel Authority

(MTA Bridges and Tunnels)

Triborough Station, Box 35

New York, New York 10035

(212) 360-3000

Website: www.mta.info

| | |
|------------------------------|-------------------|
| Peter S. Kalikow | Chairman |
| David S. Mack | Vice-Chairman |
| Andrew M. Saul | Vice-Chairman |
| Andrew B. Albert | Non-Voting Member |
| John H. Banks III | Member |
| James F. Blair | Non-Voting Member |
| Nancy Shevell Blakeman | Member |
| Norman E. Brown | Non-Voting Member |
| Donald Cecil | Member |
| Barry L. Feinstein | Member |
| Jeffrey A. Kay | Member |
| Mark D. Lebow | Member |
| James L. McGovern | Non-Voting Member |
| Susan G. Metzger | Member |
| Mark Page | Member |
| Mitchell H. Pally | Member |
| Francis H. Powers | Member |
| Norman I. Seabrook | Member |
| James L. Sedore, Jr. | Member |
| Ed Watt | Non-Voting Member |
| Carl V. Wortendyke | Member |

| | |
|------------------------------|-----------------------------------|
| Elliot G. Sander | Executive Director |
| David Moretti | Acting President |
| Thomas Bach | Vice President and Chief Engineer |
| Robert M. O'Brien, Esq. | General Counsel |
| Donald Spero | Acting Chief Financial Officer |

HAWKINS DELAFIELD & WOOD LLP
New York, New York
Bond Counsel

GOLDMAN, SACHS & CO.
New York, New York
Financial Advisor

URS CORPORATION – NEW YORK
New York, New York
Independent Engineers

SUMMARY OF TERMS

MTA Bridges and Tunnels has prepared this Summary of Terms to describe the specific terms of the Series 2007A Bonds. The information in this official statement, including the materials filed with the repositories and included by specific cross-reference as described herein, provides a more detailed description of matters relating to MTA Bridges and Tunnels and to MTA Bridges and Tunnels' General Revenue Bonds. Investors should carefully review that detailed information in its entirety before making a decision to purchase any of the bonds being offered.

| | | |
|---|---|----------------|
| Issuer | Triborough Bridge and Tunnel Authority, a public benefit corporation of the State of New York (hereinafter referred to as MTA Bridges and Tunnels). | |
| Bonds Being Offered | General Revenue Bonds, Series 2007A. | |
| Purpose of Issue | To finance bridge and tunnel projects. | |
| Rates and Maturities | See inside cover. | |
| Denominations | \$5,000 and whole multiples of \$5,000. | |
| Interest Payment Dates | May 15 and November 15, commencing November 15, 2007. | |
| Redemption | See "DESCRIPTION OF SERIES 2007A BONDS – Redemption Prior to Maturity" in Part I. | |
| Sources of Payment and Security | Net revenues collected on the bridges and tunnels operated by MTA Bridges and Tunnels as described herein. | |
| Registration of the Bonds | DTC Book-Entry-Only System. No physical certificates evidencing ownership of a bond will be delivered, except to DTC. | |
| Trustee | U.S. Bank Trust National Association. | |
| Bond Counsel | Hawkins Delafield & Wood LLP, New York, New York. | |
| Tax Status | See "TAX MATTERS" in Part III. | |
| Ratings | <u>Rating Agency</u> | <u>Ratings</u> |
| | Moody's | Aa2 |
| | Standard & Poor's | AA- |
| | Fitch | AA |
| | See "RATINGS" in Part III. | |
| Financial Advisor | Goldman, Sachs & Co. | |
| Underwriters | See cover page. Lehman Brothers Inc. is the representative of the Underwriters for the Series 2007A Bonds. | |
| Purchase Price/Underwriters' Discount | See "UNDERWRITING" in Part III. | |
| Counsel to the Underwriters | Winston & Strawn LLP, New York, New York. | |
| Independent Engineers | URS Corporation – New York, New York, New York. | |

-
- ***No Unauthorized Offer.*** This official statement is not an offer to sell, or the solicitation of an offer to buy, the Series 2007A Bonds in any jurisdiction where that would be unlawful. MTA Bridges and Tunnels has not authorized any dealer or salesperson or anyone else to give any information or make any representation in connection with the offering of the Series 2007A Bonds, except as set forth in this official statement. No other information or representations should be relied upon.
 - ***No Contract or Investment Advice.*** This official statement is not a contract and does not provide investment advice. Investors should consult their financial advisors and legal counsel with questions about this official statement and the Series 2007A Bonds being offered, and anything else related to this bond issue.
 - ***Information Subject to Change.*** Information and expressions of opinion are subject to change without notice, and it should not be inferred that there have been no changes since the date of this document. Neither the delivery of, nor any sale made under, this official statement shall under any circumstances create any implication that there has been no change in MTA Bridges and Tunnels' affairs or in any other matters described herein.
 - ***Forward-Looking Statements.*** Many statements contained in this official statement, including the appendices and the documents included by specific cross-reference, that are not historical facts are forward-looking statements, which are based on MTA Bridges and Tunnels' and the Independent Engineers' beliefs, as well as assumptions made by, and information currently available to, the management and staff of MTA Bridges and Tunnels and the Independent Engineers. 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," "plan," "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 this official statement.
 - ***Projections.*** The MTA Bridges and Tunnels projections set forth in this official statement were not prepared with a view toward complying with the guidelines established by the American Institute of Certified Public Accountants with respect to prospective financial information, but, in the view of MTA Bridges and Tunnels' management, were prepared on a reasonable basis, reflect the best currently available estimates and judgments, and present, to the best of management's knowledge and belief, the expected course of action and the expected future financial performance of MTA Bridges and Tunnels. However, this information is not fact and should not be relied upon as being necessarily indicative of future results, and readers of this official statement are cautioned not to place undue reliance on the prospective financial information. Neither MTA Bridges and Tunnels' independent auditors, nor any other independent auditors, have compiled, examined, or performed any procedures with respect to the prospective financial information contained herein, nor have they expressed any opinion or any other form of assurance on such information or its achievability. Neither MTA Bridges and Tunnels' independent auditors, nor any other independent auditors, have been consulted in connection with the preparation of the prospective financial information set forth in this official statement, which is solely the product of MTA Bridges and Tunnels and its affiliates, and the independent auditors assume no responsibility for its content.
 - ***No Guarantee of Information by Underwriters.*** The Underwriters have provided the following sentence for inclusion in this official statement: The Underwriters have reviewed the information in this official statement in accordance with, and as part of, their 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.
 - ***Overallotment and Stabilization.*** The Underwriters may overallocate or effect transactions that stabilize or maintain the market price of the Series 2007A Bonds at a level above that which might otherwise prevail in the open market. The Underwriters are not obligated to do this and are free to discontinue it at any time.

TABLE OF CONTENTS

| | <u>Page</u> |
|---|-------------|
| SUMMARY OF TERMS | ii |
| INTRODUCTION | 1 |
| MTA Bridges and Tunnels and Other Related Entities | 1 |
| Where to Find Information | 2 |
| Recent Developments | 3 |
| PART I. SERIES 2007A BONDS | 4 |
| APPLICATION OF PROCEEDS | 4 |
| DESCRIPTION OF SERIES 2007A BONDS | 4 |
| General | 4 |
| Redemption Prior to Maturity | 4 |
| Debt Service on the Bonds | 6 |
| PART II. SOURCES OF PAYMENT AND SECURITY FOR THE BONDS | 8 |
| SOURCES OF PAYMENT | 8 |
| SECURITY | 12 |
| Pledge Effected by the Senior Bridges and Tunnels Resolution | 12 |
| Revenues and Additional MTA Bridges and Tunnels Projects | 12 |
| Flow of Revenues | 13 |
| Rate Covenant | 14 |
| Additional Bonds | 15 |
| Refunding Bonds | 15 |
| Subordinate Obligations | 15 |
| PART III. OTHER INFORMATION ABOUT THE SERIES 2007A BONDS | 16 |
| TAX MATTERS | 16 |
| General | 16 |
| Original Issue Discount | 17 |
| Bond Premium | 17 |
| Information Reporting and Backup Withholding | 17 |
| Miscellaneous | 17 |
| LEGALITY FOR INVESTMENT | 18 |
| LITIGATION | 18 |
| FINANCIAL ADVISOR | 18 |
| UNDERWRITING | 18 |
| RATINGS | 19 |
| LEGAL MATTERS | 19 |
| CONTINUING DISCLOSURE | 19 |
| FURTHER INFORMATION | 20 |
| Attachment 1 – Book-Entry-Only System | |
| Attachment 2 – Continuing Disclosure Under SEC Rule 15c2-12 | |
| Attachment 3 – Form of Opinion of Bond Counsel | |
| Attachment 4 – History and Projection of Traffic, Toll Revenues and Expenses and Review of Physical Conditions of the Facilities of Triborough Bridge and Tunnel Authority, dated June 1, 2007, prepared by URS Corporation – New York | |

Information Included by Specific Cross-reference. The following portions of MTA’s 2007 Combined Continuing Disclosure Filings, dated April 26, 2007, and filed with the repositories identified in the “INTRODUCTION” to this official statement, are included by specific cross-reference in this official statement, along with material that updates this official statement and that is either filed with those repositories or, in the case of official statements, filed with the Municipal Securities Rulemaking Board (MSRB) prior to the delivery date of the Series 2007A Bonds, together with any supplements or amendments thereto:

- **Appendix A** – The Related Entities
- **Appendix D** – Audited Financial Statements of Triborough Bridge and Tunnel Authority for the Years Ended December 31, 2006 and 2005

Readers of this official statement should also be aware that **Appendix A**, which is included by specific cross-reference in this official statement, itself includes additional documents by specific cross-reference therein.

The following documents have also been filed with the repositories identified in the “INTRODUCTION” and are included by specific cross-reference in this official statement:

- Summary of Certain Provisions of the Senior Bridges and Tunnels Resolution⁽¹⁾
- Definitions and Summary of Certain Provisions of the Standard Resolution Provisions⁽¹⁾

⁽¹⁾ Copies of these summaries can be found on the MTA website (www.mta.info/mta/investor/index.html) under the caption “MTA Home-Investor Information.” The summary of certain provisions of the Senior Bridges and Tunnels Resolution is listed under “Summaries of Certain Provisions of the TBTA Senior Lien Resolution.” Definitions of certain terms used in the summaries may differ from terms used in this official statement, such as using the popular name “MTA Bridges and Tunnels” in place of Triborough Bridge and Tunnel Authority or its abbreviation, TBTA.

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INTRODUCTION

MTA Bridges and Tunnels and Other Related Entities

Triborough Bridge and Tunnel Authority, or MTA Bridges and Tunnels, is a public benefit corporation, which means that it is a corporate entity separate and apart from the State, without any power of taxation – frequently called a “public authority”. MTA Bridges and Tunnels is empowered to construct and operate toll bridges and tunnels and other public facilities in New York City. MTA Bridges and Tunnels issues debt obligations to finance the capital costs of its facilities and the transit and commuter systems operated by other affiliates and subsidiaries of the Metropolitan Transportation Authority, or MTA. MTA Bridges and Tunnels’ surplus amounts are used to fund transit and commuter operations and finance capital projects.

MTA has responsibility for developing and implementing a single, integrated mass transportation policy for the MTA Commuter Transportation District, which consists of New York City and the seven New York metropolitan-area counties of Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk and Westchester. It carries out some of those responsibilities by operating the transit and commuter systems through its subsidiary and affiliate entities: the New York City Transit Authority and its subsidiary, the Manhattan and Bronx Surface Transit Operating Authority; the Staten Island Rapid Transit Operating Authority; The Long Island Rail Road Company; the Metro-North Commuter Railroad Company; the Metropolitan Suburban Bus Authority; the MTA Bus Company; and the MTA Capital Construction Company. MTA issues debt obligations to finance a substantial portion of the capital costs of these systems, other than MSBA.

The board members of MTA serve as the board members of the MTA’s affiliates and subsidiaries, which, together with the MTA, are referred to collectively herein as the Related Entities. MTA Bridges and Tunnels is an affiliate, not a subsidiary, of MTA. MTA, MTA Bridges and Tunnels and the other Related Entities are described in detail in **Appendix A** to MTA’s 2007 Combined Continuing Disclosure Filings (**Appendix A**), which is included by specific cross-reference in this official statement.

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

| <u>Legal Name</u> | <u>Popular Name</u> |
|---|---------------------------|
| Metropolitan Transportation Authority | MTA |
| New York City Transit Authority | MTA New York City Transit |
| Manhattan and Bronx Surface Transit Operating Authority | MaBSTOA |
| Staten Island Rapid Transit Operating Authority | MTA Staten Island Railway |
| MTA Bus Company | MTA Bus |
| Metropolitan Suburban Bus Authority | MTA Long Island Bus |
| The Long Island Rail Road Company | MTA Long Island Rail Road |
| Metro-North Commuter Railroad Company | MTA Metro-North Railroad |
| MTA Capital Construction Company | MTA Capital Construction |
| Triborough Bridge and Tunnel Authority | MTA Bridges and Tunnels |

Capitalized terms used herein and not otherwise defined have the meanings provided by **Appendix A**.

Where to Find Information

Information in this Official Statement. This official statement is organized as follows:

- **Part I** provides specific information about the Series 2007A Bonds.
- **Part II** describes the sources of payment and security for all General Revenue Bonds, including the Series 2007A Bonds.
- **Part III** provides miscellaneous information relating to the Series 2007A Bonds.
- **Attachment 1** sets forth certain provisions applicable to the book-entry system of registration to be used for the Series 2007A Bonds.
- **Attachment 2** sets forth a summary of certain provisions of a continuing disclosure agreement relating to the Series 2007A Bonds.
- **Attachment 3** is the form of opinion of Bond Counsel in connection with the Series 2007A Bonds.
- **Attachment 4** sets forth the history and projection of traffic, toll revenues and expenses and review of physical condition of MTA Bridges and Tunnels' facilities by the Independent Engineers.
- **Information Included by Specific Cross-reference** in this official statement and identified in the Table of Contents may be obtained, as described below, from the repositories or the MSRB and from MTA.

Information from Repositories. MTA and MTA Bridges and Tunnels file annual and other information with each Nationally Recognized Municipal Securities Information Repository (NRMSIRs). Documents filed by MTA and MTA Bridges and Tunnels should be available from those repositories designated as such at the time of the filing. The repositories may charge a fee for access to those documents. The current repositories are as follows:

Bloomberg Municipal Repository

100 Business Park Drive
Skillman, NJ 08558
Phone: (609) 279-3225
Fax: (609) 279-5962
Email: munis@bloomberg.com

Interactive Data Pricing and Reference Data, Inc.

Attn: NRMSIR
100 William Street, 15th Floor
New York, NY 10038
Phone: (212) 771-6999; (800) 689-8466
Fax: (212) 771-7390
Email: NRMSIR@interactivedata.com

DPC Data Inc.

One Executive Drive
Fort Lee, NJ 07024
Phone: (201) 346-0701
Fax: (201) 947-0107
Email: nrmsir@dpcdata.com

Standard & Poor's Securities Evaluations, Inc.

55 Water Street, 45th Floor
New York, NY 10041
Phone: (212) 438-4595
Fax: (212) 438-3975
Email: nrmsir_repository@sandp.com

Information Included by Specific Cross-reference. The information listed under the caption "Information Included by Specific Cross-reference" following the Table of Contents, as filed with the repositories to date, is "included by specific cross-reference" in this official statement. This means that important information is disclosed by referring to those documents and that the specified portions of those documents are considered to be part of this official statement. This official statement, which includes those filings, should be read in its entirety in order to obtain essential information for making an informed decision in connection with the Series 2007A Bonds.

Information Available at No Cost. Information filed with the repositories is also available, at no cost, on MTA's website or by contacting MTA, Attn.: Finance Department, at 347 Madison Avenue, New York, New York 10017. For important information about MTA's website, see Part III – "FURTHER INFORMATION" below.

Recent Developments

GASB Statement No. 45 relating to accounting and financial reporting by employers for post-employment benefits other than pensions (OPEB) applies to the MTA when the MTA releases its first quarter 2007 unaudited financial statements. MTA has received a draft report from an independent actuary firm that preliminarily calculates, consistent with GASB Statement No. 45, the present value of OPEB costs accrued to December 31, 2006 for past and current employees, including retirees, of the Related Entities to be approximately \$13.4 billion. The following chart allocates that value by agency:

| <u>Agency</u> | <u>GASB 45 Present Value (in millions)</u> |
|---|--|
| MTA New York City Transit (including MaBSTOA) | \$10,268.8 |
| MTA Long Island Rail Road | 1,196.1 |
| MTA Metro-North Railroad | 464.0 |
| MTA Bridges and Tunnels | 536.0 |
| MTA Headquarters | 360.1 |
| MTA Long Island Bus | 49.7 |
| MTA Staten Island Railway | 25.7 |
| MTA Bus | <u>514.2</u> |
| Total | \$13,414.6 |

MTA management is reviewing the draft report. Once the report is finalized, MTA will decide, among other things, the amortization period of the liability (up to 30 years), the basis for amortizing (*i.e.*, level dollar or level percentage), and certain interest rate assumptions. The results of those decisions will be reflected in the first quarter 2007 unaudited financial statements which are expected to be released no later than July 2007. The final report may reflect a value that is higher or lower than the liability set forth in the preceding paragraph.

The Related Entities began making contributions to cover future OPEB expenses in 2006, though the contributions have not been segregated into irrevocable trust funds.

See “EMPLOYEES, LABOR RELATIONS AND PENSION AND OTHER POST-EMPLOYMENT OBLIGATIONS – OPEBS” in Part 5 of **Appendix A** for a more complete description of OPEB and the contributions made, and projected to be made, by the Related Entities.

PART I. SERIES 2007A BONDS

Part I of this official statement, together with the Summary of Terms, provides specific information about the Series 2007A Bonds.

APPLICATION OF PROCEEDS

MTA Bridges and Tunnels anticipates that the net proceeds of the Series 2007A Bonds (the principal amount thereof plus net original issue premium of \$4,980,767.95 and less certain financing, legal and miscellaneous expenses of \$3,335,767.95) in the amount of \$225,000,000 will be used to finance bridge and tunnel projects.

DESCRIPTION OF SERIES 2007A BONDS

General

Book-Entry-Only System. The Series 2007A Bonds will be issued as registered bonds, registered in the name of The Depository Trust Company or its nominee (together, DTC), New York, New York, which will act as securities depository for the Series 2007A Bonds. Individual purchases will be made in book-entry-only form, in the principal amount of \$5,000 or integral multiples thereof. So long as DTC is the registered owner of the Series 2007A Bonds, all payments on the Series 2007A Bonds will be made directly to DTC. DTC is responsible for disbursement of those payments to its participants, and DTC participants and indirect participants are responsible for making those payments to beneficial owners. See **Attachment 1** – “Book-Entry-Only System.”

Interest Payments. The Series 2007A Bonds will bear interest at the rates and mature in the amounts and on the dates shown on the inside cover of this official statement. Interest will be paid on each May 15 and November 15, beginning November 15, 2007. So long as DTC is the sole registered owner of all of the Series 2007A Bonds, all interest payments will be paid to DTC by wire transfer of immediately available funds, and payment of interest to beneficial owners will occur through the DTC Book-Entry-Only System.

Transfers and Exchanges. So long as DTC is the securities depository for the Series 2007A Bonds, it will be the sole registered owner of the Series 2007A Bonds, and transfers of ownership interests in the Series 2007A Bonds will occur through the DTC Book-Entry-Only System.

Trustee. U.S. Bank Trust National Association is Trustee and Paying Agent with respect to the Series 2007A Bonds.

Redemption Prior to Maturity

Mandatory Sinking Fund Redemption. The term bonds shown below are subject to mandatory sinking fund redemption, in part (in accordance with procedures of DTC, so long as DTC is the sole registered owner, and otherwise by lot in such manner as the Trustee in its discretion deems proper) on any November 15 on and after the first sinking fund installment date shown below at the principal amount thereof plus accrued interest up to but not including the date of redemption thereof, from mandatory Sinking Fund Installments that are required to be made in amounts sufficient to redeem on November 15 of each year the principal amount of such Series 2007A Bonds shown below:

| <u>2032 Term Bond</u> | | |
|----------------------------|---|---------------------------------------|
| | Sinking Fund Redemption Date <u>(November 15)</u> | Sinking Fund <u>Installment</u> |
| first payment | 2028 | \$ 6,255,000 |
| | 2029 | 9,265,000 |
| | 2030 | 9,725,000 |
| | 2031 | 10,215,000 |
| final maturity | 2032 | 10,725,000 |
| average life – 23.62 years | | |

| <u>2037 Term Bond</u> | | |
|----------------------------|---|---------------------------------------|
| | Sinking Fund Redemption Date <u>(November 15)</u> | Sinking Fund <u>Installment</u> |
| first payment | 2033 | \$11,260,000 |
| | 2034 | 11,825,000 |
| | 2035 | 12,415,000 |
| | 2036 | 13,035,000 |
| final maturity | 2037 | 13,685,000 |
| average life – 28.50 years | | |

Credit Toward Mandatory Sinking Fund Redemption. MTA Bridges and Tunnels may take credit toward mandatory Sinking Fund Installment requirements as follows, and if taken, thereafter reduce the amount of term Series 2007A Bonds of the same maturity and interest rate otherwise subject to mandatory Sinking Fund Installments on the date for which credit is taken:

- If MTA Bridges and Tunnels directs the Trustee to purchase term Series 2007A Bonds with money in the Debt Service Fund (at a price not greater than par plus accrued interest to the date of purchase), then a credit of 100% of the principal amount of bonds purchased will be made against the next Sinking Fund Installment due.
- If MTA Bridges and Tunnels purchases or redeems term Series 2007A Bonds with other available moneys, then the principal amount of those bonds will be credited against future Sinking Fund Installment requirements in any order, and in any annual amount, that MTA Bridges and Tunnels may direct.

Optional Redemption. The Series 2007A Bonds maturing on and after November 15, 2018 are subject to redemption prior to maturity on any date on and after November 15, 2017 at the option of MTA Bridges and Tunnels, in whole or in part (in accordance with procedures of DTC, so long as DTC is the sole registered owner, and otherwise by lot in such manner as the Trustee in its discretion deems proper) at 100% of the principal amount thereof, together with accrued interest thereon up to but not including the redemption date.

State and City Redemption. Pursuant to the MTA Bridges and Tunnels Act, the State or the City, upon providing sufficient funds, may require MTA Bridges and Tunnels to redeem the Series 2007A Bonds as a whole at the time and at the price and in accordance with the terms upon which the Series 2007A Bonds are otherwise redeemable.

Redemption Notices. So long as DTC is the securities depository for the Series 2007A Bonds, the Trustee must mail redemption notices to DTC at least 30, but not more than 45, days before the redemption date. If the Series 2007A Bonds are *not* held in book-entry-only form, then the Trustee must mail redemption notices directly to bondholders within the same time frame. A redemption of the Series 2007A Bonds is valid and effective even if DTC's procedures for notice should fail. Beneficial owners should consider arranging to receive redemption notices or other communications to DTC affecting them, including notice of interest payments through DTC participants. Any notice of optional redemption may state that it is conditional upon receipt by the Trustee of money sufficient to pay the Redemption Price or upon the satisfaction of any other condition, or that it may be rescinded upon the occurrence of any other event, and any conditional notice so given may be rescinded at any time before the payment of the Redemption Price if any such condition so specified is not satisfied or if any such other event occurs. **Please note that all redemptions are final - even if beneficial owners did not receive their notice, and even if that notice had a defect.**

Effect of Call for Redemption. If the Trustee gives an unconditional notice of redemption, then on the redemption date the Series 2007A Bonds called for redemption will become due and payable. If the Trustee gives a conditional notice of redemption and holds money to pay the redemption price of the affected Series 2007A Bonds, then on the redemption date the Series 2007A Bonds called for redemption will become due and payable. In either case, if on the redemption date the Trustee holds money to pay the Series 2007A Bonds called for redemption, thereafter, no interest will accrue on those Series 2007A Bonds, and a bondholder's only right will be to receive payment of the redemption price upon surrender of those Series 2007A Bonds.

Debt Service on the Bonds

Table 1 on the next page sets forth, on a cash basis, the debt service on the outstanding Bonds, estimated debt service on the Series 2007A Bonds, and the aggregate senior lien debt service on all Bonds to be outstanding after the issuance of the Series 2007A Bonds. **Table 1** does not include debt service on the subordinate bonds.

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Table 1

**Aggregate Senior Lien Debt Service
(in thousands)⁽¹⁾**

| Year Ending December 31 | Outstanding Bonds ⁽²⁾ | Series 2007A | | | Aggregate Debt Service ⁽³⁾ |
|----------------------------|-------------------------------------|------------------|------------------|------------------|--|
| | | Principal | Interest | Total | |
| 2007 | \$ 308,880 | \$ 0 | \$ 4,322 | \$ 4,322 | \$ 313,202 |
| 2008 | 308,799 | 3,640 | 10,730 | 14,370 | 323,169 |
| 2009 | 308,680 | 3,785 | 10,584 | 14,369 | 323,050 |
| 2010 | 308,992 | 3,940 | 10,433 | 14,373 | 323,365 |
| 2011 | 308,891 | 4,095 | 10,275 | 14,370 | 323,261 |
| 2012 | 308,760 | 4,270 | 10,101 | 14,371 | 323,132 |
| 2013 | 308,708 | 4,440 | 9,931 | 14,371 | 323,079 |
| 2014 | 307,502 | 4,620 | 9,753 | 14,373 | 321,875 |
| 2015 | 307,384 | 4,850 | 9,522 | 14,372 | 321,756 |
| 2016 | 307,269 | 5,055 | 9,316 | 14,371 | 321,639 |
| 2017 | 307,562 | 5,265 | 9,107 | 14,372 | 321,935 |
| 2018 | 307,405 | 5,490 | 8,884 | 14,374 | 321,778 |
| 2019 | 307,312 | 5,720 | 8,650 | 14,370 | 321,682 |
| 2020 | 307,594 | 6,005 | 8,364 | 14,369 | 321,964 |
| 2021 | 307,442 | 6,305 | 8,064 | 14,369 | 321,811 |
| 2022 | 307,305 | 6,625 | 7,749 | 14,374 | 321,678 |
| 2023 | 308,835 | 6,955 | 7,417 | 14,372 | 323,207 |
| 2024 | 307,424 | 7,265 | 7,104 | 14,369 | 321,793 |
| 2025 | 307,327 | 7,630 | 6,741 | 14,371 | 321,698 |
| 2026 | 307,584 | 8,010 | 6,360 | 14,370 | 321,953 |
| 2027 | 307,627 | 8,410 | 5,959 | 14,369 | 321,996 |
| 2028 | 307,501 | 8,830 | 5,539 | 14,369 | 321,870 |
| 2029 | 307,375 | 9,265 | 5,108 | 14,373 | 321,747 |
| 2030 | 307,521 | 9,725 | 4,644 | 14,369 | 321,890 |
| 2031 | 307,377 | 10,215 | 4,158 | 14,373 | 321,750 |
| 2032 | 278,164 | 10,725 | 3,647 | 14,372 | 292,536 |
| 2033 | 21,742 | 11,260 | 3,111 | 14,371 | 36,113 |
| 2034 | 21,755 | 11,825 | 2,548 | 14,373 | 36,128 |
| 2035 | 21,768 | 12,415 | 1,957 | 14,372 | 36,139 |
| 2036 | 0 | 13,035 | 1,336 | 14,371 | 14,371 |
| 2037 | 0 | 13,685 | 684 | 14,369 | 14,369 |
| Total | <u>\$8,040,485</u> | <u>\$223,355</u> | <u>\$212,098</u> | <u>\$435,453</u> | <u>\$8,475,937</u> |

⁽¹⁾ Totals may not add due to rounding.

⁽²⁾ Includes the following variable rate assumptions for debt service: Series 2001B, Series 2001C and Series 2002C – assumed net payments made by MTA Bridges and Tunnels under the respective swap agreements relating thereto and a variable interest rate of 4% per annum thereafter; and Series 2002F, Series 2003B and Series 2005A – assumed variable interest rate of 4% per annum. Debt service payable on January 1 of each year is included in the prior year's debt service; Series 2005B – assumes interest at a rate of 3.513% per annum based on the related interest rate swaps through January 1, 2012 and 3.076% per annum based on the related interest rate swaps from January 1, 2012 through final maturity.

⁽³⁾ Includes the assumptions set forth in footnotes 1 and 2.

PART II. SOURCES OF PAYMENT AND SECURITY FOR THE BONDS

Part II of this official statement describes the sources of payment and security for all Bonds, including the Series 2007A Bonds.

SOURCES OF PAYMENT

MTA Bridges and Tunnels receives its revenues from all tolls, rates, fees, charges, rents, proceeds of use and occupancy insurance on any portion of its tunnels, bridges and other facilities, including the net revenues of the Battery Parking Garage, and MTA Bridges and Tunnels' receipts from those sources, after payment of MTA Bridges and Tunnels' operating expenses, are pledged to the holders of the Bonds for payment, as described below.

The following 7 bridges and 2 tunnels constitute MTA Bridges and Tunnels Facilities for purposes of the Senior Bridges and Tunnels Resolution:

- Triborough Bridge,
- Verrazano-Narrows Bridge,
- Bronx-Whitestone Bridge,
- Throgs Neck Bridge,
- Henry Hudson Bridge,
- Marine Parkway-Gil Hodges Memorial Bridge,
- Cross Bay Veterans Memorial Bridge,
- Brooklyn-Battery Tunnel, and
- Queens Midtown Tunnel.

MTA Bridges and Tunnels is required to fix and collect tolls for the MTA Bridges and Tunnels Facilities, and MTA Bridges and Tunnels' power to establish toll rates is not subject to the approval of any governmental entity. For more information relating to MTA Bridges and Tunnels' power to establish tolls, see **Appendix A – "RIDERSHIP AND FACILITIES USE – Toll Rates."**

For more detailed information about MTA Bridges and Tunnels' tolls, see "History and Projection of Traffic, Toll Revenues and Expenses and Review of Physical Conditions of the Facilities of Triborough Bridge and Tunnel Authority" attached hereto as **Attachment 4**. Readers should understand that the projections set forth in the Independent Engineers' report have been developed based upon methodologies and using assumptions that may be different than the methodologies and assumptions used by MTA Bridges and Tunnels in connection with preparing the 2007-2010 Financial Plan. Consequently, the projections set forth in the Independent Engineers' report and in the 2007-2010 Financial Plan may differ. Investors should read the Independent Engineers' report in its entirety.

Copies of TBTA's audited financial statements for the years ended December 31, 2006 and 2005 are included herein by specific cross-reference.

From time to time legislation has been introduced by various State legislators seeking, among other things, to restrict the level of tolls on certain of MTA Bridges and Tunnels' Facilities, to require approval of future toll increases by the Governor, or to eliminate minimum tolls or to require discounts or free passage to be accorded to certain users of MTA Bridges and Tunnels' Facilities. Under the MTA Bridges and Tunnels Act, however, the State has covenanted to holders of MTA Bridges and Tunnels' bonds that it will not limit or alter the rights vested in MTA Bridges and Tunnels to establish and collect such charges and tolls as may be convenient or necessary to produce sufficient revenue to fulfill the terms of any agreements made with the holders of MTA Bridges and Tunnels bonds or in any way to impair rights and remedies of those bondholders.

Table 2 sets forth, by MTA Bridges and Tunnels Facility, the amount of revenues for each of the last 5 years, as well as operating expenses.

Table 2
MTA Bridges and Tunnels
Historical Revenues, Certain Operating Expenses⁽¹⁾ and Senior Lien Debt Service
(in thousands)

| | Years Ended December 31, | | | | |
|--|--------------------------|--------------------|--------------------|--------------------|--------------------|
| | <u>2002</u> | <u>2003</u> | <u>2004</u> | <u>2005</u> | <u>2006</u> |
| Bridge and Tunnel Revenues: | | | | | |
| Triborough Bridge | \$208,905 | \$222,224 | \$247,937 | \$280,516 | \$288,301 |
| Verrazano-Narrows Bridge | 216,312 | 233,482 | 246,322 | 267,276 | 274,100 |
| Bronx-Whitestone Bridge | 160,730 | 175,393 | 187,231 | 188,808 | 186,384 |
| Throgs Neck Bridge | 157,988 | 172,603 | 184,338 | 210,242 | 223,756 |
| Henry Hudson Bridge | 34,045 | 37,744 | 40,149 | 43,920 | 44,901 |
| Marine Parkway-Gil Hodges Memorial Bridge | 8,938 | 9,694 | 10,102 | 11,234 | 11,536 |
| Cross Bay Veterans' Memorial Bridge | 8,471 | 8,993 | 9,477 | 10,988 | 11,630 |
| Queens Midtown Tunnel | 88,865 | 99,994 | 107,067 | 121,666 | 127,075 |
| Brooklyn-Battery Tunnel | <u>48,880</u> | <u>61,810</u> | <u>64,365</u> | <u>70,294</u> | <u>73,868</u> |
| Total Bridge and Tunnel Revenues: | \$933,134 | \$1,021,937 | \$1,096,988 | \$1,204,944 | \$1,241,551 |
| Investment Income and Other ⁽²⁾ | <u>27,757</u> | <u>87,743</u> | <u>38,376</u> | <u>60,102</u> | <u>31,603</u> |
| Total Revenues | \$960,891 | \$1,109,680 | \$1,135,364 | \$1,265,046 | \$1,273,154 |
| Operating Expenses ⁽¹⁾ | | | | | |
| Personnel Costs | \$140,967 | \$159,976 | \$158,403 | \$173,549 | \$183,268 |
| Maintenance and Other Operating Expenses | <u>159,229</u> | <u>169,041</u> | <u>160,812</u> | <u>170,123</u> | <u>169,642</u> |
| Total Operating Expenses | \$300,196 | \$329,017 | \$319,215 | \$343,672 | \$352,910 |
| Net Revenues Available for Debt Service | \$660,695 | \$780,663 | \$816,149 | \$921,374 | \$920,244 |
| Senior Lien Debt Service⁽³⁾ | \$349,478 | \$206,946 | \$251,139 | \$284,462 | \$300,450 |
| Senior Lien Coverage | 1.89x | 3.77x | 3.25x | 3.24x | 3.06x |

(1) Excludes depreciation.

(2) Includes the net revenues from the Battery Parking Garage, as well as E-ZPass administrative fees and miscellaneous other revenues. Investment earnings include interest earned on bond funds, including debt service and debt service reserve funds, that were applied to the payment of debt service as follows for the years 2002 through 2006, respectively: \$6.403 million; \$11.863 million; \$4.048 million; \$5.578 million; and \$5.044 million. The amounts set forth in this footnote, as well as all of **Table 2**, are derived from MTA Bridges and Tunnels' audited financial statements for the years 2002 through 2006.

(3) For the year 2002, includes debt service on the senior bonds refunded under the debt restructuring until the date of defeasance thereof.

The following should be noted in **Table 2** and the following **Table 3**:

- Bridge and Tunnel Revenues – In 2003, crossing charges were increased effective May 18, 2003. In 2005, crossing charges were increased effective March 13, 2005.
- Investment Income and Other – For 2003, other income includes non-recurring revenues of \$37 million in security reimbursements and \$24.6 million in World Trade Center insurance settlement proceeds allocable to MTA Bridges and Tunnels. For 2005, other income includes \$25.9 million in security reimbursements and \$9.5 million relating to the \$1 per month account maintenance fees that MTA Bridges and Tunnels imposed on all E-ZPass subscribers effective July 1, 2005. Legislation enacted with the State’s budget for State Fiscal Year 2006-07 prevents MTA Bridges and Tunnels from charging that fee effective June 1, 2006. Prior to 2006, MTA Bridges and Tunnels was reimbursed for security expenses by MTA Headquarters. Since these are ongoing expenses, all security programs were included in MTA Bridges and Tunnels’ baseline Financial Plan beginning in 2006, thus eliminating the need for reimbursement.
- Operating Expenses—Personnel Costs – The 2002 results reflect certain additional expenses incurred after the terrorist attack to provide additional security at all facilities. The 2003 increase in personnel costs was caused by additional expenditures for security staff, worker’s compensation adjustments and health and welfare benefits rate increases. 2004 personnel costs were marginally lower. The 2005 increase in personnel costs was caused by worker’s compensation and pension cost adjustments. The 2006 increase in personnel costs was caused by increases in salaries and wages, health and welfare, and pension costs.
- Operating Expenses—Maintenance and Other Operating Expenses – In 2003, the following major costs were more than in 2002: major maintenance (consisting of additional roadway and standpipe repair on the Verrazano) – \$9.1 million; and bridge painting – \$6.3 million. In 2004, non-labor expenses were 4.5% lower than in 2003 due to a decrease in the required number of E-ZPass tag purchases. In 2005, major maintenance and bridge painting were more than in 2004.
- Total Debt Service (Senior) – The significant decline in senior debt service between 2002 and 2003 reflects the effects of the debt restructuring.

Table 3 sets forth certain revenues and expenses, including debt service, relating to MTA Bridges and Tunnels’ (1) results of operations for 2006 (audited) and (2) 2007 budget. The projection of estimated revenues set forth in the report by MTA Bridges and Tunnels’ Independent Engineers (which is attached hereto as **Attachment 4**) is different from that set forth in the 2007 budget as the projection is based upon conclusions formed independently based upon their own methodology and assumptions. Investors should read the Independent Engineers’ report in its entirety.

Table 3
MTA Bridges and Tunnels
Audited 2006 and 2007 Budget Comparisons
(in thousands)

| | Years Ended December 31, <u>2006</u> | 2007 (budgeted) |
|---|---|---------------------------|
| Total Bridge and Tunnel Revenues: | \$1,241,551 | \$1,236,873 |
| Investment Income and Other ⁽¹⁾ | <u>31,603</u> | <u>11,758</u> |
| Total Revenues | <u>\$1,273,154</u> | <u>\$1,248,631</u> |
| Operating Expenses ⁽²⁾ | | |
| Personnel Costs (net of reimbursements) ⁽³⁾ | \$183,268 | \$ 192,765 |
| Maintenance and Other Operating Expenses ⁽⁴⁾ | <u>169,642</u> | <u>215,040</u> |
| Total Operating Expenses | <u>\$352,910</u> | <u>\$407,805</u> |
| Net Revenues Available for Debt Service | \$920,244 | \$840,826 |
| Senior Lien Debt Service | \$300,450 | \$309,275 |
| Senior Lien Coverage | 3.06x | 2.72x |

⁽¹⁾ Includes the net revenues from the Battery Parking Garage, E-ZPass administrative fees through May 2006, and miscellaneous other revenues. Investment earnings include interest earned on bond funds, including debt service and debt service reserve funds, that were applied to the payment of debt service for the year 2006 in the amount of \$5.044 million. The amounts set forth in this footnote relating to 2006 are derived from MTA Bridges and Tunnels' audited financial statements. The decrease between 2006 and 2007 is in part due to the elimination of the monthly E-ZPass administrative fee effective June 1, 2006 – the comparable 2006 Investment Income and Other revenues includes the monthly fees (approximately \$10 - \$11 million) collected through May 31, 2006.

⁽²⁾ Excludes depreciation.

⁽³⁾ For 2006 and 2007, includes regular and overtime salaries and fringe benefits, less capitalized personnel reimbursements.

⁽⁴⁾ Increases in budgeted 2007 expenses include non-recurring Customer Service Center contract expenses of approximately \$21 million associated with the transition to a new contract.

SECURITY

General Revenue Bonds are general obligations of MTA Bridges and Tunnels payable solely from the trust estate (described below) pledged for the payment of the Bonds and Parity Debt pursuant to the terms of the Senior Bridges and Tunnels Resolution, after the payment of Operating Expenses. Summaries of certain provisions of the Senior Bridges and Tunnels Resolution, including the Standard Resolution Provisions, are included by specific cross-reference herein.

General Revenue Bonds are not a debt of the State or The City of New York, or any local governmental unit. MTA Bridges and Tunnels has no taxing power.

Pledge Effected by the Senior Bridges and Tunnels Resolution

The Bonds and Parity Debt issued in accordance with the Senior Bridges and Tunnels Resolution are secured by a net pledge of Revenues after the payment of Operating Expenses.

Pursuant to, and in accordance with, the Senior Bridges and Tunnels Resolution, MTA Bridges and Tunnels has pledged to the holders of the Bonds a “trust estate,” which consists of

- Revenues,
- the proceeds from the sale of the Bonds, and
- all funds, accounts and subaccounts established by the Senior Bridges and Tunnels Resolution (except those established by a supplemental obligation resolution for variable interest rate obligations, put obligations, parity debt, subordinated contract obligations or subordinated debt).

Revenues and Additional MTA Bridges and Tunnels Projects

Revenues from MTA Bridges and Tunnels Facilities. For purposes of the pledge under the Senior Bridges and Tunnels Resolution, revenues of MTA Bridges and Tunnels generally include all tolls, revenues, rates, fees, charges, rents, proceeds of use and occupancy insurance on any portion of the MTA Bridges and Tunnels Facilities (including net revenues derived from the Battery Parking Garage) and of any other insurance which insures against loss of revenues therefrom payable to or for the account of MTA Bridges and Tunnels, and other income and receipts, as received by MTA Bridges and Tunnels directly or indirectly from any of MTA Bridges and Tunnels’ operations, including the ownership or operation of any MTA Bridges and Tunnels Facilities, subject to certain exceptions.

MTA Bridges and Tunnels does not currently derive any significant recurring Revenues from any sources other than the MTA Bridges and Tunnels Facilities and investment income. Income from the MTA Bridges and Tunnels Transit and Commuter Project (the transit and commuter systems) is not derived by or for the account of MTA Bridges and Tunnels; consequently, no revenues from any portion of the MTA Bridges and Tunnels Transit and Commuter Project are pledged to the payment of debt service on the Bonds.

For a discussion of other projects that MTA Bridges and Tunnels is authorized to undertake, see **Appendix A** – “TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY – *Authorized Projects of MTA Bridges and Tunnels.*”

Additional MTA Bridges and Tunnels Projects that can become MTA Bridges and Tunnels Facilities. If MTA Bridges and Tunnels is authorized to undertake another project, whether or not a bridge or tunnel, that project can become a MTA Bridges and Tunnels Facility for purposes of the Senior Bridges and Tunnels Resolution if it is designated as such by MTA Bridges and Tunnels and it satisfies, among others, the following conditions:

- an Authorized Officer certifies that either:
 - the Additional MTA Bridges and Tunnels Project has been in operation (whether or not by MTA Bridges and Tunnels) for a period of at least 12 months prior to the date of such designation, and

that for a period of any 12 consecutive calendar months out of the 18 calendar months preceding the date of designation, the Additional MTA Bridges and Tunnels Project Revenues derived from the operation of such Additional MTA Bridges and Tunnels Project exceeded the Operating Expenses; or

- the Additional MTA Bridges and Tunnels Project is in operation and, in such Authorized Officer's opinion, the Additional MTA Bridges and Tunnels Project Revenues to be derived from the operation of such Project will exceed the Operating Expenses for such Additional MTA Bridges and Tunnels Project during the first 12 months of operation; and
- an Authorized Officer certifies
 - as to the actual or anticipated Revenues and Operating Expenses of MTA Bridges and Tunnels for the applicable 12-month period; provided that,
 - the Revenues (adjusted up or down to reflect any new toll rate changes) and Operating Expenses shall be increased by the actual or anticipated Additional MTA Bridges and Tunnels Project Revenues and Operating Expenses of the Additional MTA Bridges and Tunnels Project for such 12-month period, and
 - the actual or anticipated Additional MTA Bridges and Tunnels Project Revenues (adjusted up or down to reflect any new toll rate changes) and Operating Expenses of any Additional MTA Bridges and Tunnels Project operated by or under lease from MTA Bridges and Tunnels otherwise than as an Additional MTA Bridges and Tunnels Project during any part of the period shall be calculated as if the definitions of Revenues and Operating Expenses had been applicable thereto, and
 - that for such 12-month period, the Revenues less Operating Expenses, as calculated in accordance with the preceding bullet points, are at least equal to 1.40 times Maximum Annual Calculated Debt Service during such period; and
- an Independent Engineer certifies that, for each of 5 successive 12-month periods, the earliest of which begins on a calendar quarterly date not more than 60 days immediately following the date of designation as an Additional MTA Bridges and Tunnels Project, the Net Revenues in each 12-month period (after giving effect to such designation) will be at least equal to 1.40 times the Maximum Calculated Debt Service for each of such successive 12-month periods.

For a more complete description of the requirements that must be satisfied before designation as an Additional MTA Bridges and Tunnels Facility, see "SUMMARY OF CERTAIN PROVISIONS OF THE SENIOR BRIDGES AND TUNNELS RESOLUTION – Additional TBTA Facilities" included by specific cross-reference herein.

The Convention Center Project is not and cannot become an Additional MTA Bridges and Tunnels Project, and no Bonds may be issued under the Senior Bridges and Tunnels Resolution to finance the Convention Center Project.

Flow of Revenues

The Senior Bridges and Tunnels Resolution establishes the following funds and accounts, each held by MTA Bridges and Tunnels:

- Revenue Fund,
- Proceeds Fund,
- Debt Service Fund, and
- General Fund.

Under the Senior Bridges and Tunnels Resolution, MTA Bridges and Tunnels is required to pay into the Revenue Fund all Revenues as and when received and available for deposit.

MTA Bridges and Tunnels is required to pay out from the Revenue Fund, on or before the 25th day of each calendar month, the following amounts in the following order of priority:

- payment of reasonable and necessary Operating Expenses or accumulation in the Revenue Fund as a reserve (i) for working capital, (ii) for such Operating Expenses the payment of which is not immediately required, including amounts determined by MTA Bridges and Tunnels to be required as an operating reserve, or (iii) deemed necessary or desirable by MTA Bridges and Tunnels to comply with orders or rulings of an agency or regulatory body having lawful jurisdiction;
- transfer to the Debt Service Fund, the amount, if any, required so that the balance in the fund is equal to Accrued Debt Service to the last day of the current calendar month; provided, however, that in no event shall the amount to be so transferred be less than the amount required for all payment dates occurring prior to the 25th day of the next succeeding calendar month;
- transfer to another person for payment of, or accrual for payment of, principal of and interest on any Subordinated Indebtedness or for payment of amounts due under any Subordinated Contract Obligations; and
- transfer to the General Fund any remaining amount.

All amounts paid out by MTA Bridges and Tunnels for an authorized purpose (excluding transfers to any other pledged Fund or Account), or withdrawn from the General Fund in accordance with the Senior Bridges and Tunnels Resolution, are free and clear of the lien and pledge created by the Senior Bridges and Tunnels Resolution.

Under the Senior Bridges and Tunnels Resolution, MTA is required to use amounts in the General Fund to make up deficiencies in the Debt Service Fund and the Revenue Fund, in that order. Subject to the preceding sentence and any lien or pledge securing Subordinated Indebtedness, the Senior Bridges and Tunnels Resolution authorizes MTA Bridges and Tunnels to release amounts in the General Fund to be paid to MTA Bridges and Tunnels free and clear of the lien and pledge created by the Senior Bridges and Tunnels Resolution.

MTA Bridges and Tunnels is required by law to transfer amounts released from the General Fund to MTA, and a statutory formula determines how MTA allocates that money between the transit and commuter systems.

Rate Covenant

Under the Senior Bridges and Tunnels Resolution, MTA Bridges and Tunnels is required at all times to establish, levy, maintain and collect, or cause to be established, levied, maintained and collected, such tolls, rentals and other charges in connection with the MTA Bridges and Tunnels Facilities as shall always be sufficient, together with other money available therefor (including the anticipated receipt of proceeds of sale of Obligations or other bonds, notes or other obligations or evidences of indebtedness of MTA Bridges and Tunnels that will be used to pay the principal of Obligations issued in anticipation of such receipt, but not including any anticipated or actual proceeds from the sale of MTA Bridges and Tunnels Facilities), to equal or exceed in each calendar year the greater of:

- an amount equal to the sum of amounts necessary in such calendar year
 - to pay all Operating Expenses of MTA Bridges and Tunnels, plus
 - to pay Calculated Debt Service, as well as the debt service on all Subordinated Indebtedness and all Subordinated Contract Obligations, plus
 - to maintain any reserve established by MTA Bridges and Tunnels pursuant to the Senior Bridges and Tunnels Resolution, in such amount as may be determined from time to time by MTA Bridges and Tunnels in its judgment, or

- an amount such that Revenues less Operating Expenses shall equal at least 1.25 times Calculated Debt Service on all senior lien Bonds for such calendar year.

For a more complete description of the rate covenant and a description of the minimum tolls that can be charged at the MTA Bridges and Tunnels Facilities, see “SUMMARY OF CERTAIN PROVISIONS OF THE SENIOR BRIDGES AND TUNNELS RESOLUTION – Rates and Fees” included by specific cross-reference herein.

Additional Bonds

Under the provisions of the Senior Bridges and Tunnels Resolution, MTA Bridges and Tunnels may issue one or more series of Additional Bonds on a parity with the Series 2007A Bonds and other Outstanding Bonds to provide for Capital Costs.

Certain Additional Bonds for MTA Bridges and Tunnels Facilities. MTA Bridges and Tunnels may issue Additional Bonds without satisfying any earnings or coverage test for the purpose of providing for Capital Costs relating to MTA Bridges and Tunnels Facilities for the purpose of keeping such MTA Bridges and Tunnels Facilities in good operating condition or preventing a loss of Revenues or Revenues after payment of Operating Expenses derived from such MTA Bridges and Tunnels Facilities.

Additional Bonds for Other Purposes. MTA Bridges and Tunnels may issue Additional Bonds to pay or provide for the payment of all or part of Capital Costs relating to any of the following purposes:

- MTA Bridges and Tunnels Transit and Commuter Project,
- any Additional MTA Bridges and Tunnels Project (that does not become a MTA Bridges and Tunnels Facility), or
- any MTA Bridges and Tunnels Facilities other than for the purposes set forth in the preceding paragraph.

In the case of Additional Bonds issued other than for the improvement, reconstruction or rehabilitation of MTA Bridges and Tunnels Facilities as described under the preceding heading, in addition to meeting certain other conditions, all as more fully described in “SUMMARY OF CERTAIN PROVISIONS OF THE SENIOR BRIDGES AND TUNNELS RESOLUTION – Special Provisions for Capital Cost Obligations” included by specific cross-reference herein, an Authorized Officer must certify that the historical Twelve Month Period Net Revenues are at least equal to 1.40 times the Maximum Annual Calculated Debt Service on all senior lien Bonds, including debt service on the Bonds to be issued.

Refunding Bonds

Bonds may be issued for the purpose of refunding Bonds if (a) the Maximum Annual Calculated Debt Service (including the refunding Bonds then proposed to be issued but not including the Bonds to be refunded) is equal to or less than the Maximum Annual Calculated Debt Service on the Bonds as calculated immediately prior to the refunding (including the refunded Bonds but not including the refunding Bonds) or (b) the conditions referred to above under Additional Bonds for the category of Bonds being refunded are satisfied.

For a more complete description of the conditions that must be satisfied before issuing refunding Bonds, see “SUMMARY OF CERTAIN PROVISIONS OF THE SENIOR BRIDGES AND TUNNELS RESOLUTION – Refunding Obligations” included by specific cross-reference herein.

Subordinate Obligations

The Senior Bridges and Tunnels Resolution authorizes the issuance or incurrence of subordinate obligations.

PART III. OTHER INFORMATION ABOUT THE SERIES 2007A BONDS

Part III of this official statement provides miscellaneous additional information relating to the Series 2007A Bonds.

TAX MATTERS

General

Hawkins Delafield & Wood LLP is Bond Counsel for the Series 2007A Bonds. Their opinion under existing law, relying on certain statements by MTA Bridges and Tunnels and assuming compliance by MTA Bridges and Tunnels with certain covenants, is that interest on the Series 2007A Bonds is:

- excluded from a bondholder's federal gross income under the Internal Revenue Code of 1986,
- not a preference item for a bondholder under the federal alternative minimum tax, and
- included in the adjusted current earnings of a corporation under the federal corporate alternative minimum tax.

Their opinion is also that under existing law interest on the Series 2007A Bonds is exempt from personal income taxes of New York State and any political subdivisions of the State, including The City of New York. See **Attachment 3** to this official statement for the form of the opinion that Bond Counsel expects to deliver when the Series 2007A Bonds are delivered.

The Internal Revenue Code imposes requirements on the Series 2007A Bonds that MTA Bridges and Tunnels must continue to meet after the Series 2007A Bonds are issued. These requirements generally involve the way that Series 2007A Bond proceeds must be used and invested. If MTA Bridges and Tunnels does not meet these requirements, it is possible that a bondholder may have to include interest on the Series 2007A Bonds in its federal gross income on a retroactive basis to the date of issue. MTA Bridges and Tunnels has covenanted to do everything necessary to meet the requirements of the Internal Revenue Code.

A bondholder who is a particular kind of taxpayer may also have additional tax consequences from owning the Series 2007A Bonds. This is possible if a bondholder is

- an S corporation,
- a United States branch of a foreign corporation,
- a financial institution,
- a property and casualty or a life insurance company,
- an individual receiving Social Security or railroad retirement benefits,
- an individual claiming the earned income credit or
- a borrower of money to purchase or carry the Series 2007A Bonds.

If a bondholder is in any of these categories, it should consult its tax advisor.

Bond Counsel is not responsible for updating its opinion in the future. It is possible that something may happen in the future that could change the tax treatment of the interest on the Series 2007A Bonds or affect the market price of the Series 2007A Bonds. For example, the Internal Revenue Code could be changed. See also "Miscellaneous" below in this heading.

Bond Counsel expresses no opinion on the effect of any action taken or not taken in reliance upon an opinion of other counsel on the federal income tax treatment of interest on the Series 2007A Bonds, or under State, local or foreign tax law.

Original Issue Discount

Each maturity of the Series 2007A Bonds will have “original issue discount” if the price first paid by the bondholders for a substantial amount of the Series 2007A Bonds is less than the principal amount of these Series 2007A Bonds. Bond Counsel’s opinion is that the original issue discount on these Series 2007A Bonds as it accrues is excluded from a bondholder’s federal gross income under the Internal Revenue Code. The tax accounting treatment of original issue discount is complex. It accrues on an actuarial basis and as it accrues a bondholder’s tax basis in these Series 2007A Bonds will be increased. Bond Counsel’s opinion is also that the original issue discount on these Series 2007A Bonds as it accrues is exempt from personal income taxes of New York State and its political subdivisions. If a bondholder owns one of these Series 2007A Bonds, it should consult its tax advisor regarding the tax treatment of original issue discount.

Bond Premium

If a bondholder purchases a Series 2007A Bond for a price that is more than the principal amount, generally the excess is “bond premium” on that Series 2007A Bond. The tax accounting treatment of bond premium is complex. It is amortized over time and as it is amortized a bondholder’s tax basis in that Series 2007A Bond will be reduced. The holder of a Series 2007A Bond that is callable before its stated maturity date may be required to amortize the premium over a shorter period, resulting in a lower yield on such Series 2007A Bonds. A bondholder in certain circumstances may realize a taxable gain upon the sale of a Series 2007A Bond with bond premium, even though the Series 2007A Bond is sold for an amount less than or equal to the owner’s original cost. If a bondholder owns any Series 2007A Bonds with bond premium, it should consult its tax advisor regarding the tax accounting treatment of bond premium.

Information Reporting and Backup Withholding

Information reporting requirements apply to interest paid on the Series 2007A Bonds. If the bondholder provides the entity from whom she receives interest payments (the “payor”) with a Form W-9, “Request for Taxpayer Identification Number and Certification”, or if the bondholder is one of a limited class of exempt recipients, including corporations, these requirements will be satisfied. Other bondholders will be subject to “backup withholding”; that is, the tax due from a bondholder with respect to any interest payment on the tax-exempt obligation will be deducted and withheld by the payor.

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 2007A Bonds under federal or state law and could affect the market price or marketability of the Series 2007A Bonds.

Prospective purchasers should be aware that the United States Supreme Court has agreed to review *Davis v. Dep’t. of Revenue of the Finance and Admin. Cabinet*, 197 S.W. 3d 557 (Ky. App. 2006), *cert. granted* 2007 U.S. LEXIS 5914 (May 21, 2007), a decision of a Kentucky appellate court, which held that provisions of Kentucky tax law that provided more favorable income tax treatment for holders of bonds issued by Kentucky municipal bond issuers than for holders of non-Kentucky municipal bonds violated the Commerce Clause of the United States Constitution. New York State statutes provide more favorable State and local income tax treatment for holders of bonds issued by the State of New York, its political subdivisions and public authorities, including the Series 2007A Bonds, than for bonds issued by other states and their political subdivisions. If the United States Supreme Court was to affirm the holding of the Kentucky appellate court, subsequent New York State judicial decisions or legislation designed to ensure the constitutionality of New York State tax law could, among other alternatives, adversely affect the New York State and local tax exemption of outstanding bonds, including the Series 2007A Bonds, to the extent constitutionally permissible, or result in the exemption from New York State and local income tax of interest on certain bonds issued by other states and their political subdivisions, either of which actions could affect the market price or marketability of the Series 2007A Bonds.

Prospective bondholders should consult their own tax advisors regarding the foregoing matters.

LEGALITY FOR INVESTMENT

The MTA Bridges and Tunnels Act provides that the Series 2007A Bonds are securities in which the following investors may properly and legally invest funds, including capital in their control or belonging to them:

- all public officers and bodies of the State and all municipalities and political subdivisions in the State,
- all insurance companies and associations and other persons carrying on an insurance business, all banks, bankers, trust companies, savings banks and savings 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 who may hereafter be authorized to invest in the obligations of the State.

Certain of those investors, however, may be subject to separate restrictions which limit or prevent their investment in the Series 2007A Bonds.

LITIGATION

There is no pending litigation concerning the Series 2007A Bonds.

MTA Bridges and Tunnels is the defendant in numerous claims and actions, including an action commenced (*Janes and Schwartz v. TBTA, MTA, Kalikow and Ascher*) alleging unfair treatment on toll collection policies at certain bridges. MTA Bridges and Tunnels does not believe that any of these claims and actions are material to MTA Bridges and Tunnels' ability to pay principal and interest on the Series 2007A Bonds. A summary of certain of these potentially material claims and actions is set forth in **Appendix A** – "LITIGATION – MTA Bridges and Tunnels," as that filing may be amended or supplemented to date.

FINANCIAL ADVISOR

Goldman, Sachs & Co. is MTA Bridges and Tunnels' financial advisor for the Series 2007A Bonds. The financial advisor has provided MTA Bridges and Tunnels advice on the plan of financing and reviewed the pricing of the Series 2007A Bonds. The financial advisor has not independently verified the information contained in this official statement and does not assume responsibility for the accuracy, completeness or fairness of such information. The financial advisor's fees for serving as financial advisor are contingent upon the issuance of the Series 2007A Bonds.

UNDERWRITING

The Underwriters for the Series 2007A Bonds, acting through Lehman Brothers Inc., as Representative, have jointly and severally agreed, subject to certain conditions, to purchase from MTA Bridges and Tunnels the Series 2007A Bonds described on the inside cover page of this official statement at an aggregate purchase price of \$227,178,982.72, reflecting a net original issue premium of \$4,980,767.95 and an Underwriters' discount of \$1,156,785.23, and to reoffer such Series 2007A Bonds at the public offering prices or yields set forth on the inside cover page.

The Series 2007A Bonds may be offered and sold to certain dealers (including dealers depositing such Series 2007A Bonds into investment trusts) at prices lower or yields higher than such public offering prices or yields and prices or 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 2007A Bonds if any Series 2007A Bonds are purchased.

RATINGS

The Summary of Terms identifies the ratings of the credit rating agencies that are assigned to the Series 2007A Bonds. Those ratings reflect only the views of the organizations assigning them. An explanation of the significance of the ratings from each identified agency may be obtained as follows:

| | | |
|---|---|---|
| Fitch Ratings One State Street Plaza New York, New York 10004 (212) 908-0500 | Moody's Investors Service, Inc. 99 Church Street New York, New York 10007 (212) 553-0300 | Standard & Poor's Ratings Services 55 Water Street New York, New York 10041 (212) 438-2000 |
|---|---|---|

MTA Bridges and Tunnels has furnished to each rating agency rating the bonds being offered information, including information not included in this official statement, about MTA Bridges and Tunnels and the bonds. Generally, rating agencies base their ratings on that information and on independent investigations, studies and assumptions made by each rating agency. There can be no assurance that ratings will continue for any given period of time or that they will not be revised downward or withdrawn entirely by a rating agency if, in the judgment of that rating agency, circumstances warrant the revision or withdrawal. Those circumstances may include, among other things, changes in or unavailability of information relating to MTA Bridges and Tunnels or the bonds. Any downward revision or withdrawal of a rating may have an adverse effect on the market price of the bonds.

LEGAL MATTERS

All legal proceedings in connection with the issuance of the bonds being offered are subject to the approval of the nationally-recognized bond counsel firm identified on the cover page and in the Summary of Terms. The form of the opinion of Bond Counsel is **Attachment 3** to this official statement.

Certain legal matters regarding MTA Bridges and Tunnels will be passed upon by its General Counsel. In addition, certain legal matters will be passed upon by counsel to the Underwriters as indicated in the Summary of Terms.

CONTINUING DISCLOSURE

As more fully stated in **Attachment 2**, MTA Bridges and Tunnels has agreed to provide certain financial information and operating data by no later than 120 days following the end of each fiscal year. That information is to include, among other things, information concerning MTA Bridges and Tunnels annual audited financial statements prepared in accordance with generally accepted accounting principles, or if unavailable, unaudited financial statements will be delivered until audited statements become available. MTA Bridges and Tunnels has undertaken to file such above information with each Nationally Recognized Municipal Securities Repository and a New York State Information Depository (the SID), if and when one is established.

MTA Bridges and Tunnels has further agreed to deliver notice to each repository or the Municipal Securities Rulemaking Board (MSRB) and to the SID of any failure to provide the Annual Information. MTA Bridges and Tunnels is also obligated to deliver notices of the following events, if material, to each repository, or to the MSRB or the SID:

- principal and interest delinquencies;
- non-payment related defaults;
- unscheduled draws on debt service reserves reflecting financial difficulties;
- unscheduled draws on credit enhancements reflecting financial difficulties;
- substitution of credit or liquidity providers, or their failure to perform;
- adverse tax opinions or events affecting the tax exempt status of the security;

- modifications to the rights of security holders;
- bond calls;
- defeasance;
- release, substitution, or sale of property securing repayment of the securities; and
- rating changes.

MTA Bridges and Tunnels has also contracted with Digital Assurance Corporation (DAC), a dissemination agent recognized as such by the SEC to perform certain of the foregoing functions. In addition, as described in **Attachment 2**, MTA may file its information with the Texas Municipal Advisory Council provided at www.disclosureusa.org.

MTA Bridges and Tunnels has not failed to comply, in any material respect, with any previous undertakings in a written contract or agreement specified in paragraph (b)(5)(i) of Rule 15c2-12 under the Securities Exchange Act of 1934, as amended.

FURTHER INFORMATION

MTA Bridges and Tunnels may place a copy of this official statement on MTA's website at "www.mta.info/mta/investor/index.html". No statement on the MTA's website or any other website is included by specific cross-reference herein.

Although MTA Bridges and Tunnels and MTA have prepared the information on the MTA's website for the convenience of those seeking that information, no decision in reliance upon that information should be made. Typographical or other errors may have occurred in converting the original source documents to their digital format, and MTA and MTA Bridges and Tunnels assume no liability or responsibility for errors or omissions contained on any website. Further, MTA and MTA Bridges and Tunnels disclaim any duty or obligation to update or maintain the availability of the information contained on any website or any responsibility or liability for any damages caused by viruses contained within the electronic files on any website. MTA Bridges and Tunnels and MTA also assume no liability or responsibility for any errors or omissions or for any updates to dated information contained on any website.

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

By: /s/ Kenneth C. Lind
Acting Director of Finance
Metropolitan Transportation Authority

ATTACHMENT 1
BOOK-ENTRY-ONLY SYSTEM

1. The Depository Trust Company (DTC), New York, NY, will act as securities depository for the Series 2007A Bonds. The Series 2007A Bonds 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 2007A Bond will be issued for each maturity of the Series 2007A Bonds, each in the aggregate principal amount of such maturity, and will be deposited with DTC. If, however, the aggregate principal amount of any maturity of the Series 2007A Bonds exceeds \$500 million, one Bond of such maturity will be issued with respect to each \$500 million of principal amount, and an additional Bond will be issued with respect to any remaining principal amount of such maturity.

2. 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 2.2 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, in turn, is owned by a number of Direct Participants of DTC and Members of the National Securities Clearing Corporation, Fixed Income Clearing Corporation, and Emerging Markets Clearing Corporation (NSCC, FICC, and EMCC, also subsidiaries of DTCC), as well as by the New York Stock Exchange, Inc., the American Stock Exchange LLC, and the National Association of Securities Dealers, Inc. 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 Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com and www.dtc.org.

3. Purchases of Series 2007A Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series 2007A Bonds on DTC's records. The ownership interest of each actual purchaser of each Series 2007A Bond (Beneficial Owner) is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Series 2007A Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in Series 2007A Bonds, except in the event that use of the book-entry system for the Series 2007A Bonds is discontinued.

4. To facilitate subsequent transfers, all Series 2007A Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Series 2007A Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Series 2007A Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Series 2007A Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

5. Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of Series 2007A Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Series 2007A Bonds, such as redemptions, tenders, defaults, and proposed amendments to the Series 2007A Bond documents. For example, Beneficial Owners of the Series 2007A Bonds may wish to ascertain that the nominee holding the Series 2007A Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of notices be provided directly to them.

6. Redemption notices shall be sent to DTC. If less than all of the Series 2007A Bonds of any maturity are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such maturity to be redeemed.

7. Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Series 2007A Bonds unless authorized by a Direct Participant in accordance with DTC's Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to TBTA as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts Series 2007A Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

8. Redemption proceeds and principal and interest payments on the Series 2007A Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detailed information from MTA Bridges and Tunnels or the Trustee, on 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 Trustee or MTA Bridges and Tunnels, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds and principal and interest payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of MTA Bridges and Tunnels or the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

9. DTC may discontinue providing its services as depository with respect to the Series 2007A Bonds at any time by giving reasonable notice to MTA Bridges and Tunnels or the Trustee. Under such circumstances, in the event that a successor depository is not obtained, certificates for the Series 2007A Bonds are required to be printed and delivered.

10. MTA Bridges and Tunnels may decide to discontinue use of the system of book-entry transfers through DTC (or a successor depository). In that event, certificates for the Series 2007A Bonds will be printed and delivered.

THE ABOVE INFORMATION CONCERNING DTC AND DTC'S BOOK-ENTRY SYSTEM HAS BEEN OBTAINED FROM SOURCES THAT MTA BRIDGES AND TUNNELS BELIEVES TO BE RELIABLE, BUT MTA BRIDGES AND TUNNELS TAKES NO RESPONSIBILITY FOR THE ACCURACY THEREOF.

ATTACHMENT 2

CONTINUING DISCLOSURE UNDER SEC RULE 15c2-12

In order to assist the Underwriters in complying with the provisions of Rule 15c2-12 under the Securities Exchange Act of 1934, as amended (“Rule 15c2-12”), MTA Bridges and Tunnels and the Trustee will enter into a written agreement (the “Disclosure Agreement”) for the benefit of holders of the Series 2007A Bonds to provide continuing disclosure. MTA Bridges and Tunnels will undertake to provide certain financial information and operating data by no later than 120 days after the end of each MTA Bridges and Tunnels fiscal year, commencing with the fiscal year ending December 31, 2007 (the “Annual Information”), and to provide notices of the occurrence of certain enumerated events, if material. The Annual Information will be filed by or on behalf of MTA Bridges and Tunnels with each Nationally Recognized Municipal Securities Information Repository (the “NRMSIRs”) and with the state information depository for the State, if and to the extent it shall have been established and shall be in existence and operating as a state information depository within the meaning of Rule 15c2-12 (the “State Depository”). Notices of material events will be filed by or on behalf of MTA Bridges and Tunnels with NRMSIRs or the Municipal Securities Rulemaking Board (the “MSRB”) and with the State Depository. The nature of the information to be provided in the Annual Information and the notices of material events is set forth below.

Pursuant to Rule 15c2-12, MTA Bridges and Tunnels will undertake for the benefit of holders of Series 2007A Bonds to provide or cause to be provided either directly or through the Trustee, audited financial statements by no later than 120 days after the end of each fiscal year commencing with the fiscal year ending December 31, 2007, when and if such audited financial statements become available and, if such audited financial statements are not available on the date which is 120 days after the end of a fiscal year, the unaudited financial statements for such fiscal year. MTA Bridges and Tunnels annual financial statements will be filed with each NRMSIR and the State Depository.

The required Annual Information will include at least the following:

1. information of the type included in **Appendix A** under the following captions:
 - a. “TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY – MTA Bridges and Tunnels Facilities,”
 - b. “TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY – Authorized Projects of MTA Bridges and Tunnels,”
 - c. “RIDERSHIP AND FACILITIES USE – MTA Bridges and Tunnels – Total Revenue Vehicles,”
 - d. “RIDERSHIP AND FACILITIES USE – Toll Rates,”
 - e. “RIDERSHIP AND FACILITIES USE – Competing Facilities and Other Matters,” and
 - f. “EMPLOYEES, LABOR RELATIONS AND PENSION OBLIGATIONS – MTA Bridges and Tunnels.”
2. information regarding the capital programs of MTA Bridges and Tunnels, as well as of related public authorities whose operating needs, financing activities and capital programs may have a material impact on the operations and financing activities of MTA Bridges and Tunnels,
3. a presentation of changes to indebtedness issued by MTA Bridges and Tunnels under both the Senior Bridges and Tunnels Resolution, as well as information concerning changes to MTA Bridges and Tunnels’ debt service requirements on such indebtedness payable from Revenues,
4. historical information concerning traffic, revenues, operating expenses, Senior Bridges and Tunnels Resolution debt service and debt service coverage of the type included in this Official Statement in **Table 2**,
5. material litigation related to any of the foregoing, and
6. such narrative explanation as may be necessary to avoid misunderstanding and to assist the reader in understanding the presentation of financial information and operating data concerning, and in judging the financial condition of, MTA Bridges and Tunnels.

All or any portion of the Annual Information as well as required audited financial statements may be incorporated therein by specific reference to any other documents which have been filed with (a) the NRMSIRs and the State Depository or (b) the Securities and Exchange Commission; provided, however, that if the document is an official statement, it shall have been filed with the MSRB and need not have been filed elsewhere. Annual Information for any fiscal year containing any amended operating data or financial information for such fiscal year shall explain, in narrative form, the reasons for such amendment and the impact of the change on the type of operating data or financial information in the Annual Information being provided for such fiscal year. If a change in accounting principles is included in any such amendment, such information shall present a comparison between the financial statements or information prepared on the basis of the amended accounting principles and those prepared on the basis of the former accounting principles. Such comparison shall include a qualitative discussion of the differences in the accounting principles and the impact of the change in the accounting principles on the presentation of the financial information. To the extent feasible, such comparison shall also be quantitative. A notice of any such change in accounting principles shall be sent to each NRMSIR or to the MSRB, and to the State Depository.

MTA Bridges and Tunnels will undertake, for the benefit of holders of the Series 2007A Bonds, to provide or cause to be provided:

1. to each NRMSIR or to the MSRB and to the State Depository, in a timely manner, notice of any of the events listed under the heading "CONTINUING DISCLOSURE" in this official statement with respect to the Series 2007A Bonds, if material, and
2. to each NRMSIR or to the MSRB, and to the State Depository, in a timely manner, notice of a failure to provide any Annual Information required by such undertaking or any required audited financial statements.

The Disclosure Agreement provides that if any party to the Disclosure Agreement fails to comply with any provisions of its undertaking described herein, then any holder of the Series 2007A Bonds (which will include beneficial owners during any period that DTC acts as securities depository for, and DTC or its nominee is the registered owner of, the Series 2007A Bonds) may enforce, for the equal benefit and protection of all holders similarly situated, by mandamus or other suit or proceeding at law or in equity, the undertaking against such party and any of its officers, agents and employees, and may compel such party or any of its officers, agents or employees to perform and carry out their duties thereunder; provided that the sole and exclusive remedy for breach under the undertaking is an action to compel specific performance, and no person or entity, including any holder of Series 2007A Bonds, may recover monetary damages thereunder under any circumstances, and provided further that any challenge to the adequacy of any information under the undertaking may be brought only by the Trustee or the holders of 25 percent in aggregate principal amount of the Series 2007A Bonds at the time Outstanding which are affected thereby. Each of MTA Bridges and Tunnels and the Trustee reserves the right, but shall not be obligated to, enforce the obligations of the others. Failure to comply with any provisions of the undertaking shall not constitute a default under the Senior Bridges and Tunnels Resolution nor give right to the Trustee or any Bondholder to exercise any remedies under the Senior Bridges and Tunnels 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 undertaking 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 is 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 MTA Bridges and Tunnels' 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. MTA Bridges and Tunnels does not anticipate that it often will be necessary to amend the undertaking. The undertaking, however, may be amended or modified under certain circumstances set forth therein and the undertaking will continue until the earlier of the date the Series 2007A Bonds have been paid in full or legally defeased pursuant to the Senior Bridges and Tunnels Resolution or the date the undertaking is no longer required by law. Copies of the undertaking when executed by the parties will be on file at the office of MTA Bridges and Tunnels.

MTA Bridges and Tunnels may satisfy its obligations to file any notice, document or information with a NRMSIR or SID (i) solely by transmitting such filing to the Texas Municipal Advisory Council (the MAC) as provided at <http://www.disclosureusa.org> unless the SEC has withdrawn the interpretive advice in its letter to the MAC dated September 7, 2004, or (ii) by filing the same with any dissemination agent, including any “central post office” or similar entity, assuming or charged with responsibility for accepting notices, documents or information for transmission to such NRMSIR or SID, to the extent permitted or required by the SEC. For this purpose, permission shall be deemed to have been granted by the SEC if and to the extent the agent has received a “no action” letter, which has not been revoked, from the SEC to the effect that enforcement action would not be recommended on account of using the agent, and not such NRMSIR or SID, as the source of information in determining compliance with the Rule.

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**ATTACHMENT 3
FORM OF OPINION OF BOND COUNSEL**

Upon delivery of the Series 2007A Bonds in definitive form, Hawkins Delafield & Wood LLP, New York, New York, Bond Counsel to TBTA, proposes to render its final approving opinion in substantially the following form:

[Date of Closing]

Triborough Bridge and Tunnel Authority
New York, New York

Ladies and Gentlemen:

We have examined a certified copy of the record of proceedings of the Triborough Bridge and Tunnel Authority (the "TBTA") and other proofs submitted to us relative to the issuance of \$223,355,000 aggregate principal amount of Triborough Bridge and Tunnel Authority General Revenue Bonds, Series 2007A (the "Series 2007A Bonds").

All terms defined in the Resolution (hereinafter defined) and used herein shall have the respective meanings assigned in the Resolution, except where the context hereof otherwise requires.

The Series 2007A Bonds are issued under and pursuant to the Constitution and statutes of the State of New York (the "State"), including the Triborough Bridge and Tunnel Authority Act, being Title 3 of Article 3 of the Public Authorities Law, Chapter 43-A of the Consolidated Laws of the State of New York, as amended to the date of this opinion letter (herein called the "Issuer Act"), and under and pursuant to proceedings of TBTA duly taken, including a resolution adopted by the members of TBTA on March 26, 2002 entitled "General Resolution Authorizing General Revenue Obligations", as supplemented by a resolution of said members adopted on January 31, 2007 (collectively, the "Resolution").

The Series 2007A Bonds are dated, mature, are payable, bear interest and are subject to redemption, all as provided in the Resolution.

The Internal Revenue Code of 1986, as amended (the "Code"), establishes certain requirements that must be met subsequent to the issuance and delivery of the Series 2007A Bonds in order that interest on the Series 2007A Bonds be and remain excluded from gross income for federal income tax purposes under Section 103 of the Code. We have examined the Arbitrage and Use of Proceeds Certificate of the TBTA, dated the date hereof (the "Arbitrage and Use of Proceeds Certificate"), in which the TBTA has made representations, statements of intention and reasonable expectation, certifications of fact and covenants relating to the federal tax status of interest on the Series 2007A Bonds, including, but not limited to, certain representations with respect to the use of the proceeds of the Series 2007A Bonds and the investment of certain funds. The Arbitrage and Use of Proceeds Certificate obligates the TBTA to take certain actions necessary to cause interest on the Series 2007A Bonds to be excluded from gross income pursuant to Section 103 of the Code. Noncompliance with the requirements of the Code could cause interest on the Series 2007A Bonds to be included in gross income for federal income tax purposes retroactive to the date of issuance, irrespective of the date on which such noncompliance occurs or is ascertained. The TBTA has covenanted in the Resolution to maintain the exclusion of the interest on the Series 2007A Bonds from gross income for federal income tax purposes pursuant to Section 103(a) of the Code.

In rendering the opinion in paragraph 5 hereof, we have relied upon and assumed (i) the material accuracy of the representations, statements of intention and reasonable expectation and certifications of fact contained in the Arbitrage and Use of Proceeds Certificate with respect to matters affecting the exclusion of interest on the Series 2007A Bonds from gross income for federal income tax purposes under Section 103 of the Code and (ii) compliance by the TBTA with procedures and covenants set forth in the Arbitrage and Use of Proceeds Certificate as to such tax matters.

We have also examined one of said Series 2007A Bonds as executed and, in our opinion, the form of said Series 2007A Bond and its execution are regular and proper.

We are of the opinion that:

1. TBTA is duly created and validly existing under the laws of the State, including the Constitution of the State and the Issuer Act.

2. TBTA has the right and power under the Issuer Act to adopt the Resolution. The Resolution has been duly and lawfully adopted by TBTA, is in full force and effect, is valid and binding upon TBTA, and is enforceable in accordance with its terms, and no other authorization for the Resolution is required. The Resolution creates the valid pledge which it purports to create of the Trust Estate, subject only to the provisions of the Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the Resolution.

3. The Series 2007A Bonds have been duly and validly authorized and issued in accordance with the laws of the State, including the Constitution of the State and the Issuer Act, and in accordance with the Resolution, and are valid and binding direct and general obligations of TBTA, enforceable in accordance with their terms and the terms of the Resolution, payable solely from the Trust Estate as provided in the Resolution, and are entitled to the benefits of the Issuer Act and the Resolution. TBTA has no taxing power and the Series 2007A Bonds are not debts of the State or of any other political subdivision thereof. TBTA reserves the right to issue additional Obligations and to incur Parity Debt on the terms and conditions, and for the purposes, provided in the Resolution, on a parity as to security and payment with the Series 2007A Bonds.

4. The Series 2007A Bonds are securities in which all public officers and bodies of the State and all municipalities and political subdivisions, all insurance companies and associations and other persons carrying on an insurance business, all banks, bankers, trust companies, savings banks and savings 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 who are or may 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 to the extent that the legality of such investment is governed by the laws of the State; and which may be deposited with and shall be received by all public officers and bodies of the State and all municipalities and political subdivisions for any purpose for which the deposit of bonds or other obligations of the State is or may be authorized.

5. Under existing statutes and court decisions (i) interest on the Series 2007A Bonds is excluded from gross income for federal income tax purposes pursuant to Section 103 of the Code, and (ii) interest on the Series 2007A Bonds 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.

6. Under existing statutes, interest on the Series 2007A Bonds is exempt from personal income taxes imposed by the State or any political subdivision thereof.

The opinions expressed in paragraphs 2 and 3 above are subject to applicable bankruptcy, insolvency, reorganization, moratorium and other laws heretofore or hereafter enacted affecting creditors' rights and are subject to the application of principles of equity relating to or affecting the enforcement of contractual obligations, whether such enforcement is considered in a proceeding in equity or at law.

Except as stated in paragraphs 5 and 6, we express no opinion regarding any other federal, state, local or foreign tax consequences with respect to the Series 2007A Bonds. We express 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 2007A Bonds, or under state, local and foreign tax law.

We express no opinion as to the accuracy or sufficiency of any financial or other information which has been or will be supplied to purchasers of the Series 2007A Bonds.

This opinion letter 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 letter is issued as of the date hereof, and we assume no obligation to update, revise or supplement this opinion letter to reflect any future actions, 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 reason whatsoever.

Very truly yours,

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ATTACHMENT 4
URS REPORT

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**HISTORY AND PROJECTION OF
TRAFFIC, TOLL REVENUES
AND EXPENSES**

and

Review of Physical Conditions

OF THE FACILITIES OF

Triborough Bridge and Tunnel Authority

June 1, 2007

Prepared for the
Triborough Bridge and Tunnel Authority

By

URS

TABLE OF CONTENTS

| | <u>Page</u> |
|--|-------------|
| TRANSPORTATION INFRASTRUCTURE | 4-4 |
| Triborough Bridge and Tunnel Authority (TBTA) | 4-4 |
| Metropolitan Area Arterial Network | 4-6 |
| Other Regional Toll Facilities | 4-7 |
| Regional Public Transportation | 4-8 |
| TOLL COLLECTION ON THE TBTA FACILITIES | 4-8 |
| Current Toll Structure and Operation | 4-8 |
| <i>E-ZPass</i> Electronic Toll Collection System | 4-10 |
| TBTA's Role in <i>E-ZPass</i> | 4-12 |
| Passenger Car Toll Rate Trends and Inflation | 4-12 |
| HISTORICAL TRAFFIC, REVENUES AND EXPENSES AND ESTIMATED/BUDGETED NUMBERS FOR 2007 | 4-15 |
| Traffic and Toll Revenue, 1996 to 2006 | 4-15 |
| Traffic by Facility and Vehicle Class, 2006 | 4-18 |
| Monthly Traffic, 2006 | 4-20 |
| Changes in Monthly Traffic 2005 to 2006 | 4-20 |
| Estimated Traffic and Toll Revenue, 2007 | 4-21 |
| Operating Expenses 1996 to 2006 | 4-23 |
| 2007 Budget | 4-25 |
| FACTORS AFFECTING TRAFFIC GROWTH | 4-26 |
| Employment, Population and Motor Vehicle Registrations | 4-26 |
| Fuel Conditions | 4-29 |
| Toll Impacts and Elasticity | 4-31 |
| Bridge and Tunnel Capacities | 4-33 |
| TBTA and Regional Operational and Construction Impacts | 4-34 |
| Other Considerations | 4-41 |
| Summary of Assumptions and Conditions | 4-43 |
| PROJECTED TRAFFIC, REVENUES AND EXPENSES | 4-46 |
| Traffic and Toll Revenue at Current Tolls | 4-46 |
| Traffic and Toll Revenue with Periodic Toll Increases | 4-47 |
| Effects of Second Avenue Subway Construction in Forecast Years | 4-50 |
| Operating Expenses | 4-50 |
| Net Revenues from Toll Operations | 4-52 |
| REVIEW OF PHYSICAL CONDITION | 4-54 |
| Review of Inspection Reports | 4-56 |
| Long-Term Outlook for TBTA Facilities | 4-63 |

TABLES

| <u>Table</u> | <u>Page</u> |
|--|-------------|
| Table 1. Toll Rates at TBTA Facilities, Effective March 13, 2005 | 4-9 |
| Table 2. <i>E-ZPass</i> Participation Rates | 4-11 |
| Table 3. Historical Trends in Non-Discounted Cash Passenger Car Toll Rates | 4-13 |
| Table 4. Cash Passenger Toll Rates Versus Consumer Price Index | 4-14 |
| Table 5. Annual Toll-Paying Traffic and Toll Revenue: 1996 to 2006 | 4-17 |
| Table 6. Summary of Annual Paid Traffic and Toll Revenue: 1996 to 2006 | 4-18 |
| Table 7. Traffic by Facility and Vehicle Class, 2006 | 4-19 |
| Table 8. Monthly Traffic Variations, 2006 | 4-20 |
| Table 9. Changes in Monthly Traffic – 2005 to 2006 | 4-21 |
| Table 10. Estimated Changes in Annual Traffic – 2006 to 2007 | 4-22 |
| Table 11. Estimated 2007 Toll-Paying Traffic and Toll Revenue | 4-22 |
| Table 12. Historical Operating Expenses: 1996 to 2006 | 4-24 |
| Table 13. Employment Trends and Projections | 4-27 |
| Table 14. Population Trends and Projections | 4-28 |
| Table 15. Motor Vehicle Registrations | 4-29 |
| Table 16. Elasticity Factors | 4-32 |
| Table 17. Estimated Percent Change in Average Toll Rates and Traffic | 4-33 |
| Table 18. Comparison of 2006 Traffic with Highest Recorded Levels Since 1970 | 4-34 |
| Table 19. Traffic and Toll Revenue Forecast, Constant Tolls | 4-48 |
| Table 20. Traffic and Toll Revenue Forecast, Periodic Toll Increases | 4-49 |
| Table 21. Projected Operating Expenses | 4-51 |
| Table 22. Net Toll Revenue Forecast | 4-52 |
| Table 23. Opening Dates of TBTA Facilities | 4-54 |
| Table 24. Capital Commitments by Facility, 1992 to 2009 | 4-55 |

FIGURES

| <u>Figure</u> | <u>Page</u> |
|---|-------------|
| 1. Location Map | 4-5 |
| 2. Aggregated TBTA Facilities Paid Traffic and Toll Revenue, 1970 to 2006 | 4-15 |

June 1, 2007

To Triborough Bridge and Tunnel Authority:

In accordance with your request, URS Corporation-New York (URS) conducted this annual study to develop projections of traffic, revenues and expenses for the toll bridge and tunnel facilities operated by Triborough Bridge and Tunnel Authority (TBTA), and to provide an overview of the physical conditions of each facility. We have reviewed the bridge and tunnel inspection reports provided by TBTA, toured the facilities in light of these inspection reports with TBTA Engineering and Facilities staff, and discussed TBTA's on-going maintenance and capital programs with its engineering staff.

Our projections have taken into account: (1) the general physical condition of TBTA's toll facilities; (2) traffic and revenue data, reflecting the 12 toll increases since 1972; (3) the impact of the *E-ZPass* electronic toll collection system; (4) the toll structure; (5) possible future toll increases; (6) population, employment and other demographic forecasts in the New York Metropolitan Area; (7) the traffic capacities of the bridges and tunnels and the existing roadway network that feeds the facilities in terms of the potential for future growth of peak versus non-peak period traffic; (8) construction conditions on the arterial highway network serving the New York Metropolitan Area, including the toll-free East River bridges; (9) mass transit network projects; and (10) the impacts of recent economic and political events on metropolitan area traffic.

In 2006, actual total toll revenues for the TBTA Bridges and Tunnels was \$1,241.6 million, or 0.8 percent lower than the URS forecast of \$1,252.0 million.

TRANSPORTATION INFRASTRUCTURE

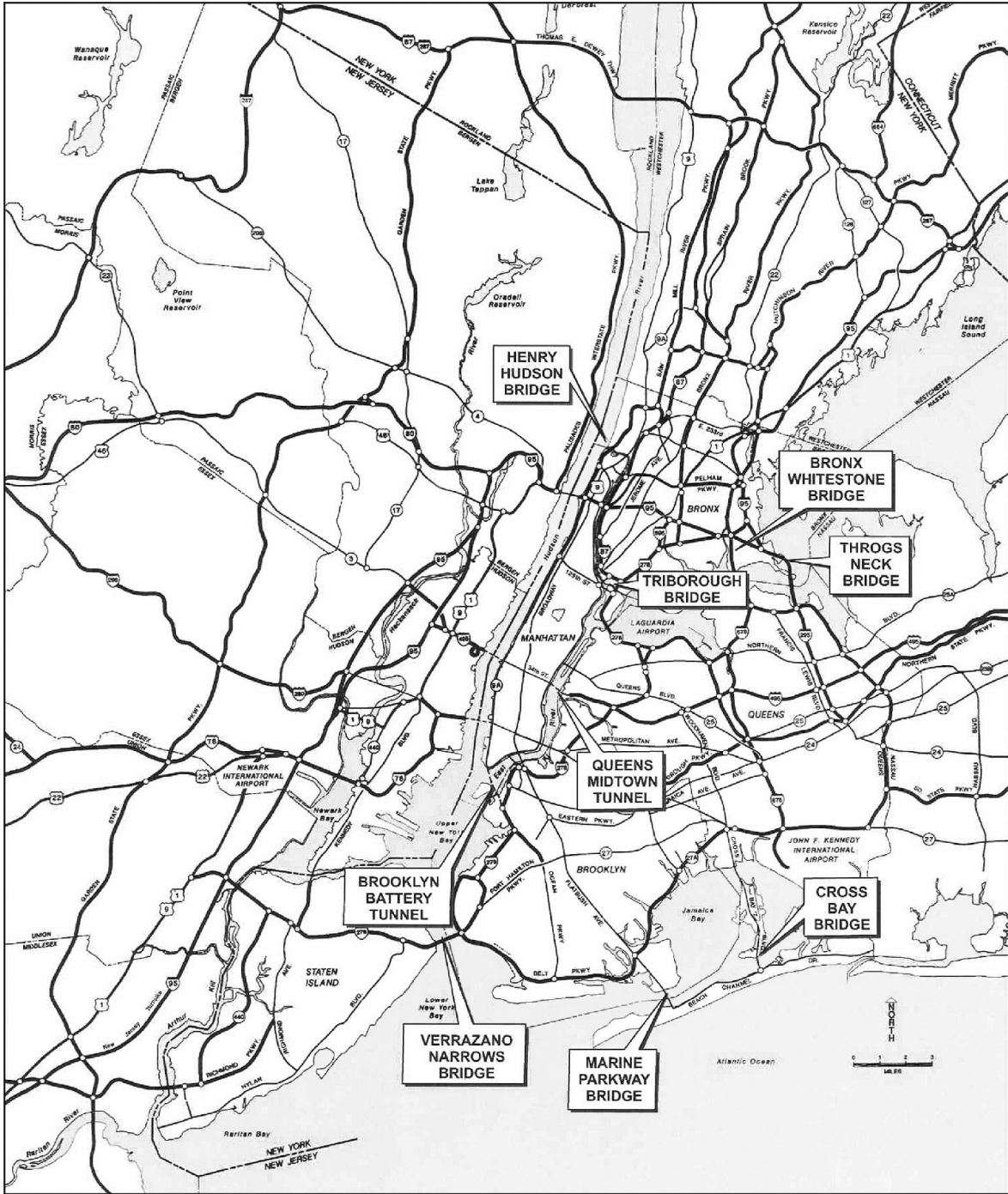
The New York Metropolitan Area's transportation infrastructure consists of an extensive network of highways, tunnels and bridges (both tolled and toll-free), regional commuter rail and the New York City transit system.

Triborough Bridge and Tunnel Authority (TBTA)

TBTA operates nine toll facilities within New York City (the "City"), consisting of seven bridges and two tunnels that provide vital links across the City's rivers and bays. In 2006, these facilities carried 305.6 million total vehicles, of which 302.1 million were toll paying, and generated \$1.2 billion in toll revenue. (Non-revenue transactions include police, emergency and TBTA vehicles.) The locations of the facilities are shown on the following map in the context of the regional highway network.

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Figure 1: Location Map





The facilities are briefly described as follows:

Verrazano-Narrows Bridge - a two-level suspension bridge, with three lanes of traffic in each direction on both decks. It crosses the entrance to New York Harbor and connects Brooklyn and Staten Island.

Triborough Bridge - a complex of three bridges connecting Manhattan, the Bronx and Queens, with a central connecting interchange on Randall's Island. Manhattan is reached via a six-lane vertical lift bridge over the Harlem River. The Bronx is accessed via a six-lane truss bridge over the Bronx Kill. An eight-lane suspension bridge over the East River leads to Queens.

Bronx-Whitestone Bridge - a suspension bridge, with three lanes of traffic in each direction, which crosses the East River connecting the boroughs of Queens and the Bronx.

Throgs Neck Bridge - a suspension bridge, with three lanes of traffic in each direction, which crosses the upper East River also connecting the boroughs of Queens and the Bronx.

Queens Midtown Tunnel - a twin-tube tunnel with each tube carrying two lanes of traffic under the East River between the boroughs of Queens and Manhattan. During normal morning commuting hours, three lanes are operated in the peak traffic direction.

Brooklyn-Battery Tunnel - a twin-tube tunnel with each tube carrying two lanes of traffic under the East River connecting the southern tip of Manhattan with Brooklyn. During normal morning commuting hours, three lanes are operated in the peak traffic direction.

Henry Hudson Bridge - a two-level steel arch bridge, with four southbound lanes on its lower deck and three northbound lanes on its upper deck that crosses the Harlem River to connect the northern tip of Manhattan with the Spuyten Duyvil section of the Bronx.

Marine Parkway - Gil Hodges Memorial Bridge - a four-lane crossing of the Rockaway Inlet that connects the Rockaway peninsula in Queens with Brooklyn.

Cross Bay Veterans Memorial Bridge - a pre-stressed concrete viaduct with three lanes of traffic in each direction crossing Beach Channel in Jamaica Bay, connecting the Rockaway peninsula in Queens with the Queens mainland, via Broad Channel.

Metropolitan Area Arterial Network

The New York Metropolitan Area is served by an extensive network of highway facilities. Many of the bridges and tunnels operated by TBTA are links in the Interstate highway network, as these limited-access expressways pass through New York City to serve both local and long distance traffic. These regional facilities are shown on the map on page 2.

The Verrazano-Narrows Bridge is part of I-278 (Staten Island, Gowanus and Brooklyn-Queens Expressways), which connects with the Brooklyn-Battery Tunnel and the Triborough Bridge.



The Queens Midtown Tunnel carries I-495 (Long Island Expressway) into Manhattan. The Triborough Bridge joins I-87 (Major Deegan Expressway) and I-278 (Bruckner Expressway) with I-278/Grand Central Parkway in Queens and the FDR Drive in Manhattan. The Bronx-Whitestone Bridge carries traffic between the Hutchinson River and Merritt Parkways and Long Island via I-678 (Whitestone and Van Wyck Expressways) and the Cross Island Parkway. The Throgs Neck Bridge carries traffic between I-95 (New England Thruway and George Washington Bridge) and Long Island via I-295.

The Henry Hudson Bridge is part of the Henry Hudson Parkway, a major commuter route into Manhattan from the extensive parkway network in western Westchester County and beyond.

In addition to TBTA facilities and their expressway/parkway connections, New York City's toll-free East River bridges — Brooklyn, Manhattan, Williamsburg and Queensboro — also connect Manhattan with Brooklyn and Queens; and nine toll-free bridges over the Harlem River connect Manhattan with the Bronx. Unlike the TBTA facilities, the approaches to these bridges are mostly surface arterials, such as Flatbush Avenue and Queens Boulevard. Only a few have expressway ramp connections (such as the Brooklyn-Queens Expressway connection to the Williamsburg Bridge), and the Alexander Hamilton Bridge, or I-95, is part of the Cross Bronx Expressway.

Other Regional Toll Facilities

TBTA is one of a number of toll authorities that operate bridge, tunnel and highway facilities in the New York Metropolitan Area. The agency whose facilities are geographically closest to TBTA's bridges and tunnels is the Port Authority of New York and New Jersey. The Port Authority's George Washington Bridge is linked to the Triborough, Bronx-Whitestone and Throgs Neck bridges via the expressway system in the Bronx (plus the George Washington-Triborough Bridge connection in Manhattan via the Harlem River Drive and the George Washington-Henry Hudson Bridge connection in Manhattan via the Henry Hudson Parkway); while the Bayonne Bridge, Goethals Bridge and Outerbridge Crossing are linked to the Verrazano-Narrows Bridge via the expressway system in Staten Island. Only motorists using the Port Authority's two tunnels — Holland and Lincoln — must traverse surface streets (in Manhattan) to reach TBTA's and the City's East River crossings.

The other toll authorities in the region are the New York State Thruway Authority (Tappan Zee Bridge and several Thruway sections), New York State Bridge Authority (five Hudson River bridges) and the New Jersey Turnpike Authority (Garden State Parkway and New Jersey Turnpike).

All of these authorities, together with seventeen others beyond the New York Metropolitan Area, are linked through the *E-ZPass* Interagency Group (IAG) to better serve the regional traveler. *E-ZPass* and its impact on the TBTA facilities are discussed further in this report.



Regional Public Transportation

In addition to the TBTA facilities, most of the public transportation facilities within the City and the suburban counties north and east of the City are part of the Metropolitan Transportation Authority (MTA) system. These include the New York City Transit Authority subway and buses, MTA Bus Company, Staten Island Rapid Transit, Metro-North Commuter Railroad, Long Island Rail Road, and the Long Island Bus system (in Nassau County, and serves adjacent portions of Queens and Suffolk County).

For those major TBTA facilities directly serving Manhattan — Triborough Bridge, Queens Midtown Tunnel and Brooklyn-Battery Tunnel — the motorist can, for the most part, choose to use transit. For the outlying bridges, however, the choice is more difficult, due to a reduced level of transit service or different trip characteristics.

TOLL COLLECTION ON THE TBTA FACILITIES

The nine TBTA toll facilities have three toll structures, in terms of toll levels and methods of collection: major, minor and the Verrazano-Narrows Bridge. The major crossings include the Triborough Bridge, Bronx-Whitestone Bridge, Throgs Neck Bridge, Queens Midtown Tunnel and Brooklyn-Battery Tunnel. The minor crossings are the Henry Hudson Bridge, Marine Parkway-Gil Hodges Memorial Bridge and Cross Bay Veterans Memorial Bridge. The Verrazano-Narrows Bridge is the only facility on which tolls are collected in one direction only, while the cash tolls for passenger cars on the minor bridges are half the level of those on the major facilities.

Current Toll Structure and Operation

The current toll structure, in place since March 13, 2005, is shown in Table 1. Tolls are determined using a basic rate as modified by variables specific to a number of factors. These factors include:

- crossing used
- vehicle classification
- toll payment method
- place of residence
- vehicle occupancy



Table 1. Toll Rates at TBTA Facilities, Effective March 13, 2005

| Classification | Verrazano-Narrows Bridge ^(a) | | Triborough Bridge Bronx-Whitestone Bridge Throgs Neck Bridge Queens Midtown Tunnel Brooklyn-Battery Tunnel | | Henry Hudson Bridge | | Marine Parkway- Gil Hodges Memorial Bridge Cross Bay Veterans Memorial Bridge | |
|--|---|----------------|--|----------------|---------------------|----------------|---|---------------------|
| | Cash | <i>E-ZPass</i> | Cash | <i>E-ZPass</i> | Cash | <i>E-ZPass</i> | Cash | <i>E-ZPass</i> |
| Two-axle vehicles, including: Passenger vehicles, SUVs, station wagons, self-propelled mobile homes, ambulances, hearses, vehicles with seating capacity of not more than 15 adult persons (including the driver) and trucks with maximum gross weight of 7,000 lbs. and under | \$4.50 | \$4.00 | \$ 4.50 | \$4.00 | \$2.25 | \$1.75 | \$2.25 | \$1.50 |
| Each additional axle costs | 2.00 | 2.00 | 2.00 | 2.00 | \$1.25 | \$1.25 | \$1.25 | \$1.25 |
| The following discounted prepaid charges are presently available for the two-axle vehicles referenced above: | | | | | | | | |
| Prepaid charges through token roll purchases | | | | | | | 1.50 ^(b) | |
| Prepaid charges per crossing for registered Staten Island Residents using an eligible vehicle with three or more occupants | 1.125 | | | | | | | |
| Prepaid charges per crossing for registered Staten Island Residents using an eligible vehicle through token roll purchase | 3.20 ^(b) | | | | | | | |
| Registered Staten Island Residents using an eligible vehicle | | 2.40 | | | | | | |
| Prepaid charges per crossing for registered Rockaway Peninsula/Broad Channel Residents using an eligible vehicle | | | | | | | 1.33 ^(b) | 1.00 ^(c) |
| All two axle vehicles greater than 7,000 lbs. and buses (other than franchise buses and motor homes) | 9.00 | 7.20 | 9.00 | 7.20 | (d) | (d) | 4.50 | 3.60 |
| Each additional axle | 5.00 | 4.00 | 5.00 | 4.00 | | | 2.50 | 2.00 |
| Two-axle franchise buses | 3.50 | 2.80 | 3.50 | 2.80 | (d) | (d) | 1.75 | 1.40 |
| Three-axle franchise buses | 4.25 | 3.40 | 4.25 | 3.40 | (d) | (d) | 2.25 | 1.80 |
| Motorcycles | 2.00 | 1.75 | 2.00 | 1.75 | 2.00 | 1.25 | 2.00 | 1.25 |
| Each additional axle costs | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Notes:

- (a) Under the Verrazano-Narrows one-way crossing charge collection program, all per crossing charges shown should be doubled; toll is collected in the westbound direction only.
- (b) Prepaid discount token roll sales may be discontinued when permissible.
- (c) Rockaway Peninsula and Broad Channel residents using *E-ZPass* at the Cross Bay Veterans' Memorial Bridge receive a rebate of this amount, reimbursed to TBTA by MTA. This program was instituted January 1, 1998.
- (d) Passage prohibited.

Passenger Car Tolls

TBTA crossings are separated into major and minor categories for toll classification purposes. The passenger car cash toll is \$4.50 for the major crossings. The minor crossing passenger car cash toll is \$2.25. All tolls are collected in each direction except on the Verrazano-Narrows Bridge where the round-trip tolls are collected only in the westbound (Staten Island-bound) direction in order to comply with a provision of Federal law.

Tolls for passenger cars are discounted under the following programs: (1) *E-ZPass* and tokens; (2) place of residence/crossing used; (3) place of residence/vehicle occupancy; and (4) some combination of the foregoing. *E-ZPass* electronic toll collection is available on all TBTA toll facilities (see the following section for a more complete description of *E-ZPass* and its impact). Motorists open a pre-paid *E-ZPass* account and receive a transponder that they mount on their windshields. TBTA toll plazas are all equipped with *E-ZPass* antennas that identify and read the on-board tags and electronically debit the toll from the motorist's prepaid account. Passenger cars equipped with *E-ZPass* are allowed a \$0.50 discount per trip at all major facilities (\$1.00 for Verrazano-Narrows Bridge westbound only) and the Henry Hudson Bridge, and \$0.75 at the Cross Bay Veterans Memorial and Marine Parkway-Gil Hodges Memorial bridges.

A separate discount program is in place for registered Staten Island residents on the Verrazano-Narrows Bridge and for registered Rockaway peninsula and Broad Channel residents on the Cross Bay and Marine Parkway-Gil Hodges Memorial bridges. A toll-rebate program for the benefit of *E-ZPass* customers who are residents of Broad Channel and the Rockaway peninsula was implemented on January 1, 1998 for use on the Cross Bay Bridge. MTA reimburses the TBTA in the amount of approximately \$3.5 million annually in toll rebates.

Tolls for Vehicles over 7,000 Pounds

The toll charges for vehicles over 7,000 pounds are a function of weight/number of axles as well as the crossing used. For the major crossings (except for the Verrazano-Narrows Bridge), the cash rate for these vehicles is \$9.00 and is \$5.00 for each additional axle over two. For the Verrazano-Narrows Bridge, the cash rate for vehicles over 7,000 pounds is the same; however, rates should be doubled, since the toll is collected in the westbound direction only. These vehicles are eligible for a 20 percent discount with *E-ZPass*.

For the minor crossings, the two-axle cash rate for vehicles over 7,000 pounds is \$4.50, with an additional per axle rate of \$2.50. These vehicles are eligible for a 20 percent discount with *E-ZPass*. Commercial vehicles are not permitted on the Henry Hudson Bridge.

***E-ZPass* Electronic Toll Collection System**

The *E-ZPass* Electronic Toll Collection (ETC) system has been fully installed at all TBTA bridges and tunnels since December 1996. *E-ZPass* usage at each facility has shown strong growth as motorists have become more familiar with the system and its time saving advantages. Unlike cash transactions, vehicles equipped with *E-ZPass* tags can use the gated *E-ZPass*-only

lanes. An electronic reader identifies the tag code at the toll plaza and the toll is deducted from the customer’s pre-paid account. TBTA has approximately 3.4 million *E-ZPass* tags in use. Currently, participation rates are at 72.6 percent of toll-paying traffic system-wide. The total number of active Interagency Group (IAG) tags in use for all agencies in the extended region as of December 31, 2006 was approximately 15.8 million.

With the introduction of *E-ZPass* at all TBTA crossings, toll plaza operations have improved and vehicle-hours of delay have been reduced. This, in turn, has led to even more motorists enrolling in *E-ZPass*. Electronic payment of tolls has accelerated vehicle processing through the *E-ZPass* lanes, thereby reducing the overall vehicle queue at the plazas. TBTA estimates that manual toll lanes are able to process approximately 250 vehicles per hour, and dedicated *E-ZPass* lanes are able to process approximately 900 to 1,000 vehicles per hour. Prior to implementation of *E-ZPass*, vehicle processing through the TBTA toll plazas during peak periods was a primary cause of congestion at the crossings.

Table 2 lists the *E-ZPass* annual system-wide participation rates starting in 1998, the second year since all nine crossings had *E-ZPass* in operation. Implementation of *E-ZPass* started in October 1995 on the Verrazano-Narrows Bridge and was phased in gradually on the remaining crossings through December 1996. Also shown are the participation rates for each of the facilities for 2006.

Table 2. *E-ZPass* Participation Rates

| Yearly Average | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|--|------------|------------------|--------------|----------------|-----------|----------------|------------------|-------------|-------------------|
| Percent Participation (All Facilities) | 56.8% | 60.1% | 63.7% | 67.4% | 68.5% | 69.8% | 70.1% | 71.5% | 72.6% |
| Facility | Triborough | Bronx-Whitestone | Henry Hudson | Marine Parkway | Cross Bay | Queens Midtown | Brooklyn Battery | Throgs Neck | Verrazano-Narrows |
| Percent Participation (2006) | 65.5% | 64.4% | 79.5% | 78.7% | 73.7% | 77.3% | 80.8% | 72.9% | 76.3% |

Source: TBTA

Based on customer acceptance of the technology, TBTA expects that the *E-ZPass* share of total transactions will continue to increase, albeit marginally, over time.

E-ZPass is fully integrated at facilities operated by 22 agencies located in 11 states. The transportation network includes the six interstate crossings of the Port Authority of New York and New Jersey, the New Jersey Turnpike, the Garden State Parkway, the New York State Thruway including its Tappan Zee Bridge, the five bridges of the New York State Bridge Authority (from Bear Mountain northward), the Buffalo and Fort Erie Public Bridge Authority’s Peace Bridge, the Atlantic City Expressway, the four toll bridges between New Jersey and Pennsylvania operated by the Delaware River Port Authority, the seven toll bridges between New Jersey and Pennsylvania operated by the Delaware River Joint Toll Bridge Commission, the Delaware Memorial Bridge between New Jersey and Delaware operated by the Delaware River

and Bay Authority, the two toll roads in Delaware, toll facilities in Virginia and Maryland, the West Virginia Turnpike, the Maine Turnpike, the Massachusetts Turnpike, the Tobin Bridge operated by the Massachusetts Port Authority, the Pennsylvania Turnpike, the New Hampshire Turnpike System, eight bridges between New Jersey and Pennsylvania operated by the Burlington County Bridge Commission, the toll roads maintained by the Illinois State Toll Highway Authority, and the Chicago Skyway Bridge operated by the Skyway Concession Company, LLC. In addition, the Indiana Toll Road Concession Company became a member of the Inter-Agency Group (IAG) in 2007 and is expected to be on-line by the end of the year.

TBTA's Role in *E-ZPass*

TBTA was a founding member of the *E-ZPass* IAG, originally comprised of toll authorities in Delaware, Pennsylvania, New Jersey and New York, and now including Maryland, Massachusetts, Virginia, West Virginia, New Hampshire, Illinois, Maine and the Peace Bridge between Buffalo and Fort Erie, Ontario. The IAG has been working since 1991 toward the development and delivery of a compatible electronic toll collection system for the entire region. In July 1998, TBTA entered into an inter-operability agreement with the IAG.

Customers of the member IAG agencies are able to use their tags at any *E-ZPass*-equipped facility operated by an IAG member. All IAG members provide inter-operability among agencies for their customers. As IAG members implement electronic toll collection systems, the *E-ZPass* customer base will increase, which will help increase usage of *E-ZPass* on TBTA facilities.

TBTA customers must pre-pay their *E-ZPass* accounts. These pre-payments are based on a customer's *E-ZPass* usage at both TBTA and other IAG member facilities. Through the IAG system, TBTA and other member agencies transfer payments associated with inter-operability to each other on a routine basis. For 2006, TBTA transferred \$366.3 million to other members and received \$236.4 million from other members within the IAG.

Passenger Car Toll Rate Trends and Inflation

Since 1971, toll rates have been increased periodically on the TBTA facilities. Table 3 displays passenger car toll rates for the nine TBTA bridges and tunnels over the past 35 years.

Since 1982, passenger car toll rates have been separated into three categories, as follows:

- Major crossings - Triborough, Bronx-Whitestone and Throgs Neck bridges, and the Queens Midtown and Brooklyn-Battery tunnels;
- Minor crossings - Henry Hudson, Marine Parkway-Gil Hodges Memorial and Cross Bay Veterans Memorial bridges; and
- Verrazano-Narrows Bridge - a major crossing with one-way toll collection.

Table 3. Historical Trends in Non-Discounted Cash Passenger Car Toll Rates

| | Verrazano-Narrows Bridge | Triborough, Bronx-Whitestone and Throgs Neck Bridges and Queens Midtown Tunnel | Brooklyn-Battery Tunnel | Henry Hudson Bridge | Marine Parkway-Gil Hodges Memorial & Cross Bay Bridges |
|-------------------------------|--------------------------|--|-------------------------|---------------------|--|
| 1971 | \$0.50 | \$0.25 | \$0.35 | \$0.10 | \$0.10 |
| 1972 – 1975 | 0.75 | 0.50 | 0.70 | 0.25 | 0.25 |
| 1975 – 1980 | 1.00 | 0.75 | 0.75 | 0.50 | 0.50 |
| 1980 – 1982 | 1.00 | 1.00 | 1.00 | 0.60 | 0.75 |
| 1982 – 1984 | 1.25 | 1.25 | 1.25 | 0.90 | 0.90 |
| 1984 – 1986 | 1.50 | 1.50 | 1.50 | 0.90 | 0.90 |
| 1986 – 1987 | 1.75 ^(a) | 1.75 | 1.75 | 1.00 | 1.00 |
| 1987 – 1989 | 2.00 ^(a) | 2.00 | 2.00 | 1.00 | 1.00 |
| 1989 – 1993 | 2.50 ^(a) | 2.50 | 2.50 | 1.25 | 1.25 |
| 1993 – 1996 | 3.00 ^(a) | 3.00 | 3.00 | 1.50 | 1.50 |
| 1996 – 2003 | 3.50 ^(a) | 3.50 | 3.50 | 1.75 | 1.75 |
| 2003 – 2005 | 4.00 ^(a) | 4.00 | 4.00 | 2.00 | 2.00 |
| 2005 ^(b) – Present | 4.50 ^(a) | 4.50 | 4.50 | 2.25 | 2.25 |

Notes:

- (a) Effective March 20, 1986, round-trip tolls (twice the amount shown) have been collected on the Verrazano-Narrows Bridge in the westbound direction only in compliance with a Federal legislative mandate. Eastbound traffic uses the bridge toll-free. These amounts are the equivalents of collecting tolls in each direction.
- (b) Last toll rate increase effective March 13, 2005.

Verrazano-Narrows Bridge

The Verrazano-Narrows Bridge one-way cash toll of \$9.00 is collected westbound only. The current one-way cash passenger car toll rate, effective March 13, 2005, for the major crossings is \$4.50, collected in each direction. Cash tolls on the three minor crossings are \$2.25, collected in each direction.

Over the years, various discount programs have been introduced. In March 1987, the Staten Island Carpool Program was initiated. Staten Island residents were offered 30-round trip coupons for vehicles with three or more occupants at a discounted price of \$30.00. This program was revised to 24 coupons for \$30.00 in July 1989, to 24 coupons for \$42.00 in May 2003, and to 24 coupons for \$54.00 in March 2005.

In general, tolls for vehicles over 7,000 pounds have also been adjusted upward whenever passenger car toll rates were increased. A notable exception was 1987 when these toll rates were not raised while there was a general increase for passenger cars. In 1989, tolls for vehicles over 7,000 pounds on the Verrazano-Narrows Bridge remained constant while all other tolls were raised. Historically, these vehicles received discounts on any TBTA facility when they used pre-paid accounts. This plan continues with *E-ZPass*.

Inflation

The Consumer Price Index (CPI), compiled by the US Department of Labor, Bureau of Labor Statistics for United States Cities, is intended to represent the average inflation rate for all urban consumers. Table 4 displays the TBTA major crossing passenger car toll rates from the 1971 level of \$0.25 to the toll rate of \$4.50 set in 2005, alongside the CPI. Also shown is the CPI for April 2007 alongside the \$4.50 toll.

Table 4. Cash Passenger Toll Rates Versus Consumer Price Index

| Year | Triborough, Bronx-Whitestone and Throgs Neck Bridges and Queens Midtown Tunnel | Consumer Price Index ^(a) | Tolls Adjusted to 1982-84 Dollars ^(b) |
|-----------------|--|-------------------------------------|--|
| 1971 | \$0.25 | 43.6 | \$0.57 |
| 1972 | 0.50 | 45.5 | 1.10 |
| 1975 | 0.75 | 57.6 | 1.30 |
| 1980 | 1.00 | 82.1 | 1.22 |
| 1982 | 1.25 | 95.3 | 1.31 |
| 1984 | 1.50 | 104.8 | 1.43 |
| 1986 | 1.75 | 112.3 | 1.56 |
| 1987 | 2.00 | 118.0 | 1.69 |
| 1989 | 2.50 | 130.6 | 1.91 |
| 1993 | 3.00 | 154.5 | 1.94 |
| 1996 | 3.50 | 166.9 | 2.10 |
| 2003 | 4.00 | 197.8 | 2.02 |
| April 2007 | 4.50 ^(c) | 225.8 ^(d) | \$1.99 |
| Ratio 2007/1971 | 18.0 | 5.18 | 3.49 |

Notes: (a) New York Metropolitan Statistical Area: New York–Northern New Jersey–Long Island, NY-NJ-CT-PA, All Urban Consumers, All Items. Base period: 1982-1984 = 100.0

(b) The current toll divided by the CPI and expressed as a decimal.

(c) Effective March 13, 2005.

(d) Not seasonally adjusted. Seasonally adjusted data not available at the MSA level.

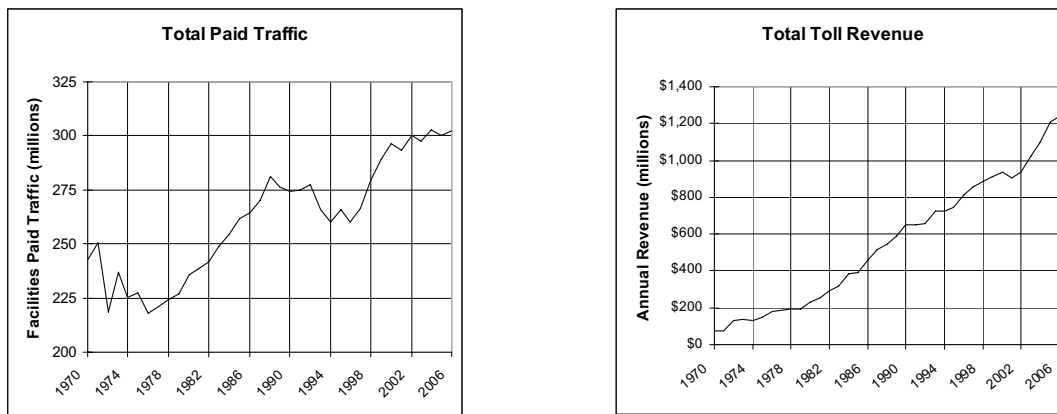
Source: US Department of Labor, Bureau of Labor Statistics.

As indicated in the table, TBTA tolls in current dollars have risen faster than the CPI during the 36-year period. As can be seen in Table 4, the current \$4.50 toll in 2007 dollars is equivalent to a toll of \$2.00 in 1982-1984 dollars. The actual (current) 2007 cash toll for passenger cars is 18 times the actual toll in 1971. However, if adjusted for inflation, the toll today is only 3.49 times that in 1971 (in each case based on 1982-1984 dollars). Notwithstanding the aforementioned rise in tolls, traffic volumes have remained strong.

HISTORICAL TRAFFIC, REVENUES AND EXPENSES AND ESTIMATED/BUDGETED NUMBERS FOR 2007

Historical traffic, revenues and expenses were reviewed for the nine TBTA bridges and tunnels. Over the last 36 years, paid traffic volumes on the crossings have ranged from approximately 220 million in the 1970s to 303 million in 2004. In 2006, total annual volume was 302 million. As displayed in Figure 2, the growth of traffic reflects the region’s moderate overall growth in population and employment, offset by the impact of 12 periodic toll increases. By 2000, with tolls at 14 times the 1971 level, toll revenues had increased more than 13-fold, from \$72 million to a high of \$941 million in 2000. Revenues then declined to \$915 million in 2001 primarily due to the closures and restrictions on TBTA facilities following the September 11 terrorist attack on the World Trade Center and the regional decline in employment. In 2006, with tolls having been increased again in 2003 and 2005, revenue reached \$1,242 million, \$37 million greater than revenues in 2005.

Figure 2: Aggregated TBTA Facilities Paid Traffic and Toll Revenue, 1970 to 2006



Since 1970, annual operating expenses for the toll facilities have risen by a multiple of 14, from \$25 million to \$353 million in 2006, during which time the CPI increased a multiple of 5.1. A significant part of the increase in annual operating expenses is due to the creation of new security positions after the events of September 11, 2001.

Traffic and Toll Revenue, 1996 to 2006

Table 5 lists the traffic and toll revenue record for each of the nine crossings for the 1996-2006 period. Total TBTA traffic and toll revenue are shown in Table 6. The peak in toll-paying traffic during this period, 303 million crossings, occurred in 2004. The general system-wide pattern has been that when toll rates are increased, traffic declines moderately and then traffic begins to rise until the next rate increase. (The relationship between toll increases and traffic volume is described in the *Toll Impacts and Elasticity* section of this report.) The two most recent toll increases shown in this table, in 2003 and 2005, are evident in the jump in average tolls in such years. The strong growth of almost 10 percent in revenues between 2004 and 2005 is due to the toll increase in March 2005.

In 1996, toll revenue was reported at \$808 million. As stated above, revenues rose to \$941 million in 2000, an increase of approximately 16 percent, and then declined in 2001 due to the impact of September 11 and a decline in regional employment. The greatest impact from September 11 was due to closures and restrictions at the Brooklyn-Battery Tunnel, with negative impacts also occurring at the Queens Midtown Tunnel and at the Triborough Bridge. In 2002, residual effects due to September 11-related traffic restrictions were seen particularly in the results for the Brooklyn-Battery Tunnel. Also in 2002, the positive impact on the Verrazano-Narrows Bridge was brought about by the truck restrictions at the Holland Tunnel as well as New York City's single occupancy vehicle restrictions. Since November 17, 2003, when the morning peak-period ban on Manhattan-bound single occupancy vehicles south of 14th Street was lifted, there have been no externally imposed traffic restrictions on any of TBTA's facilities. Revenue in 2003 topped \$1 billion, as a result of the May 18, 2003 toll increase. After the March 13, 2005 toll increase, 2005 traffic volumes decreased 0.9 percent and revenue rose to \$1,205 million in 2005 and then increased to \$1,242 million in 2006.

Most recently (2005-2006), with construction on the Bronx-Whitestone Bridge, some traffic has diverted to the Throgs Neck Bridge. These two bridges generally serve the same areas in the Bronx and Queens, and historically traffic has shifted back and forth to the crossing providing the better level of service.

The Triborough Bridge reported the highest toll revenue for 2006 at \$288.3 million, while the Marine Parkway-Gil Hodges Memorial Bridge registered the lowest revenue at \$11.5 million.

Table 5. Annual Toll-Paying Traffic and Toll Revenue:^(a) 1996 to 2006
(000's)

| Year | Verrazano-Narrows Bridge | | | | Triborough Bridge | | | | Bronx-Whitestone Bridge | | | |
|---------------------|--------------------------|--------|-----------|-----------------------------|-------------------|--------|-----------|--------------|-------------------------|--------|-----------|--------------|
| | Traffic | | Revenue | Average Toll ^(c) | Traffic | | Revenue | Average Toll | Traffic | | Revenue | Average Toll |
| | Volume ^(b) | Change | | | Volume | Change | | | Volume | Change | | |
| 1996 | 60,176 | -1.9% | \$177,655 | \$2.95 | 54,975 | -3.4% | \$186,051 | \$3.38 | 37,258 | -7.3% | \$132,264 | \$3.55 |
| 1997 | 62,848 | 4.4 | 185,131 | 2.95 | 56,766 | 3.3 | 200,451 | 3.53 | 36,372 | -2.4 | 135,593 | 3.73 |
| 1998 ^(d) | 65,886 | 4.8 | 192,788 | 2.93 | 59,524 | 4.9 | 208,324 | 3.50 | 38,112 | 4.8 | 140,083 | 3.68 |
| 1999 ^(d) | 67,496 | 2.4 | 196,556 | 2.91 | 61,943 | 4.1 | 216,414 | 3.49 | 40,155 | 5.4 | 147,597 | 3.68 |
| 2000 ^(d) | 69,107 | 2.4 | 203,172 | 2.94 | 63,677 | 2.8 | 222,612 | 3.50 | 42,334 | 5.4 | 155,938 | 3.68 |
| 2001 | 70,929 | 2.6 | 208,164 | 2.93 | 62,506 | -1.8 | 215,241 | 3.44 | 42,090 | -0.6 | 152,881 | 3.63 |
| 2002 | 73,361 | 3.4 | 216,312 | 2.95 | 60,747 | -2.8 | 208,905 | 3.44 | 44,359 | 5.4 | 160,730 | 3.62 |
| 2003 | 71,108 | -3.1 | 233,482 | 3.28 | 58,339 | -4.0 | 222,224 | 3.81 | 44,413 | 0.1 | 175,393 | 3.95 |
| 2004 | 71,404 | 0.4 | 246,322 | 3.45 | 61,638 | 5.7 | 247,937 | 4.02 | 45,223 | 1.8 | 187,231 | 4.14 |
| 2005 | 69,980 | -2.0 | 267,276 | 3.82 | 62,841 | 2.0 | 280,516 | 4.46 | 41,198 | -8.9 | 188,808 | 4.58 |
| 2006 | 70,381 | 0.6 | 274,100 | 3.89 | 63,063 | 0.4 | 288,300 | 4.57 | 39,488 | -4.2 | 186,384 | 4.72 |

| Year | Throgs Neck Bridge | | | | Brooklyn-Battery Tunnel | | | | Queens Midtown Tunnel | | | |
|---------------------|--------------------|--------|-----------|--------------|-------------------------|--------|----------|--------------|-----------------------|--------|----------|--------------|
| | Traffic | | Revenue | Average Toll | Traffic | | Revenue | Average Toll | Traffic | | Revenue | Average Toll |
| | Volume | Change | | | Volume | Change | | | Volume | Change | | |
| 1996 | 35,208 | 5.3% | \$136,691 | \$3.88 | 17,064 | -7.3% | \$54,880 | \$3.22 | 23,507 | 3.0% | \$77,485 | \$3.30 |
| 1997 | 36,711 | 4.3 | 147,106 | 4.01 | 17,029 | -0.2 | 56,166 | 3.30 | 24,600 | 4.6 | 83,543 | 3.40 |
| 1998 ^(d) | 37,660 | 2.6 | 149,711 | 3.98 | 19,651 | 15.4 | 63,578 | 3.24 | 25,362 | 3.1 | 85,626 | 3.38 |
| 1999 ^(d) | 38,076 | 1.1 | 152,134 | 4.00 | 20,778 | 5.7 | 67,080 | 3.23 | 25,969 | 2.4 | 87,284 | 3.36 |
| 2000 ^(d) | 37,535 | -1.4 | 152,453 | 4.06 | 21,298 | 2.5 | 69,018 | 3.24 | 26,573 | 2.3 | 89,451 | 3.37 |
| 2001 | 37,802 | 0.7 | 150,764 | 3.99 | 16,452 ^(e) | -22.8 | 52,188 | 3.17 | 26,177 ^(e) | -1.5 | 87,067 | 3.33 |
| 2002 | 39,687 | 5.0 | 157,988 | 3.98 | 15,447 ^(e) | -6.1 | 48,880 | 3.16 | 26,901 ^(e) | 2.8 | 88,865 | 3.30 |
| 2003 | 39,082 | -1.5 | 172,603 | 4.42 | 17,806 | 15.3 | 61,810 | 3.47 | 27,512 | 2.3 | 99,994 | 3.63 |
| 2004 | 39,439 | 0.9 | 184,338 | 4.67 | 17,700 | -0.6 | 64,366 | 3.64 | 28,181 | 2.4 | 107,067 | 3.80 |
| 2005 | 41,199 | 4.5 | 210,242 | 5.10 | 17,426 | -1.5 | 70,294 | 4.03 | 28,751 | 2.0 | 121,666 | 4.23 |
| 2006 | 43,186 | 4.8 | 223,756 | 5.18 | 17,718 | 1.7 | 73,868 | 4.17 | 28,966 | 0.7 | 127,075 | 4.39 |

| Year | Henry Hudson Bridge | | | | Marine Parkway-Gil Hodges Memorial Bridge | | | | Cross Bay Veterans Memorial Bridge | | | |
|---------------------|---------------------|--------|----------|--------------|---|--------|---------|--------------|------------------------------------|--------|---------|--------------|
| | Traffic | | Revenue | Average Toll | Traffic | | Revenue | Average Toll | Traffic | | Revenue | Average Toll |
| | Volume | Change | | | Volume | Change | | | Volume | Change | | |
| 1996 | 19,922 | -2.2% | \$27,915 | \$1.40 | 7,086 | -4.0% | \$8,231 | \$1.16 | 4,967 | -4.2% | \$6,446 | \$1.30 |
| 1997 | 19,757 | -0.8 | 28,687 | 1.45 | 7,304 | 3.1 | 8,589 | 1.18 | 5,133 | 3.3 | 6,727 | 1.31 |
| 1998 ^(d) | 20,300 | 2.7 | 28,731 | 1.42 | 7,322 | 0.2 | 8,577 | 1.17 | 5,647 | 10.0 | 7,021 | 1.24 |
| 1999 ^(d) | 21,287 | 4.9 | 30,068 | 1.41 | 7,391 | 0.9 | 8,461 | 1.14 | 6,012 | 6.5 | 7,199 | 1.20 |
| 2000 ^(d) | 22,546 | 5.9 | 31,938 | 1.42 | 7,207 | -2.5 | 8,374 | 1.16 | 6,356 | 5.7 | 7,651 | 1.20 |
| 2001 | 23,290 | 3.3 | 32,242 | 1.38 | 7,263 | 0.8 | 8,344 | 1.15 | 6,712 | 5.6 | 7,965 | 1.19 |
| 2002 | 24,657 | 5.9 | 34,045 | 1.38 | 7,745 | 6.6 | 8,938 | 1.15 | 7,091 | 5.6 | 8,471 | 1.19 |
| 2003 | 24,582 | -0.3 | 37,744 | 1.54 | 7,704 | -0.5 | 9,694 | 1.26 | 6,919 | -2.4 | 8,993 | 1.30 |
| 2004 | 24,703 | 0.5 | 40,149 | 1.63 | 7,719 | 0.2 | 10,102 | 1.31 | 6,989 | 1.0 | 9,477 | 1.36 |
| 2005 | 24,136 | -2.3 | 43,920 | 1.82 | 7,673 | -0.6 | 11,234 | 1.46 | 7,182 | 2.8 | 10,988 | 1.53 |
| 2006 | 24,159 | 0.1 | 44,901 | 1.86 | 7,737 | 0.8 | 11,536 | 1.49 | 7,361 | 2.5 | 11,630 | 1.58 |

- Notes:
- (a) Toll rate increases occurred on March 24, 1996, May 18, 2003 and March 13, 2005.
 - (b) Westbound toll traffic volume doubled.
 - (c) Average toll on basis of revenues divided by doubled westbound volume.
 - (d) Includes write-offs due to unredeemed tokens and tickets.
 - (e) Reflects traffic restrictions and closures beginning September 11, 2001 and ending gradually through November 17, 2003.

Total annual TBTA toll traffic volume and revenue are shown in Table 6 for the period 1996 through 2006.

Table 6. Summary of Annual Paid Traffic and Toll Revenue:^(a) 1996 to 2006

| Year | Total Paying Traffic Volume (000) | Total Toll Revenue (000) |
|------|-----------------------------------|--------------------------|
| 1996 | 260,163 | \$807,618 |
| 1997 | 266,520 | 851,993 |
| 1998 | 279,463 | 884,439 ^(b) |
| 1999 | 289,107 | 912,793 ^(b) |
| 2000 | 296,633 | 940,607 ^(c) |
| 2001 | 293,220 | 914,856 |
| 2002 | 299,995 | 933,134 |
| 2003 | 297,465 | 1,021,937 |
| 2004 | 302,995 | 1,096,989 |
| 2005 | 300,385 | 1,204,944 |
| 2006 | 302,059 | 1,241,551 |

- Notes: (a) Toll rate increases occurred on March 24, 1996, May 18, 2003, and March 13, 2005.
 (b) Includes \$2.5 million relating to the write-off of unredeemed tokens and tickets.
 (c) Includes \$9.7 million relating to the write-off of unredeemed tokens and tickets.
 Source: TBTA

Traffic by Facility and Vehicle Class, 2006

TBTA maintains traffic counts for each crossing in 13 toll-paying categories, ranging from passenger cars to trucks with seven axles. Displayed in Table 7 are the 2006 traffic volumes by facility. Passenger cars totaled 281 million crossings and represented 93 percent (which has remained relatively constant over time) of the total toll-paying vehicles. Of the TBTA facilities, the Verrazano-Narrows Bridge registered the highest two-way traffic volume of 70.4 million toll-paying vehicles. The lowest toll-paying volume, 7.4 million vehicles, was recorded at the Cross Bay Veterans Memorial Bridge.

Table 7. Traffic by Facility and Vehicle Class, 2006
(000's)

| Facility | 1 Passenger Cars | 2 Pass. Cars w/one-axle Trailer | 3 Pass. Cars w/two-axle Trailer | 4 Trucks 2 Axles | Franchise Buses | | 6 Trucks 3 Axles | 7 Trucks 4 Axles |
|--|------------------------|--|--|------------------------|-----------------|---------------|------------------------|------------------------|
| | | | | | 5 2 Axles | 11 3 Axles | | |
| Throgs Neck Bridge | 38,537 | 49 | 44 | 1,736 | 2 | 0 | 358 | 392 |
| Bronx-Whitestone Bridge | 36,607 | 13 | 9 | 1,305 | 157 | 0 | 300 | 205 |
| Triborough Bridge | 58,323 | 25 | 13 | 2,866 | 158 | 187 | 574 | 122 |
| Queens Midtown Tunnel | 26,672 | 5 | 6 | 1,634 | 109 | 72 | 374 | 26 |
| Brooklyn-Battery Tunnel | 16,265 | 2 | 2 | 621 | 52 | 535 | 166 | 11 |
| Verrazano-Narrows Bridge ^(a) | 65,740 | 33 | 28 | 1,925 | 134 | 402 | 437 | 250 |
| Henry Hudson Bridge ^(b) | 23,994 | 2 | 2 | 112 | 0 | 0 | 1 | 0 |
| Marine Parkway Bridge | 7,481 | 2 | 1 | 165 | 39 | 0 | 21 | 3 |
| Cross Bay Bridge | 6,922 | 3 | 1 | 305 | 36 | 0 | 55 | 5 |
| Total | 280,541 | 134 | 106 | 10,669 | 687 | 1,196 | 2,286 | 1,014 |
| Percent of Paid Vehicles | 92.9% | 0.0% | 0.0% | 3.5% | 0.2% | 0.4% | 0.8% | 0.3% |

| Facility | 8 Trucks 5 Axles | 9 Motor- cycles | 12 Trucks 6 Axles | 13 Trucks 7 Axles | 14 Other Vehicles | Total Toll- Paying Vehicles | 10 Non-Rev Vehicles ^(c) | Total Vehicles |
|--|------------------------|-----------------------|-------------------------|-------------------------|-------------------------|--------------------------------------|--|-------------------|
| Throgs Neck Bridge | 1,909 | 73 | 85 | 1 | 2 | 43,188 | 274 | 43,462 |
| Bronx-Whitestone Bridge | 816 | 57 | 18 | 0 | 0 | 39,487 | 229 | 39,716 |
| Triborough Bridge | 644 | 97 | 51 | 0 | 0 | 63,060 | 1,194 | 64,254 |
| Queens Midtown Tunnel | 18 | 48 | 2 | 0 | 0 | 28,966 | 407 | 29,373 |
| Brooklyn-Battery Tunnel | 7 | 57 | 1 | 0 | 0 | 17,719 | 473 | 18,192 |
| Verrazano-Narrows Bridge ^(a) | 1,227 | 145 | 56 | 1 | 1 | 70,379 | 697 | 71,076 |
| Henry Hudson Bridge ^(b) | 1 | 47 | 0 | 0 | 0 | 24,159 | 92 | 24,251 |
| Marine Parkway Bridge | 10 | 14 | 1 | 0 | 0 | 7,737 | 83 | 7,820 |
| Cross Bay Bridge | 17 | 16 | 2 | 0 | 0 | 7,362 | 133 | 7,495 |
| Total | 4,649 | 554 | 216 | 2 | 3 | 302,059 | 3,582 | 305,639 |
| Percent of Paid Vehicles | 1.5% | 0.2% | 0.1% | 0.0% | 0.0% | 100.0% | | |

Notes: Totals may not add due to rounding.

(a) Westbound traffic doubled.

(b) Truck passage prohibited.

(c) Includes police, fire and other emergency vehicles and TBTA vehicles.

Source: TBTA

Monthly Traffic, 2006

Monthly traffic variations on the nine crossings are normally attributed to several factors. Traffic volumes historically have been weather-related, e.g., severe winter weather may result in lower volumes. Conversely, traffic reaches its highest levels during the summer months when recreational travel peaks. Toll rate increases have also affected the traffic volumes in the aftermath of a toll increase. Furthermore, individual facilities can be affected by construction projects on adjacent arterials or competing bridges. The limited number of crossings in the region sustains the overall demand for TBTA’s bridges and tunnels. In addition to these normal impacts, there are extraordinary events such as the effects of September 11.

The data in Table 8 indicate that total traffic on the nine crossings in 2006 peaked in June. August was the second highest month in 2006. For the combined facilities, the monthly variations in 2006 ranged from 9 percent below the annual average in January and February to 6 percent above in June. This is indicative of a stable traffic mix comprised of a solid base of commuting and commercial traffic.

Table 8. Monthly Traffic Variations, 2006

| Month | Average Daily Toll-Paying Traffic | | | | | | | | | | Ratio to AADT |
|---------------------|-----------------------------------|------------------|-------------|----------------|----------------|----------------------------------|--------------|-------------|-----------|---------|---------------|
| | Throgs Neck | Bronx-Whitestone | Tri-borough | Queens Midtown | B’klyn Battery | Verrazano-Narrows ^(a) | Henry Hudson | Marine Pkwy | Cross Bay | Total | |
| January | 103,703 | 101,958 | 155,795 | 72,288 | 44,977 | 178,835 | 60,707 | 18,041 | 17,738 | 754,042 | 0.91 |
| February | 104,889 | 102,763 | 154,661 | 73,792 | 46,124 | 177,288 | 60,833 | 17,601 | 17,559 | 755,510 | 0.91 |
| March | 114,097 | 104,979 | 171,329 | 80,239 | 50,635 | 190,643 | 65,500 | 19,698 | 19,206 | 816,326 | 0.99 |
| April | 118,267 | 107,263 | 175,922 | 80,753 | 47,679 | 193,754 | 67,781 | 19,212 | 19,059 | 829,690 | 1.00 |
| May | 123,389 | 108,561 | 181,166 | 80,460 | 48,881 | 195,773 | 68,307 | 22,027 | 20,664 | 849,229 | 1.03 |
| June | 126,135 | 110,690 | 184,757 | 83,684 | 50,272 | 202,853 | 69,408 | 23,478 | 21,949 | 873,225 | 1.06 |
| July | 128,944 | 108,276 | 175,644 | 77,496 | 45,419 | 196,191 | 63,679 | 26,154 | 23,590 | 845,393 | 1.02 |
| August | 130,789 | 109,481 | 179,100 | 80,552 | 48,859 | 200,494 | 65,757 | 25,005 | 21,836 | 861,873 | 1.04 |
| September | 122,534 | 108,070 | 176,575 | 80,250 | 48,565 | 194,966 | 67,969 | 21,739 | 20,430 | 841,098 | 1.02 |
| October | 118,010 | 111,952 | 174,431 | 82,830 | 50,103 | 193,361 | 69,161 | 20,402 | 20,141 | 840,392 | 1.02 |
| November | 115,825 | 112,918 | 173,212 | 81,044 | 50,596 | 192,946 | 68,615 | 20,451 | 19,977 | 835,584 | 1.01 |
| December | 112,241 | 110,996 | 169,598 | 78,647 | 50,248 | 195,702 | 66,316 | 20,211 | 19,636 | 823,596 | 1.00 |
| AADT ^(b) | 118,318 | 108,186 | 172,777 | 79,359 | 48,541 | 192,824 | 66,188 | 21,197 | 20,168 | 827,558 | 1.00 |

Notes: May not add due to rounding.
 (a) Westbound traffic doubled.
 (b) Annual Average Daily Traffic

Changes in Monthly Traffic, 2005 to 2006

All of the traffic restrictions that were introduced at TBTA facilities following the September 11, 2001 attack have been removed. However, a ban on large commercial vehicles remains in effect at the Holland Tunnel. The recovery of traffic has differed considerably between the crossings depending on the timing of the lifting of restrictions, but by now, traffic at most facilities has returned to or exceeded pre-September 2001 levels. At the Brooklyn-Battery Tunnel, traffic volumes are below the 2000 level due to the loss of employment in lower Manhattan.

Table 9 lists the monthly traffic changes that have occurred between 2005 and 2006. Data are also compared for the first three months of 2006 and 2007.

Table 9. Changes in Monthly Traffic – 2005 to 2006

| Month | Percent Change Comparing 2006 Monthly Traffic to 2005 | | | | | | | | |
|--------------------------|---|------------------|------------|----------------|------------------|-------------------|--------------|----------------|------------------|
| | Throgs Neck | Bronx-Whitestone | Triborough | Queens Midtown | Brooklyn-Battery | Verrazano-Narrows | Henry Hudson | Marine Parkway | Cross Bay Bridge |
| January 2006 | 13.9% | -5.0% | 3.2% | 2.9% | 3.1% | 4.1% | 3.2% | 4.8% | 7.5% |
| February | 6.7 | -10.2 | -5.8 | -4.2 | -3.6 | -3.9 | -6.9 | -2.6 | 1.1 |
| March | 11.9 | -10.1 | 2.1 | 0.2 | 1.9 | 0.4 | -0.4 | 3.2 | 4.9 |
| April | 10.8 | -11.7 | 0.2 | -0.4 | -1.9 | -0.2 | -3.0 | -3.5 | -1.2 |
| May | 10.5 | -12.1 | 0.1 | -0.5 | -0.2 | -1.1 | 4.2 | 1.7 | 2.8 |
| June | 0.5 | -4.7 | -1.8 | -1.5 | -1.0 | -1.3 | -3.1 | -6.5 | -7.6 |
| July | 2.3 | -6.6 | -1.6 | -0.6 | -0.9 | -1.4 | -3.3 | 0.7 | 3.7 |
| August | 2.4 | -5.5 | 0.4 | 1.1 | 3.8 | 0.5 | -1.0 | 0.7 | 0.6 |
| September | 1.5 | -0.3 | 0.4 | 1.0 | 2.4 | 1.2 | 0.0 | -3.2 | -0.5 |
| October | 3.3 | 8.2 | 4.5 | 5.0 | 9.3 | 4.6 | 4.1 | 8.7 | 9.1 |
| November | -2.1 | 6.5 | 1.4 | 0.8 | 2.5 | 1.4 | -0.3 | 4.0 | 6.3 |
| December | 0.9 | 5.3 | 1.0 | 5.2 | 4.5 | 2.7 | 8.0 | 4.5 | 6.4 |
| Annual | 4.8 | -4.2 | 0.4 | 0.8 | 1.7 | 0.6 | 0.1 | 0.8 | 2.5 |
| January 2007 | 1.0 | 3.2 | 0.2 | 4.2 | 6.6 | 1.8 | 1.5 | 3.8 | 7.1 |
| February | -1.2 | 2.2 | 0.7 | 3.4 | 6.1 | 1.6 | 0.6 | 2.0 | 4.2 |
| March | -4.4 | 5.0 | -2.0 | 0.9 | 2.7 | -0.7 | -0.9 | 0.3 | 3.4 |
| 1 st 3 months | -1.6 | 3.5 | -0.4 | 2.7 | 5.0 | 0.9 | 0.3 | 2.0 | 4.9 |

Reasons for monthly traffic changes include:

- Continued construction on Bronx-Whitestone Bridge in 2005 caused shift to Throgs Neck Bridge, but note a re-shift back to the Bronx-Whitestone Bridge beginning in October 2006;
- Snow in December 2005 and an unusually mild December in 2006;
- Drop in traffic on Henry Hudson Bridge in May 2005 due to collapse of retaining wall adjacent to Henry Hudson Parkway near the Cloisters;
- Record heavy rains in October 2005 reduced vehicle volumes; and
- Record blizzard in February 2006.

Estimated Traffic and Toll Revenue, 2007

The development of the traffic and toll revenue estimates for 2007 took into account the forecast of normal growth. The results for 2006 fully reflected the effects of the toll increase implemented in 2005; therefore, no additional adjustments were necessary. The impacts in the long term, regarding the national and regional economies, projected employment in lower Manhattan and the traffic and revenue forecasts beyond 2007, are covered in the following chapters of the report. In developing the traffic and toll revenue estimates for 2007, we assumed that traffic

changes for 2006 to 2007 would be at the same rate as the change in traffic for the last six months of 2005 to the same period in 2006. By using this time period, the impacts of the 2005 toll increase reflected in traffic for the first half of 2006 were not included in the analysis. The forecast for the Bronx-Whitestone Bridge and the Throgs Neck Bridge was adjusted to reflect construction at the Bronx-Whitestone Bridge. The forecasted percent changes are shown in Table 10. The percentages reflect normal growth and ongoing construction projects.

Table 10. Estimated Changes in Annual Traffic – 2006 to 2007

| Facility | Percent Change |
|--|----------------|
| Throgs Neck Bridge ^(a) | -0.1% |
| Bronx-Whitestone Bridge ^(a) | 1.8 |
| Triborough Bridge | 0.3 |
| Queens Midtown Tunnel | 1.3 |
| Brooklyn-Battery Tunnel | 3.1 |
| Verrazano-Narrows Bridge | 1.0 |
| Henry Hudson Bridge | 0.5 |
| Marine Parkway-Gil Hodges Mem. Bridge | 1.1 |
| Cross Bay Veterans Memorial Bridge | 2.8 |

(a) Due to the effects of construction on the Bronx-Whitestone Bridge, analysis of these two bridges was combined.

The traffic and toll revenue estimates for 2007 are presented in Table 11.

Table 11. Estimated 2007 Toll-Paying Traffic and Toll Revenue

| Facility | Traffic (000s) | Average Toll | Revenue (000s) |
|--------------------------|----------------|--------------|----------------|
| Throgs Neck Bridge | 43,129 | \$5.18 | \$ 223,459 |
| Bronx Whitestone Bridge | 40,197 | 4.72 | 189,728 |
| Triborough Bridge | 63,281 | 4.57 | 289,296 |
| Queens Midtown Tunnel | 29,351 | 4.39 | 128,765 |
| Brooklyn Battery Tunnel | 18,265 | 4.17 | 76,149 |
| Verrazano-Narrows Bridge | 71,093 | 3.89 | 276,874 |
| Henry Hudson Bridge | 24,276 | 1.86 | 45,119 |
| Marine Parkway Bridge | 7,823 | 1.49 | 11,664 |
| Cross Bay Bridge | 7,568 | 1.58 | 11,956 |
| Total | 304,982 | \$4.11 | \$1,253,012 |

The 1.0 percent increase in traffic and the overall increase in revenue of 0.9 percent reflect actual performance through March 31, 2007 and anticipated growth for the remainder of the year.

Table 11 provides the transition between the historical traffic and revenue data presented on the preceding pages and the 10-year forecasts in Tables 19 and 20. The methodology used to develop the estimated growth rates starting in 2008 is discussed under the “Projected Traffic, Revenue and Expenses” section of this report.

Operating Expenses 1996 to 2006

Table 12 displays the historical operating expenses for the TBTA facilities from 1996 through 2006. TBTA divides operating expenses into two major categories: Labor and Non-labor. Labor includes salaries, overtime and fringe benefits, net of capital reimbursements. Maintenance, outside services, insurance, Coliseum operations (until its sale in 1999), TBTA’s share of the *E-ZPass* Customer Service Center, and other non-personnel expenses are included in Non-labor.

TBTA labor expenses increased from \$109.3 million in 1996 to \$183.3 million in 2006. A significant part of this increase was due to the creation of 265 new security positions after the events of September 11, 2001. Because of the introduction of the *E-ZPass* system, TBTA was able to eliminate over 200 bridge and tunnel officer positions through attrition with *E-ZPass*, and these reductions were the primary offset to growth in wage and fringe benefit expenses in recent years.

Non-labor expenses increased from \$95.9 million in 1996 to \$169.6 million in 2006. The primary driving factors in TBTA’s Non-labor expense growth were inflation, an increase in major maintenance and bridge painting activities; and costs associated with *E-ZPass* including, particularly, the issuance of new tags and replacement of tags that will soon reach the end of their service life.

Timing of major expenses and extraordinary items has also resulted in some year-to-year fluctuations. An enhanced bridge painting program, including lead paint removal, implemented as part of TBTA’s effort to extend the useful life of the structural elements of its facilities, began to increase Non-labor expenses starting in 1995.

E-ZPass startup costs for tags and customer service center operations were primarily responsible for Non-labor growth in 1996 and 1997. In 1998, *E-ZPass* startup costs eased and bridge painting activities were delayed due to an extensive evaluation of contractor experience. Resumption of the planned level of bridge painting increased Non-labor costs in 1999, and rental expenses for TBTA administrative offices at 2 Broadway that were formerly in the New York Coliseum office building increased Non-labor costs in 1999 and 2000.

Table 12. Historical Operating Expenses: 1996 to 2006

| Year | Operating Expenses (000s) | | | Percent Change ^(c) |
|------|---------------------------|--------------------------|-----------|-------------------------------|
| | Labor ^(a) | Non-Labor ^(b) | Total | |
| 1996 | \$109,256 | \$95,915 | \$205,171 | – |
| 1997 | 111,651 | 112,222 | 223,873 | 9.1% |
| 1998 | 106,603 | 101,587 | 208,190 | –7.0 |
| 1999 | 107,430 | 120,561 | 227,991 | 9.5 |
| 2000 | 112,256 | 129,002 | 241,258 | 5.8 |
| 2001 | 123,316 | 133,198 | 256,514 | 6.3 |
| 2002 | 140,967 | 159,229 | 300,196 | 17.0 |
| 2003 | 159,976 | 169,039 | 329,015 | 9.6 |
| 2004 | 158,403 | 160,811 | 319,214 | –3.0 |
| 2005 | 173,549 | 170,123 | 343,672 | 7.7 |
| 2006 | 183,268 | 169,642 | 352,910 | 2.7 |

Notes:

- (a) Includes salaries, overtime and fringe benefits, net of capital reimbursements.
- (b) Non-labor includes the following categories: maintenance and supplies, outside services, insurance, power, leases and rentals and other expenses.
- (c) For discussion on expense fluctuations, see preceding text.

Source: TBTA

The 2001-2003 numbers reflect the additional expenses that were incurred in the aftermath of the attack on the World Trade Center. TBTA describes the added expenses as overtime labor costs for security, cleanup costs for the Brooklyn-Battery Tunnel and Battery Parking Garage, and emergency electricity generation for the Brooklyn-Battery Tunnel. Also included are costs associated with overtime incurred by represented employees required to make up for lost time as a result of the temporary closure of 2 Broadway. Some of the increases associated with these additional costs have been reimbursed to TBTA through MTA from a combination of insurance proceeds and emergency grants from the Federal Emergency Management Agency (FEMA).

The 2002 results reflect the additional expenses incurred after the terrorist attack that include an upgrade of communication and electrical systems and the replacement of a radio communication system. Also included is a delay in bridge painting from 2001 to 2002, additional security at all facilities, and *E-ZPass* tag replacement.

The 2003 increase in Labor costs was caused by additional expenditures for security staff, worker’s compensation adjustments and health and welfare benefits rate increases. The 2003 increase in Labor costs was the result of the hiring of additional security staff, adjustments to worker’s compensation and increases in health and welfare fringe benefit rates. In non-labor expenses, increases due to major maintenance and bridge painting were partially offset by decreases in insurance costs, *E-ZPass* Customer Service Center costs and other business expenses.



In 2004, non-labor expenses were 4.9 percent lower than 2003 due to a decrease in the number of *E-ZPass* tag purchases. In 2005, expenses reflected a continuation of the security measures noted above, *E-ZPass* tag replacement, and increases in major maintenance and bridge painting, offset by a reduction in 2 Broadway lease charges. Labor costs increased in 2006 primarily due to rising payroll, pension and health and welfare expenses. Regarding non-labor expenses, increased funding for additional bridge painting needs in 2006 was offset by a decrease in *E-ZPass* tag purchases and lower insurance costs.

2007 Budget

Operating expenses have been budgeted by TBTA for 2007 at \$407.8 million and include nonrecurring cost estimates associated with the transition to a new contract for the *E-ZPass* Customer Service Center. These expenses are divided into the following two categories: Labor of \$192.8 million and Non-labor at \$215.0 million.

FACTORS AFFECTING TRAFFIC GROWTH

The previous section of the report set forth the historical traffic, revenue and expense data for the nine TBTA bridges and tunnels. Before developing the forecasts, several factors affecting future traffic were considered, including projected growth (population and other demographics), TBTA and regional construction impacts, capacity constraints in the regional highway network, and toll and elasticity impacts. *E-ZPass* improvements were discussed previously on pages 7,8 and 9. This section of the report concludes with a summary of the assumptions and conditions upon which the traffic and toll revenue forecasts were based.

Employment, Population and Motor Vehicle Registrations

Regional demographic data providing information on long-term trends are maintained by the New York Metropolitan Transportation Council (NYMTC). Information from NYMTC regarding employment and population history and projections from 1970 to 2020 is included in the following tables. In general, traffic volumes in the region are affected by changes in employment and population. Normally the demand on the TBTA facilities tends to be less influenced by regional demographic trends because water crossings are limited. Another indicator of trends in traffic volumes is motor vehicle registrations, which have continued on an upward trend since 1970 in the tri-state region. To better understand how these indicators may influence traffic volumes on the TBTA crossings, URS reviewed historical trends and forecasts by NYMTC and others.

Employment Trends and Projections

Jobs traditionally influence traffic generation. Generally, when the economy is robust and jobs are plentiful, there is an increase in traffic. Conversely, when employment trends are downward, traffic volumes generally decline.

The long-term trend in employment in the region is shown in Table 13. A downward trend in employment occurred between 1970 and 1980 in New York City. Jobs declined by 1.2 percent per year, from 4,084,000 in 1970 to 3,627,000 in 1980. Staten Island, where employment increased by 3.4 percent per year, was the exception. The most recent employment forecasts were released by NYMTC in September 2004. Year 2000 census data show that employment was the highest it has been since 1970. Projections show a slight decline in 2005 followed by steady growth through 2020.

Between 1970 and 2000, employment increased in the New York suburbs, in Northern New Jersey and in Southern Connecticut. NYMTC projected that employment in the region as a whole, would grow during the forecast period through 2015, in the range of 0.3 to 1.1 percent annually.

In the New York Metropolitan Statistical Area (MSA), the preliminary unemployment rate for 2006 was 4.5 percent, down from the 4.9 percent in 2005 as reported by the Bureau of Labor Statistics. The unemployment rate has been generally decreasing since hitting a high of 6.6 percent in September 2003. These data correspond with the Class A commercial real estate vacancy

rates for Manhattan from the City of New York’s Office of Management and Budget. Vacancy rates were at their peak in mid-2003 and have since experienced steady decline. In 2006, the vacancy rate stood at 6.3 percent, and asking rents jumped 30 percent. The real estate industry anticipates that vacancy rates will decrease over the next four years to an estimated 5.3 percent in 2011 and employment will increase 0.9 percent per year during that time period. This estimate is slightly more conservative than NYMTC’s as shown in Table 13.

Table 13. Employment Trends and Projections
(000s)

| Year | New York City | | | | | | New York Region ^(b) | New Jersey Region ^(c) | Connecticut Region ^(d) |
|-------------------------------|---------------|-------|----------|--------|---------------|----------------------|--------------------------------|----------------------------------|-----------------------------------|
| | Manhattan | Bronx | Brooklyn | Queens | Staten Island | Total ^(a) | | | |
| 1970 | 2,654.9 | 247.3 | 592.2 | 543.1 | 45.9 | 4,083.7 | 1,493.8 | 2,182.4 | 731.5 |
| 1980 | 2,364.8 | 211.9 | 485.7 | 499.7 | 64.4 | 3,626.6 | 1,843.7 | 2,466.6 | 874.0 |
| 1990 | 2,565.1 | 237.8 | 504.5 | 567.3 | 91.6 | 3,966.1 | 2,231.1 | 2,899.0 | 1,028.0 |
| 2000 | 2,682.2 | 269.4 | 584.6 | 624.1 | 116.9 | 4,277.3 | 2,422.5 | 3,158.4 | 1,064.9 |
| 2005 - Projected | 2,545.8 | 282.0 | 590.5 | 635.4 | 123.4 | 4,177.1 | 2,491.7 | 3,241.6 | 1,072.2 |
| 2010 - Projected | 2,737.7 | 295.5 | 621.6 | 668.3 | 137.4 | 4,460.4 | 2,611.8 | 3,394.9 | 1,135.3 |
| 2015 - Projected | 2,850.1 | 307.1 | 650.0 | 693.3 | 150.1 | 4,650.7 | 2,732.9 | 3,550.8 | 1,174.4 |
| 2020 - Projected | 2,966.7 | 320.2 | 681.8 | 718.5 | 162.5 | 4,849.6 | 2849.3 | 3735.7 | 1,207.8 |
| Average Annual Percent Change | | | | | | | | | |
| 1970 to 1980 | -1.2% | -1.5% | -2.0% | -0.8% | 3.4% | -1.2% | 2.1% | 1.2% | 1.8% |
| 1980 to 1990 | 0.8 | 1.2 | 0.4 | 1.3 | 3.6 | 0.9 | 1.9 | 1.6 | 1.6 |
| 1990 to 2000 | 0.4 | 1.3 | 1.5 | 1.0 | 2.5 | 0.8 | 0.8 | 0.9 | 0.4 |
| 2000 to 2005 | -1.0 | 0.9 | 0.2 | 0.4 | 1.1 | -0.5 | 0.6 | 0.5 | 0.1 |
| 2005 to 2010 | 1.5 | 0.9 | 1.0 | 1.0 | 2.2 | 1.3 | 0.9 | 0.9 | 1.2 |
| 2010 to 2015 | 0.8 | 0.8 | 0.9 | 0.7 | 1.8 | 0.8 | 0.9 | 0.9 | 0.7 |
| 2015 to 2020 | 0.8 | 0.8 | 1.0 | 0.7 | 1.6 | 0.8 | 0.8 | 1.0 | 0.6 |

- Notes: (a) Totals may not add due to rounding.
 (b) Consists of the following counties: Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk and Westchester.
 (c) Consists of the following counties: Bergen, Essex, Hudson, Middlesex, Monmouth, Morris, Passaic, Somerset and Union.
 (d) Consists of the following counties: Fairfield, Litchfield, New Haven.

Source: New York Metropolitan Transportation Council, September 2004.

A review of historical traffic demand for the TBTA crossings indicated that volumes did fluctuate system-wide during the 1970s and increased through the 1980s. During the 15-year period from 1985 to 2000, and again in 2003 and 2005, fluctuations occurred in response to toll increases, when traffic declined while revenues increased.

Population Trends and Projections

Between 1970 and 1980, population in New York City declined in the Bronx, Brooklyn, Manhattan and Queens, but increased on Staten Island. For the five boroughs, population totaled 7.9 million in 1970 and 7.1 million in 1980, as displayed in Table 14. The 1990 Census indicated that there was a turnaround and population grew at an average annual rate of approximately 0.3 percent. The Census results for the year 2000 show the population of New York City grew by approximately one percent annually and now exceeds 8,000,000. Nearby New York and New

Jersey counties also show increased growth. In Connecticut, population increases were in Fairfield County, the closest county to the TBTA facilities.

Table 14. Population Trends and Projections
(000s)

| Year | New York City | | | | | | New York Region ^(b) | New Jersey Region ^(c) | Connecticut Region ^(d) |
|-------------------------------|---------------|-------|----------|--------|---------------|----------------------|--------------------------------|----------------------------------|-----------------------------------|
| | Manhattan | Bronx | Brooklyn | Queens | Staten Island | Total ^(a) | | | |
| 1970 | 1,539 | 1,472 | 2,602 | 1,987 | 296 | 7,895 | 4,178 | 5,066 | 1,682 |
| 1980 | 1,428 | 1,169 | 2,231 | 1,891 | 352 | 7,072 | 4,314 | 4,915 | 1,725 |
| 1990 | 1,488 | 1,204 | 2,301 | 1,952 | 379 | 7,323 | 4,401 | 5,008 | 1,806 |
| 2000 | 1,537 | 1,333 | 2,465 | 2,229 | 444 | 8,008 | 4,681 | 5,431 | 1,889 |
| 2005 - Projected | 1,583 | 1,367 | 2,515 | 2,273 | 471 | 8,209 | 4,882 | 5,614 | 1,958 |
| 2010 - Projected | 1,626 | 1,391 | 2,566 | 2,334 | 495 | 8,412 | 5,060 | 5,726 | 2,016 |
| 2015 - Projected | 1,651 | 1,432 | 2,622 | 2,445 | 524 | 8,674 | 5,196 | 5,850 | 2,078 |
| 2020 - Projected | 1,676 | 1,485 | 2,688 | 2,611 | 554 | 9,014 | 5,349 | 5,993 | 2,292 |
| Average Annual Percent Change | | | | | | | | | |
| 1970 to 1980 | -0.7% | -2.3% | -1.5% | -0.5% | 1.7% | -1.1% | 0.3% | -0.3% | 0.3% |
| 1980 to 1990 | 0.4 | 0.3 | 0.3 | 0.3 | 0.7 | 0.3 | 0.2 | 0.2 | 0.5 |
| 1990 to 2000 | 0.3 | 1.0 | 0.7 | 1.3 | 1.6 | 0.9 | 0.6 | 0.8 | 0.5 |
| 2000 to 2005 | 0.6 | 0.5 | 0.4 | 0.4 | 1.2 | 0.5 | 0.8 | 0.7 | 0.7 |
| 2005 to 2010 | 0.5 | 0.3 | 0.4 | 0.5 | 1.0 | 0.5 | 0.7 | 0.4 | 0.6 |
| 2010 to 2015 | 0.3 | 0.6 | 0.4 | 0.9 | 1.1 | 0.6 | 0.5 | 0.4 | 0.6 |
| 2015 to 2020 | 0.3 | 0.7 | 0.5 | 1.3 | 1.1 | 0.8 | 0.6 | 0.5 | 2.0 |

- Notes: (a) Totals may not add due to rounding.
 (b) Consists of the following counties: Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk and Westchester.
 (c) Consists of the following counties: Bergen, Essex, Hudson, Middlesex, Monmouth, Morris, Passaic, Somerset and Union.
 (d) Consists of the following counties: Fairfield, Litchfield, New Haven.
 Source: New York Metropolitan Transportation Council.

NYMTC’s latest population projections for the region for 2005 to 2020 were prepared in 2004. NYMTC projects steady population growth throughout the region ranging from 0.2 percent to 1.1 percent.

With the 2000 Census exceeding previous expectations and population increases region-wide, population growth should have a positive effect on traffic demand on the TBTA crossings. NYMTC’s most recent projection is for a population of over 9 million for New York City in 2020.

Motor Vehicle Registrations

One of the indicators of traffic stability and/or growth in an area is the trend in the number of motor vehicle registrations. As shown in the following table, motor vehicle registrations increased slightly for the period 2000 through 2006 in New Jersey, decreased slightly in New York City and remained relatively constant throughout New York State. The most recent data available indicate that between 2000 and 2006 vehicle registrations grew by an average annual rate of growth of 1.2 percent in New Jersey. In Connecticut, registrations increased between

2005 and 2006, continuing an upward trend. From 2000 to 2006, registrations in Connecticut grew at an average rate of 1.6 percent per year. These data are illustrated in Table 15.

Motor vehicle registrations are not projected for future years. However, based on past trends, it is expected that growth will continue in regional motor vehicle registrations in parallel with the demographic indicators.

Table 15. Motor Vehicle Registrations
(000s)

| Year | New York City | New York State ^(a) | New Jersey | Connecticut |
|-----------------------|---------------|-------------------------------|------------|-------------|
| 2000 | 2,044 | 10,661 | 5,951 | 2,735 |
| 2001 | 2,025 | 10,707 | 6,113 | 2,796 |
| 2002 | 1,946 | 10,445 | 6,275 | 2,893 |
| 2003 | 1,869 | 10,414 | 6,320 | 2,928 |
| 2004 | 1,849 | 10,450 | 6,361 | 2,989 |
| 2005 | 1,857 | 10,477 | 6,375 | 3,011 |
| 2006 | 1,833 | 10,551 | 6,406 | 3,016 |
| Average Annual Growth | | | | |
| 2000-2006 | -1.8% | -0.2% | 1.2% | 1.6% |

Notes: (a) Including New York City.

Sources: New York State Department of Motor Vehicles, Connecticut Department of Motor Vehicles and New Jersey Department of Motor Vehicles.

In summary, generally, employment indicators overall seem to have had a more noticeable effect on traffic volumes on the TBTA facilities than population growth. However, regional demographic trends are not always independently discernable relative to the yearly traffic variations. As discussed throughout this report, demand for the TBTA facilities has been strong overall, and NYMTC’s regional population projections indicate an increasing trend throughout the forecast period. With regard to employment, a return to previous levels is anticipated within the short term with steady growth for the next 10 years.

Fuel Conditions

The availability and pricing of motor fuel has historically affected the use of TBTA facilities. During the previous 35 years, fluctuations in traffic volumes occurred when fuel was either in short supply and/or prices increased rapidly. These conditions existed in 1973-1974, the summer of 1979, during the first war in the Persian Gulf in 1990-1991 and most recently during the second war in the Persian Gulf and in the aftermath of Hurricane Katrina.

In 1974, while the economy slowed and fuel prices rose, there was a 4.9 percent decline in TBTA traffic and lowering of traffic growth rates from 3.8 percent prior to 1974 to 1.5 percent after 1974. Succeeding fuel shortages caused temporary traffic decreases that resulted in no permanent effects on traffic growth in subsequent years.

In the aftermath of the 1973-1974 Oil Embargo, the United States established the Strategic Petroleum Reserve (SPR) to provide protection against such short-term disruptions to petroleum supplies. In the most recent drawdown, the SPR sold 11 million barrels and gave 9.8 million barrels in an emergency loan in response to Hurricane Katrina, which mitigated gasoline prices that exceeded \$3.00 per gallon in September and October of 2005. Gasoline prices spiked after Hurricane Katrina hit the Gulf Coast and temporarily closed eleven of the twenty oil refineries in the Gulf. During the first week of September 2005, the retail price for regular gasoline for the United States was \$3.07 per gallon representing a 66 percent increase from the same week in 2004. Prices gradually decreased to a low point of \$2.15 per gallon by the first week of December 2005.

U.S. gasoline prices again reached \$3.04 in the first week of August 2006. Prices in the New York City area were over \$3.00 per gallon throughout the summer, reaching \$3.13 during the last week of July. As of May 21, 2007, the average price for a gallon of regular gasoline in the U.S. was \$3.22—up \$0.33 per gallon (11.4 percent) from a year ago. The price in the New York City area was \$3.10 per gallon, an increase of \$0.06 per gallon (2.0 percent) from the same time last year. The \$3.22 per gallon still falls short of the all time high, set in March 1981, when a gallon of regular gasoline cost \$3.29 in today's (May 2007) dollars.

Such fluctuations in gasoline prices have increased substantially since 1998. According to the Energy Information Administration (EIA): world oil market conditions, growth in U.S. demand, and ongoing implementation of domestic fuel quality requirements are expected to keep consumer prices for motor fuel high in 2007. It is anticipated that there may be future increases in gasoline prices due to increases in crude oil prices triggered by potential unrest in producing areas, and because of supply adjustments due to phaseout of the additive MTBE. MTBE is being replaced with ethanol, but there are doubts within the Energy Department and the oil industry about whether there will be enough of the corn-derived fuel to meet the anticipated surge in demand and whether the country's distribution system is ready to handle it. Conversely, U.S. refinery capacity is being increased, and refineries in the Netherlands and United Kingdom are supplying more gasoline to the U.S. since more Europeans are switching to diesel.

Other factors putting upward pressure on fuel prices are:

- Gasoline consumption is expected to continue to grow, albeit at moderate rates;
- Gasoline quality requirements under the U.S. Environmental Protection Agency's (EPA) Tier 2 Vehicle and Gasoline Sulphur Program mandate further reduction in sulphur content. EPA estimates that the sulphur program will cost the refining industry about 2 cents per gallon to produce low-sulphur gasoline;
- Higher diesel fuel prices are also expected because of the additional cost of producing ultra-low-sulphur diesel fuel;
- Hurricanes and tropical storms with a potential to cause significant outages could add to the volatility of prices of motor fuel.

During 2006, transactions on TBTA facilities increased, after decreases in 2005 due to the increase in tolls in March, record rainfall in October and snow in December. While gasoline

prices rose to over \$3.00 per gallon in September 2005, the effect the higher gas prices had on transactions was slight and seemed only to appear on Labor Day weekend and the following weekend.

From 1995 to 2000, TBTA traffic increased 2.3 percent per year when gasoline prices were relatively stable; whereas from 2000 to 2006 TBTA traffic increased 0.3 percent per year while New York gasoline prices increased 14 percent per year. (One toll rate increase occurred in 1996 during the first period, and two during the second period—in 2003 and 2005).

Gasoline prices are now slightly over \$3.00 per gallon. If this level is exceeded for a prolonged period of time, it may have an effect on travel in the region. Discretionary travel (vacation and recreational trips) may decline. Most of the trips on the TBTA facilities, however, are commuter or work-oriented, so there should not be a significant change in work travel unless the price increases continue at a rate comparable to previous years.

According to the EIA Short-Term Energy Outlook, released May 8, 2007:

Continuing problems for refineries in the United States and abroad, combined with strong global gasoline demand, have raised our projected average summer gasoline price by 14 cents per gallon from our last Outlook. Retail regular grade motor gasoline prices are now projected to average \$2.95 per gallon this summer compared with the \$2.84 per gallon average of last summer.

This projection assumes no significant unplanned refinery outages or crude oil production losses.

Some motorists are offsetting higher gasoline prices by purchasing more efficient vehicles.

Toll Impacts and Elasticity

Tolls that are increased periodically affect traffic usage, especially if they outpace the rate of inflation, as they have on the TBTA facilities, as well as in those instances where competing facilities provide a good alternative. Elasticity, as used herein, is the relationship between traffic volume and the toll rate change, and represents the relative decrease in traffic corresponding to a given increase in toll. Elasticity is expressed as a negative value and the higher the absolute value, the more apt a facility is to lose traffic, which can be due to diversions to competing facilities, switches in travel modes, consolidation of trips and elimination of trips.

URS developed a set of elasticity factors for each of the TBTA crossings based on twelve toll increases between 1997 and 2005. Elasticity, in this sense, is used to analyze the relationship between tolls and use, i.e., when tolls are increased, motorists react and travel patterns may change. The elasticity factors are shown in Table 16.

Table 16. Elasticity Factors

| Location | Elasticity Factors |
|------------------------------|--------------------|
| Bronx-Whitestone/Throgs Neck | -0.105 |
| Brooklyn-Battery Tunnel | -0.358 |
| Cross Bay Bridge | -0.137 |
| Henry Hudson Bridge | -0.289 |
| Marine Parkway Bridge | -0.101 |
| Queens Midtown Tunnel | -0.192 |
| Triborough Bridge | -0.208 |
| Verrazano-Narrows Bridge | -0.126 |

Note: For each 1% increase in toll the volume is expected to decrease by the elasticity factor; e.g. for each 1% increase in the toll at the Queens-Midtown Tunnel, volume would decrease by .192%.

Elasticity factors vary, demonstrating that users react differently to toll increases depending on influencing conditions. On the TBTA crossings, elasticity tends to be influenced by the proximity of the toll-free City bridges and other considerations. The low factors for the Throgs Neck and Bronx-Whitestone bridges indicate their relative isolation from the nearest toll-free competitor, the Queensboro Bridge. Further south on the East River at the Triborough Bridge and the Queens Midtown and Brooklyn-Battery tunnels, elasticity increases as the degree of toll-free competition increases. The TBTA tunnels tend to lose traffic particularly when the competing crossings are operating under reasonable levels of traffic service and providing motorists with viable toll-free alternatives during non-peak periods. In addition, trip purpose influences demand, i.e., peak-period, work-related trips are less elastic than off-peak trips that have fewer travel-time constraints.

If the historical toll increase patterns continue, it can be expected that tolls will be increased again during the forecast period (through 2017). Accordingly, for the purposes of projecting traffic and toll revenue, URS has prepared two sets of forecasts: one at constant tolls (at the present level); and the other with toll increases assumed by URS in January 2009, 2012 and 2015. The foregoing does not reflect TBTA adopted policy.

For the toll-increase alternative, it was assumed that the toll levels (i.e., the cash toll for passenger cars) on the major and minor crossings would be increased to \$5.00 and \$2.50, respectively, in January 2009. Further, it was assumed that cash passenger car toll increases of \$0.50 on the major crossings and \$0.25 on the minor crossings (with commensurate increases for other vehicle classes) would be implemented in January 2012 and 2015. It was also assumed that the truck tolls would be increased proportionately, and that the relationship between cash and *E-ZPass* tolls for passenger cars would remain the same: \$0.50 lower than the respective cash tolls on the major crossings, \$1.00 on the Verrazano Narrows Bridge, \$0.50 on the Henry Hudson Bridge and \$0.75 on the Cross Bay Veterans Memorial and Marine Parkway-Gil Hodges Memorial bridges.

This is consistent with the experience of the March 2005 toll increase. The percent changes are shown in Table 17.

As for the impacts of the toll increases on traffic demand, the elasticity factors from Table 16 as described above were used to calculate traffic decreases as shown in Table 17. It was assumed the toll increases described previously would occur on January 1, 2009, 2012 and 2015. These traffic impacts represent the reduction in values from the corresponding annual traffic levels that would be expected if the tolls were not increased.

Table 17. Estimated Percent Change in Average Toll Rates and Traffic

| Facility | Elasticity Factor | 2009 | | 2012 | | 2015 | |
|-------------------------------------|-------------------|-------|---------|-------|---------|------|---------|
| | | Toll | Traffic | Toll | Traffic | Toll | Traffic |
| Bronx-Whitestone/Throgs Neck Bridge | -0.105 | 11.9% | -1.3% | 10.6% | -1.1% | 9.6% | -1.0% |
| Brooklyn-Battery Tunnel | -0.358 | 12.1 | -4.3 | 10.7 | -3.8 | 9.7 | -3.5 |
| Cross Bay Bridge | -0.137 | 17.2 | -2.3 | 14.3 | -2.0 | 12.5 | -1.7 |
| Henry Hudson Bridge | -0.289 | 13.2 | -3.8 | 11.6 | -3.3 | 10.4 | -3.0 |
| Marine Parkway Bridge | -0.101 | 17.1 | -1.7 | 14.2 | -1.4 | 12.5 | -1.3 |
| Queens Midtown Tunnel | -0.192 | 12.0 | -2.3 | 10.7 | -2.1 | 9.7 | -1.9 |
| Triborough Bridge | -0.208 | 11.9 | -2.5 | 10.6 | -2.2 | 9.5 | -2.0 |
| Verrazano Narrows Bridge | -0.126 | 14.3 | -1.8 | 12.3 | -1.5 | 10.9 | -1.4 |

The periodic toll increases indicated above were selected by URS to provide increases for cash passenger cars of \$0.50 on the major crossings and \$0.25 on the minor crossings, implemented periodically in line with corresponding increases in inflation. These increases have been assumed by URS for forecasting purposes only and are not adopted TBTA policy. For the purposes of this analysis, it has been assumed that the annual rate of inflation over the forecast period will be three percent.

Bridge and Tunnel Capacities

URS assessed the peak-hour capacity level of each facility at the mid-point of the bridge or tunnel, based on a highway-type capacity analysis. We recognize, however, that the TBTA bridges and tunnels have different physical and operational characteristics than do highways. Therefore, in our capacity assessment, we considered operational factors such as ramp approaches, vehicle merges, grades, sight lines, lane widths, lack of shoulders, and vehicle spacing and lane configuration at toll plazas, including *E-ZPass* lanes.

The local street system feeding the TBTA crossings also becomes constrained during peak periods, with unstable traffic flows occurring on congested roadways.

We also reviewed toll plaza operations with the electronic toll payment system. Characteristics of the *E-ZPass* system are discussed throughout this report. The acceleration of vehicle throughput for *E-ZPass* customers has mitigated congestion at the toll plazas. With *E-ZPass* participation rate at 72.6 percent in 2006, and the customer base increasing, efficient toll plaza operations are anticipated throughout the forecast period.

Additionally, we have reviewed past annual traffic volumes at each facility for comparison with the current traffic levels. URS conducted this review (in early 2007), matching the 2006 traffic volumes against the highest annual volumes recorded, by facility, going back to 1970. Note in Table 18 that the Throgs Neck Bridge and the Queens Midtown Tunnel carried their highest volumes in 2006.

Table 18. Comparison of 2006 Traffic with Highest Recorded Levels Since 1970

| Facility | Highest Volume Since 1970 | | 2006 Volume* (000s) | 2006 Percent of Highest Volumes |
|------------------------------------|---------------------------|---------------|---------------------|---------------------------------|
| | Year | Volume (000s) | | |
| Throgs Neck Bridge | 2006 | 43,186 | 43,186 | 100% |
| Bronx - Whitestone Bridge | 2004 | 45,223 | 39,488 | 87 |
| Triborough Bridge | 1988 | 64,215 | 63,063 | 98 |
| Queens Midtown Tunnel | 2006 | 28,966 | 28,966 | 100 |
| Brooklyn-Battery Tunnel | 1971 | 22,920 | 17,718 | 77 |
| Verrazano-Narrows Bridge | 2002 | 73,361 | 70,381 | 96 |
| Henry Hudson Bridge | 2004 | 24,703 | 24,159 | 98 |
| Marine-Parkway- Gil Hodges Bridge | 1971 | 9,150 | 7,737 | 85 |
| Cross Bay Veterans Memorial Bridge | 1972 | 7,562 | 7,361 | 97 |

* From Table 5

While traffic volumes during peak hours may approach capacity and limit traffic growth during these hours, there is room for traffic growth during non-peak conditions through peak spreading. Traffic volumes can continue to grow, but growth would be at a slower pace.

TBTA and Regional Operational and Construction Impacts

Traffic volumes on TBTA facilities are influenced by construction and rehabilitation projects involving roadways and bridges in the New York City area.

Major projects that result in long-term closures on the competing bridges may increase volumes on TBTA’s facilities. Also, long-term lane closures on the roadway network serving the TBTA crossings or on the TBTA crossing themselves may affect TBTA traffic volumes or cause traffic to shift from the affected crossing to either another TBTA facility or to one of the City’s toll-free bridges. For example, when the replacement of the deck on the Bronx-Whitestone Bridge began in June of 2005, some traffic diverted to the Throgs Neck Bridge.

A number of roadway construction/rehabilitation projects, over the past few years, have influenced traffic volumes on TBTA facilities, and future construction will also affect traffic. The following descriptions also highlight area construction activities and measures that have influenced TBTA volumes and other planned and proposed projects that may affect traffic during the forecast period. Information on future construction activity was obtained from the New York

State Department of Transportation, New York City Department of Transportation, NYMTC, and the Port Authority of New York and New Jersey.

In general, the majority of construction activities programmed for the TBTA facilities themselves are scheduled to take place during off-peak hours, including nighttime lane closures in the tunnels. Therefore, they are expected to have no discernible effect on toll revenue.

- On the **Verrazano-Narrows Bridge**, the replacement of the upper level suspended deck is not likely to have major traffic impacts since a movable barrier will be used to allow maintenance of traffic in the peak flow direction, and because the lower deck will be unimpeded. The upper level deck replacement is expected to be included in the 2010-2014 Capital Program; there is no commitment to re-deck the lower level of the bridge.
- The **Cross Bay Veterans Memorial Bridge** superstructure/deck rehabilitation is scheduled to begin in 2007. The roadway is to be reduced to two lanes in each direction until May 2010. Due to low traffic volumes, this should not have a detrimental effect on traffic flows.
- The **Marine Parkway-Gil Hodges Memorial Bridge** will have nighttime closures for four weeks during 2007 as reconstruction is nearing completion.
- On the **Bronx-Whitestone Bridge**, the replacement of the deck on the suspended span with an orthotropic deck has been completed. Approach decks will be replaced in the Bronx in 2008, and in Queens are expected to be scheduled in the 2010-2014 Capital Program. Three lanes will be maintained in the peak direction, with two lanes in the reverse direction during staged construction.
- The **Throgs Neck Bridge** has multiple rehabilitation projects scheduled, including replacing the concrete deck. Installation of an orthotropic deck is expected to begin in 2015. With a contraflow lane, three lanes will be maintained in the peak direction. Cross Island Parkway ramp closures are scheduled to occur during 2008 (for 35 days on each ramp). It is anticipated that traffic will divert to the Bronx-Whitestone Bridge during these construction projects, or in the case of the Cross Island Parkway ramps, to the Clearview Expressway (Queens) approach to the Throgs Neck Bridge.
- Redecking of the lower level of the **Henry Hudson Bridge** is underway, with completion scheduled by 2010. Construction is staged to minimize traffic impacts. Replacement of the Upper Level Deck in the vicinity of the toll plaza is programmed for 2008.
- **Triborough Bridge** deck widening and repair on Wards and Randalls Islands and at the Bronx toll plaza requires off peak closures but no peak restrictions.
- **Queens-Midtown Tunnel** work on the Manhattan approach is nearing completion, with no traffic impacts expected.

Operational Changes Resulting from September 11, 2001

- The ban on eastbound commercial vehicles remains in effect at the Holland Tunnel. Commercial vehicles may now use the westbound Holland Tunnel to exit New York City.

Competing Ferry Service

- **New York Water Taxi** operates East River ferry service between Manhattan, Brooklyn and Queens on the following routes: Pier 11/Wall Street – Fulton Ferry Landing and Brooklyn Army Terminal; and East 34th Street – Hunters Point and Schaefer Landing, Service generally operates during peak periods.
- NYC Department of Transportation (NYCDOT) operates the **Staten Island Ferry** between the Battery and St. George. Ferries carry vehicles and passengers on frequent schedules around the clock. Additional weekend service began in 2006 with 30-minute service during the day.
- PlaNYC, as further described in the section on “Other Considerations” below, proposes to expand ferry service to growing waterfront communities.

Since ferries have limited or no capacity for vehicles, ferry services will not significantly affect TBTA facilities.

Competing East River Crossings Construction

- **Queensboro Bridge** – Since 1989, numerous rehabilitation projects have involved the upper or lower levels, or ramp approaches to the bridge. Miscellaneous items at various locations throughout the bridge, approaches and ramps that were not addressed or were deleted from previous contracts began in November of 2003. During 2006, the surface of both roadways of the upper level of Queensboro Bridge was removed and replaced. Cleaning and repainting structural steel of the main spans and approach roadways is scheduled to be completed in January 2009. Throughout the painting contract, the North Lower Outer Roadway may be partially closed while providing a five-foot access for bicyclists and pedestrians. Seismic retrofitting of the Queensboro Bridge is programmed to commence in 2012.
- **Williamsburg Bridge** – Miscellaneous rehabilitation of the main span began in March 2003 and is expected to be completed in June 2007. This project includes rehabilitation of tower bearings, truss system and steel structure of the towers, replacement or adjustment of cable suspenders, installation of maintenance travelers (inspection platforms) under the main span, and painting of stiffening trusses. The project also includes installation of an Intelligent Transportation System (ITS). The contractor is allowed to close two lanes for construction purposes, but always maintain four lanes in the peak travel direction. From October 2006 to October 2007, two lanes are made available (except for trucks and buses) by reversing the south inner roadway from 6 AM

to 10 AM weekdays, to help minimize the impact of closing the lower roadway of the Manhattan Bridge. Seismic retrofitting of the Williamsburg Bridge is programmed to commence in 2011.

- **Manhattan Bridge** - Replacement of the lower roadway is scheduled for completion in April 2008. The contract includes complete removal and replacement of the lower roadway and milling Sands Street in Brooklyn to create additional clearance for trucks. Closure of the lower roadway until October 2007 may be inducing some traffic to divert to the Brooklyn-Battery Tunnel and Williamsburg Bridge. Replacement of the Manhattan Bridge suspender ropes and rewrapping all cables is to begin in 2008, and seismic retrofitting is scheduled to begin in 2011.
- **Brooklyn Bridge** – Maintenance and inspection of the maintenance travelers on the main span of the Brooklyn Bridge is expected to be completed in 2008. At that time, rehabilitation of the approaches and ramps and the painting of the bridge is scheduled to begin. An Intelligent Transportation System is scheduled to be implemented after 2009. Seismic retrofitting of the Brooklyn Bridge is programmed to commence in 2012.

It is unlikely any of the TBTA facilities will gain materially from these construction projects but it is possible that the Brooklyn-Battery Tunnel will experience slightly higher usage levels.

Other Major Bridge and Roadway Construction

During the forecast period, several major roadway and bridge projects, which are part of NYMTC's Transportation Improvement Program (TIP) for 2008-2012, will potentially have traffic implications for the TBTA facilities. The TIP includes the planned year of construction; however, adherence to this schedule is not mandated. Some of these projects do not yet have lane closure plans, which will be developed in coordination with NYCDOT and local community boards. As a matter of policy, NYCDOT seeks to restrict lane closures to off-peak and nighttime hours.

Other bridges, roads and overpasses programmed for construction include:

- **Willis Avenue Bridge** – Connects the FDR Drive, Major Deegan Expressway and Bruckner Expressway. Construction of a new Willis Avenue Bridge started in March 2007 and is scheduled to be completed by March 2012. A new off-line bridge is to be constructed south of the existing bridge, which will be maintained in service until the new bridge is opened to traffic. Any restrictions on the Willis Avenue Bridge or approach ramps would induce some diversions to the Triborough Bridge.
- **Third Avenue Bridge** – Replacement of the span over the Harlem River was completed in 2006. All five lanes are open to traffic, and approaches in the Bronx have been restored. Whatever diversions to the Triborough Bridge that had occurred during reconstruction should have returned to routings based on normal driver preferences.

- **Broadway Bridge** — Rehabilitation of the Broadway Bridge over the Harlem River is scheduled to begin in 2010, which may divert some traffic to the Henry Hudson Bridge.
- **Madison Avenue Bridge** — Rehabilitation of the Madison Avenue Bridge over the Harlem River is scheduled to begin in 2011.
- **Major Deegan Expressway (I-87)** – Rehabilitation of various overpasses along the Major Deegan Expressway between 138th Street and Mosholu Parkway is scheduled for completion in 2009. Safety improvements northbound at West 230th Street are scheduled for 2008. Traffic impacts at the Triborough Bridge should not be significant.
- **Three Bridges** — The Three Bridges Project in the Bronx includes reconstruction of:
 - I-295 (Cross Bronx Extension) bridge over Randall Avenue;
 - East Tremont Ave. over I-295 (CBE); and
 - I-95 bridge over I-695 (Throgs Neck Expressway).

Reconstruction of these overpasses is expected to be fully completed by mid 2007. The first two projects necessitated the closing of one lane in each direction of the CBE between East Tremont Avenue and Randall Avenue during midday. This allowed for two lanes in each direction during peak hours. More lane closures occurred during the off-peak and night hours to facilitate project work. Motorists experienced lane closures on I-95 northbound and I-695 north and southbound during off-peak hours. Service roads in this area were subject to shifts to temporary lanes. Because of these construction projects, traffic may have shifted from the Throgs Neck Bridge to the Bronx-Whitestone Bridge or possibly the Triborough Bridge. Intelligent Transportation System (ITS) components were installed.

- **I-278 Gowanus Expressway Repair and Interim Deck Replacement** — The project includes replacement of the concrete deck and deteriorated elements, until a permanent improvement is constructed. Construction between the Brooklyn-Battery Tunnel and Sixth Avenue was scheduled for April 2007, but has not been completed. Brooklyn-Battery Tunnel approaches and Prospect Expressway construction are scheduled from summer 2008 to fall 2010. The Shore Parkway interchange is scheduled from 2009 to 2011. The project is being designed to minimize lane closures and traffic disruption. The Bus/HOV lane is being maintained from the Verrazano-Narrows Bridge to the Brooklyn-Battery Tunnel during the AM peak period, and a westbound Bus/HOV lane is to be operated from 2009 to 2010.
- **I-278 Brooklyn Queens Expressway** — Park Avenue Viaduct. New York State Department of Transportation (NYSDOT) began reconstruction of the Brooklyn Queens Expressway between Flushing Avenue and Sands Street in 2005, which is anticipated to be completed in 2009. Six travel lanes are available at all times except midnight to 5:00 AM.

- Reconstruction of the I-278 **Brooklyn Queens Expressway** cantilever section between Atlantic Avenue and Sands Street is programmed for design in 2010-2012.
- I-278 **BQE Kosciuszko Bridge** — New York State Department of Transportation completed the Draft Environmental Impact Statement for the Kosciuszko Bridge Project, with formal public hearings scheduled during April 2007. Alternatives provide for maintaining all lanes on the Brooklyn Queens Expressway and local connections, while constructing a replacement bridge. Construction is programmed to begin in 2012.
- Another phase of the I-278 **Brooklyn Queens Expressway** reconstruction project runs from 61st Street to Broadway in the Woodside area of Queens. Construction work begun in the spring of 2005 is estimated to be completed in the fall of 2008. During construction, three lanes will generally be available for travel in each direction with many lane shifts such as use of shoulders or use of median area to accommodate the rehabilitation projects. Lane closures, if necessary, will only occur at night. It is anticipated that traffic diversion from the Triborough Bridge to the Bronx-Whitestone Bridge will be insignificant.
- **Whitestone Expressway** bridge (I-678) over the Flushing River – Replacement of the northbound Whitestone Expressway bascule bridge is scheduled for completion in 2008, as well as a new exit ramp from Astoria Boulevard to Linden Place. One of three lanes is closed during off peak hours. Rehabilitation of the northbound and southbound Whitestone Expressway and construction of the new northbound Van Wyck Expressway ramp to the northbound Whitestone Expressway, as well as an Intelligent Transportation System, have been completed. There should be no significant effect on Bronx-Whitestone Bridge traffic.
- **Route 9A** – After Route 9A (West Street) was heavily damaged when the World Trade Center was attacked, a six lane temporary road was opened, allowing the Brooklyn-Battery Tunnel to re-open. Further construction to improve Route 9A to a six- to eight-lane urban highway is scheduled for completion in 2008. This will have a positive impact on traffic using the Brooklyn-Battery Tunnel as motorists achieve the comfort level with the permanent traffic patterns that will be in place after completion.
- **Long Island Expressway** (I-495) –Van Wyck Expressway to Grand Central Parkway — Preliminary engineering and Final Environmental Impact Statement are scheduled for completion in November 2007 and design in 2008-2009. Alternatives include: (1) rehabilitation of overpasses, or (2) rehabilitation plus three new connecting ramps.
- **Brooklyn Queens Expressway** (I-278) – **Grand Central Parkway** — Rehabilitation from 25th Avenue to 71st Street is scheduled to begin in 2009 and from Astoria Boulevard to 44th Street in 2010.
- **Clearview Expressway** (I-295) – **Grand Central Parkway** — Rehabilitation of interchange is scheduled to begin in 2010.

- **Van Wyck Expressway (I-678)** – Rehabilitation of Roosevelt Avenue bridge is underway through 2012.
- **Belt Parkway** – Provides access to the Verrazano-Narrows Bridge from southern Brooklyn, JFK Airport, Queens and the Long Island parkway system. Rehabilitation of bridges over two waterways (Mill Basin, Gerritsen Inlet) and two overpasses (Nostrand Avenue, Rockaway Parkway) are underway or scheduled for 2008-2014. Traffic impacts should be limited to detours or alternative access routes during off-peak periods, when construction severely limits capacity.
- **Staten Island Expressway (I-278)** – NYSDOT is operating exclusive bus lanes in both directions in the median of the Staten Island Expressway on a 24-hour/7-day basis, between Slosson Avenue and the Verrazano-Narrows Bridge toll plaza. A recent Bus Lane / Priority Lane Study analyzed the feasibility of extending the bus lanes west to the Goethals Bridge toll plaza; and allowing use of the lanes by high-occupancy vehicles (HOV3+). These improvements would provide alternatives to single-occupant automobile use, particularly during peak periods. Construction between Slosson Avenue and Victory Boulevard is programmed to begin in 2011. One of the feasible scenarios would allow off-peak and weekend use of the lanes by all traffic, which would make the Verrazano-Narrows Bridge more attractive to motorists at those times.
- **Staten Island Expressway (I-278)** access improvement between the Verrazano-Narrows Bridge toll plaza and Renwick Avenue is programmed for construction beginning in 2010, to include 5 new ramps, relocating/reconfiguring 3 ramps and adding auxiliary lanes. These improvements will improve traffic flows between the Staten Island Expressway and Verrazano-Narrows Bridge, as well as reduce accidents.
- **FDR Drive – 34th Street Viaduct** – Design of reconstruction of the FDR viaduct from East 24th to East 42nd Street is scheduled to begin in 2008. The project will reconstruct this section of the FDR to reasonable standards and improve safety. It is anticipated that the construction schedule will resemble the current project on the FDR extending from East 53rd to East 64th Streets.
- **Harlem River Drive** — Design of safety alignment improvements between East 116th and East 125th Streets is scheduled to begin in 2009, followed in 2011 by design of reconstruction between East 125th and East 132nd Streets including a new entrance ramp from Third Avenue onto southbound Harlem River Drive.
- **Henry Hudson Parkway** — The viaduct from West 72nd to West 82nd Streets is programmed for rehabilitation beginning in 2009.
- **Bruckner/Sheridan Expressway Interchange** - Preliminary engineering and Draft Environmental Impact Statement are currently underway on reconstructing the interchange of Bruckner Expressway (I-278) and Sheridan Expressway (I-895). The project

will relieve the four-lane bottleneck on the six-lane Bruckner Expressway and improve access to the Hunts Point peninsula. The scenarios include deconstructing the Sheridan Expressway. It is anticipated that construction will be completed by 2016. Traffic patterns to/from the Triborough Bridge would be altered somewhat, depending on the alternative selected.

- **I-278 – Gowanus Project** – For long-term improvements, NYSDOT and the Federal Highway Administration (FHWA) are now preparing a Draft Environmental Impact Statement. Several project alternatives are being explored: No-build/maintenance; relief viaduct; rehabilitation and tunnel. Construction is projected to begin in 2013 if funding is available, and to be finished by 2020-2022. It can be assumed that some traffic would divert to the Holland Tunnel from the Verrazano-Narrows Bridge and Brooklyn-Battery Tunnel.
- **Goethals Bridge Replacement (I-278)** – The Environmental Impact Statement is scheduled for completion in 2007. All alternatives would have six lanes. Construction might be completed by approximately 2015.
- **Staten Island Expressway–West Shore Expressway (I-278/NY-440) interchange** — Design of reconstruction is scheduled to begin in 2012. This project is to support potential Bus/HOV lanes on the Staten Island Expressway and reconstruction of the Goethals Bridge, and provide better connections to Howland Hook intermodal marine/rail/highway facilities.

The Goethals Bridge and Staten Island Expressway-West Shore Expressway improvements would positively affect traffic volumes on the Verrazano-Narrows Bridge.

- **Intelligent Transportation Systems** are scheduled to be installed beginning in 2008 in Brooklyn, including on the Gowanus Expressway (I-278), on State routes in Queens, on the New England Thruway (I-95), and fiber optic cable on the Henry Hudson Parkway. Substantial funds are programmed for ITS planning, coordination and management, and for operational support of NYCDOT's Traffic Management Center and Integrated Incident Management System. Active management of traffic and incidents should result in smoother flow on the highway system including TBTA facilities, and increase reliability and motorists' satisfaction.

Other Considerations

Other considerations in the development of traffic and revenue forecasts for the TBTA facilities include the potential impacts of PlaNYC and transit improvements in the metropolitan area.

- On April 22, 2007 Mayor Bloomberg announced **PlaNYC** which proposes congestion pricing in Manhattan along with transit improvements, including:

Provide more capacity for trips into Manhattan on **East River Bridges Bus/HOV Lanes** with priority given to the most space-efficient forms of transportation. New York City could dedicate roadway capacity on the three City-owned East River bridges that can accommodate buses (the Manhattan Bridge, Williamsburg Bridge and Queensboro Bridge) and high occupancy vehicles only. Access routes in Brooklyn and Queens may also be assigned bus lanes to ensure that buses would avoid congestion in accessing the bridges, buses could travel from areas of Brooklyn and Queens that now have limited transit service, cross the East River in a dedicated lane, and use the First and Second Avenue Bus Rapid Transit (BRT) system and other existing bus lanes in Manhattan. The bus and HOV lanes on the East River bridges could be in place by 2009.

Expand **ferry service** to growing waterfront communities.

Build a **rail link** to connect Lower Manhattan with Brooklyn, Jamaica, JFK Airport and Long Island.

Implement a **congestion pricing** system to reduce traffic in the Manhattan Central Business District (CBD) and surrounding areas and encourage people to use alternatives to private automobiles. Drivers would be charged for traveling on interior streets in Manhattan south of 86th Street, between 6 AM and 6 PM weekdays – \$8 for autos and \$21 for trucks. East River bridges would remain toll-free, as well as the FDR Drive and Route 9A. *E-ZPass* users paying bridge and tunnel tolls to enter the zone would be credited the amount of their round-trip tolls. Until the plan is more advanced in the legislative process, it is too early to estimate the traffic shifts, consolidations and diversions to transit that could occur; however, since there would be no change in tolls paid by motorists using the TBTA crossings, and East River bridges patrons would be charged, it is not anticipated that there will be a negative impact on traffic on TBTA crossings, and it could be positive.

- **Impact of Transit Improvements.** Significant transit improvements, when completed, are expected to affect TBTA traffic levels during the forecast period through the year 2017:

MTA Second Avenue Subway: Construction of Phase 1 started in April 2007 and is scheduled for completion in 2013. Service from new stations at 96th, 86th and 72nd Streets along Second Avenue will connect to the 63rd Street line. Phases 2, 3 and 4 will extend service to 125th Street and to Lower Manhattan by 2018 as funding becomes available, resulting in the creation of 16 new subway stations on Second Avenue. Four traffic lanes will be maintained through construction zones, and cross streets will be kept open.

The second section from 96th Street north to 125th Street is not yet funded and construction will probably be included in the 2010-2014 Capital Plan. Construction of the Second Avenue/34th Street station might result in a loss of capacity on the access routes to the Queens Midtown Tunnel due to inefficient flow during peak hours and closure of side streets adjacent to the construction area. During the construction on the

northern portion of Second Avenue adjacent to the Triborough Bridge, the ramps between the Triborough Bridge and 125th Street may experience a loss of capacity. The high-volume ramps between the FDR Drive and the Triborough Bridge would not be affected.

MTA/LIRR East Side Access: This project will result in a new connection from the LIRR mainline tracks in Queens under Sunnyside Yard, connecting to the 63rd Street Tunnel leading to Grand Central Terminal. New tunnels are being bored in Manhattan west from Second Avenue, then under Park Avenue and into the lower level of Grand Central Terminal. Completion is scheduled for 2013. MTA anticipates that some travelers to the East Side will shift to the LIRR from other modes, including TBTA facilities.

Summary of Assumptions and Conditions

TBTA traffic, revenues and expenses have been projected by URS on the basis of the historical record of traffic, revenues and expenses, the capacities of the TBTA facilities, traffic growth forecasts, the estimated traffic elasticity due to toll variations, impacts of construction projects and the following assumptions and conditions, which we believe are reasonable.

- All TBTA facilities will be operated efficiently and maintained in good physical condition in order to attract customers and to sustain traffic demand levels.
- The TBTA adopted capital program for 2005-2009 will be implemented throughout the forecast period. Future capital programs sufficient to maintain the structural integrity of bridges and tunnels will be adopted and implemented throughout the forecast period.
- For the scenario with periodic toll increases, toll rate increases will be implemented in accordance with the schedule contained in this report.
- Elasticity factors, prepared by URS based on historical toll increases prior to and including 2006, are valid in their application to future toll rate increases to estimate future traffic and toll revenue.
- Electronic toll payment by *E-ZPass* will continue to be available on all TBTA crossings, and the payment of revenue in full to TBTA will continue to be in accordance with current interagency agreements.
- Capacity constraints in the arterial highway network will continue to limit traffic growth on the nine TBTA crossings.
- Highway/crossing improvements, in general, for the competing bridges and roadway network will be made in accordance with the plans and schedules described herein.
- Major TBTA roadway and structural improvements will continue to be performed during nighttime and non-peak hours, and/or in the off-peak direction, and approaches to the

nine TBTA crossings will not be significantly impaired by construction work beyond the items discussed in this report.

- The forecasts are based on the assumption that *E-ZPass* usage will grow at the rate of 0.5 percent annually during the period included in these forecasts. While usage at a higher level would improve toll plaza operating conditions, it would also result in lower average tolls and, therefore, could reduce the level of increase in gross toll revenues. Growth in traffic volumes would be limited without *E-ZPass* at toll plazas.
- Competing East River crossings will continue to operate toll-free and to be maintained in efficient operating condition. (This would be affected by implementation of PlaNYC).
- The trends in regional employment and population, forecast by the New York Metropolitan Transportation Council and presented in this report, will be realized in the Tri-State area and in New York City.
- Over the past several months, motor fuel (and crude oil) prices have been steadily increasing until they are now above the \$3.00 per gallon level. If this trend continues and prices rise substantially above the \$3.00 level, discretionary travel could decline and there may be fewer recreational trips. In general, however, TBTA facilities carry regular commuters and other non-discretionary trips so that the overall impact on toll volumes and toll revenues is not expected to be significant.
- LIRR East Side Access will shift some auto commuters to rail. If PlaNYC is not implemented, public transportation systems will not undergo other major construction programs nor schedule changes that would materially alter regional commuter patterns and result in significant traffic diversions from TBTA facilities. Congestion Pricing proposed in PlaNYC could shift vehicle trips from toll-free bridges to TBTA facilities. Bus/HOV lanes on City bridges could accommodate diversion from single-occupant auto trips.
- Current toll discount programs remain in effect at current projected levels, including the \$0.50 discount for *E-ZPass* auto customers and the Staten Island residents' discount program for the Verrazano-Narrows Bridge.
- The effects of the toll-rebate program, implemented in January 1998, for the benefit of *E-ZPass* customers who are residents of Broad Channel and Rockaway peninsula traveling on the Cross Bay Bridge, are fully reflected in the results since 1998 and, therefore, no further impact will occur.
- No other toll discount programs will be introduced that would adversely affect the TBTA toll facilities' revenue stream.
- No material natural disaster, or local, state or national emergency will occur that would alter travel patterns and divert traffic from the TBTA facilities.

While the projections are made and presented year-by-year by URS, they are intended to show trends on the basis of its analysis of historical data and the assumptions and conditions set forth above. Variations in the year-to-year forecasted results may occur and such variations may be significant.

PROJECTED TRAFFIC, REVENUES AND EXPENSES

Future traffic and toll revenues are estimated for the 10-year (2007-2017) forecast period for each TBTA facility based on historical trends in traffic and revenue, elasticity factors for future toll increases, toll collection operations, capacities of the nine crossings, facility maintenance, *E-ZPass* participation levels, externalities such as area roadway improvement plans and regional demographic projections, and the assumptions and conditions summarized previously. Changes in these factors, which may potentially affect future traffic and toll revenue, are detailed throughout this report.

Trends in operating expenses for the toll facilities, TBTA's 2007 through 2010 budget, and growth estimates based on the CPI-U for "All Urban Consumers–New York PMSA" for labor expenses and CPI-U for "All Urban Consumers–U.S. City Average" for non-labor items are input to the future operating expense forecast. Future operating expense estimates are used to develop net revenue projections over the forecast period.

Traffic and toll revenues were first projected on the basis that the current tolls will be continued throughout the forecast period. Then, using these estimates as a base, URS applied the elasticity impact factors listed in Table 16 and adjusted the average tolls to develop the forecast with periodic toll increases.

Traffic and Toll Revenue at Current Tolls

The methodology employed by URS to forecast traffic was based on the development of an annual growth rate for each facility (based on the historical traffic trends), the construction activities (historical and projected) throughout the highway network (bridges, tunnels and arterials) and the traffic capacity constraints in the network. Regional demographic projections were also taken into consideration.

All indicators point to the potential for traffic increases in the future at modest rates of growth. URS estimates that traffic on the Throgs Neck, Triborough, Bronx-Whitestone, Henry Hudson and Verrazano-Narrows bridges and Queens Midtown Tunnel will increase primarily during the off-peak period, once these facilities exceed their capacity levels with respect to the highest recorded levels achieved since 1970 (from Table 18). (The Cross Bay Veterans Memorial Bridge is anticipated to reach its previous highest annual volume during the forecast period; however, there is available capacity for growth on that facility so the growth rate was not reduced.) Capacity constraints in the highway network are contributing factors.

The technique used in the forecast was to reduce the potential growth rates by 50 percent to reflect lower overall growth once the previous highest annual level is reached in the peak period. This approach produces conservative forecasts inasmuch as the introduction of *E-ZPass* has provided some additional capacity at the toll plazas. For example, if grown at its full growth rate, the Verrazano-Narrows Bridge will reach the previous highest annual traffic volume in 2010. After that, an application of the 50 percent growth factor was used for the remainder of the forecast period.

On this basis, starting with the 2007 estimated traffic by facility from Table 11, URS projected the traffic by facility as shown in Table 19, and calculated the corresponding toll revenue based on the 2006 average tolls (also from Table 11).

General traffic growth in the range of 0.68 to 0.92 percent annually is estimated in the forecast period. This growth is based on the actual growth in traffic on each facility during the last 11 years, after the impact of toll increases were taken into account, and a review of actual and forecast population and employment growth in the region. An exception is the Brooklyn-Battery Tunnel, which has shown an overall negative trend since 2001 due to decreased activity in lower Manhattan. We have assumed that this negative trend will not continue and have projected future traffic to increase at 0.5 percent per year. Also, adjustments have been made to the forecast for the Triborough Bridge to reflect the impacts during construction of the Second Avenue Subway.

Traffic and Toll Revenue with Periodic Toll Increases

As mentioned previously, the traffic forecast with periodic toll increases was built upon the base (current tolls) forecast (from Table 19), to which the elasticity impacts (from Table 17) were applied. URS then applied the appropriate increased average tolls (the 2006 averages from Table 11 increased by the percentages in Table 17) in the years 2009, 2012 and 2015 (effective January 1) to calculate the corresponding toll revenues in the respective years. The traffic and revenue forecasts with periodic toll increases are listed in Table 20.

Table 19. Traffic and Toll Revenue Forecast, Constant Tolls

| Year | Throgs Neck ^(b) | Bronx-White-stone ^(b) | Tri-borough ^{(b)(c)} | Queens Midtown ^(b) | Brooklyn Battery ^(b) | Verrazano-Narrows | Henry Hudson | Marine Parkway-Gil Hodges Memorial Bridge | Cross Bay Veterans Memorial Bridge | Total |
|-----------------------|----------------------------|----------------------------------|-------------------------------|-------------------------------|---------------------------------|-------------------|--------------|---|------------------------------------|-------------|
| Annual Traffic (000s) | | | | | | | | | | |
| 2007 ^(a) | 43,129 | 40,197 | 63,281 | 29,351 | 18,265 | 71,093 | 24,276 | 7,823 | 7,568 | 304,982 |
| 2008 | 43,584 | 40,621 | 63,236 | 29,673 | 18,356 | 71,986 | 24,656 | 7,856 | 7,813 | 307,781 |
| 2009 | 44,044 | 41,050 | 62,890 | 29,999 | 18,448 | 72,890 | 24,849 | 7,889 | 8,066 | 310,125 |
| 2010 | 44,509 | 41,483 | 63,185 | 30,328 | 18,540 | 73,348 | 25,044 | 7,923 | 8,327 | 312,687 |
| 2011 | 44,744 | 41,702 | 63,481 | 30,661 | 18,633 | 73,808 | 25,240 | 7,956 | 8,597 | 314,822 |
| 2012 | 44,980 | 41,922 | 64,429 | 30,998 | 18,726 | 74,272 | 25,437 | 7,990 | 8,875 | 317,630 |
| 2013 | 45,218 | 42,143 | 64,731 | 31,338 | 18,820 | 74,738 | 25,636 | 8,024 | 9,163 | 319,811 |
| 2014 | 45,456 | 42,366 | 65,692 | 31,682 | 18,914 | 75,208 | 25,837 | 8,058 | 9,460 | 322,671 |
| 2015 | 45,696 | 42,589 | 65,999 | 32,029 | 19,008 | 75,680 | 26,039 | 8,092 | 9,766 | 324,900 |
| 2016 | 45,938 | 42,814 | 66,309 | 32,381 | 19,103 | 76,155 | 26,243 | 8,126 | 10,082 | 327,152 |
| 2017 | 46,180 | 43,040 | 66,620 | 32,736 | 19,199 | 76,634 | 26,448 | 8,161 | 10,409 | 329,427 |
| Traffic Growth | | | | | | | | | | |
| 2007-2008 | 1.06% | 1.06% | -0.07% | 1.10% | 0.50% | 1.26% | 1.57% | 0.42% | 3.24% | 0.92% |
| 2008-2009 | 1.06 | 1.06 | -0.55 | 1.10 | 0.50 | 1.26 | 0.78 | 0.42 | 3.24 | 0.76 |
| 2009-2010 | 1.06 | 1.06 | 0.47 | 1.10 | 0.50 | 0.63 | 0.78 | 0.42 | 3.24 | 0.83 |
| 2010-2011 | 0.53 | 0.53 | 0.47 | 1.10 | 0.50 | 0.63 | 0.78 | 0.42 | 3.24 | 0.68 |
| 2011-2012 | 0.53 | 0.53 | 1.49 | 1.10 | 0.50 | 0.63 | 0.78 | 0.42 | 3.24 | 0.89 |
| 2012-2013 | 0.53 | 0.53 | 0.47 | 1.10 | 0.50 | 0.63 | 0.78 | 0.42 | 3.24 | 0.69 |
| 2013-2014 | 0.53 | 0.53 | 1.48 | 1.10 | 0.50 | 0.63 | 0.78 | 0.42 | 3.24 | 0.89 |
| 2014-2015 | 0.53 | 0.53 | 0.47 | 1.10 | 0.50 | 0.63 | 0.78 | 0.42 | 3.24 | 0.69 |
| 2015-2016 | 0.53 | 0.53 | 0.47 | 1.10 | 0.50 | 0.63 | 0.78 | 0.42 | 3.24 | 0.69 |
| 2016-2017 | 0.53 | 0.53 | 0.47 | 1.10 | 0.50 | 0.63 | 0.78 | 0.42 | 3.24 | 0.70 |
| Average Toll | | | | | | | | | | |
| 2007 | \$5.181 | \$4.720 | \$4.572 | \$4.387 | \$4.169 | \$3.895 | \$1.859 | \$1.491 | \$1.580 | \$4.108 |
| 2008 ^(d) | 5.181 | 4.719 | 4.571 | 4.386 | 4.169 | 3.894 | 1.858 | 1.491 | 1.580 | 4.108 |
| Toll Revenues (000s) | | | | | | | | | | |
| 2007 | \$223,459 | \$189,728 | \$289,296 | \$128,765 | \$76,149 | \$276,874 | \$45,119 | \$11,664 | \$11,956 | \$1,253,012 |
| 2008 | 225,790 | 191,707 | 289,051 | 130,162 | 76,521 | 280,317 | 45,820 | 11,712 | 12,342 | 1,263,422 |
| 2009 | 228,145 | 193,707 | 287,437 | 131,574 | 76,894 | 283,802 | 46,173 | 11,760 | 12,740 | 1,272,232 |
| 2010 | 230,524 | 195,727 | 288,748 | 133,001 | 77,268 | 285,549 | 46,528 | 11,809 | 13,151 | 1,282,306 |
| 2011 | 231,712 | 196,736 | 290,065 | 134,444 | 77,645 | 287,306 | 46,887 | 11,857 | 13,576 | 1,290,228 |
| 2012 | 232,906 | 197,749 | 294,361 | 135,903 | 78,024 | 289,075 | 47,248 | 11,906 | 14,014 | 1,301,185 |
| 2013 | 234,106 | 198,768 | 295,703 | 137,377 | 78,404 | 290,854 | 47,612 | 11,955 | 14,466 | 1,309,245 |
| 2014 | 235,312 | 199,792 | 300,052 | 138,868 | 78,786 | 292,644 | 47,978 | 12,004 | 14,932 | 1,320,370 |
| 2015 | 236,525 | 200,822 | 301,421 | 140,374 | 79,170 | 294,445 | 48,348 | 12,054 | 15,414 | 1,328,572 |
| 2016 | 237,743 | 201,857 | 302,796 | 141,897 | 79,556 | 296,257 | 48,720 | 12,103 | 15,912 | 1,336,841 |
| 2017 | 238,968 | 202,897 | 304,176 | 143,436 | 79,944 | 298,080 | 49,096 | 12,153 | 16,425 | 1,345,176 |

- (a) From Table 11.
- (b) Growth rates reduced by 50 percent because volume reaches previous highest traffic level.
- (c) Reflects impact of construction of Second Avenue Subway between 2008 and 2013.
- (d) Average toll adjusted in 2008 and each year thereafter to reflect increase in *E-ZPass* usage of 0.5 percent per year.

Table 20. Traffic and Toll Revenue Forecast, Periodic Toll Increases

| Year | Throgs Neck ^(b) | Bronx-Whitestone ^(b) | Tri-borough ^{(b)(c)} | Queens Midtown ^(b) | Brooklyn Battery ^(b) | Verrazano-Narrows | Henry Hudson | Marine Parkway-Gil Hodges Memorial Bridge | Cross Bay Veterans Memorial Bridge | Total |
|--|----------------------------|---------------------------------|-------------------------------|-------------------------------|---------------------------------|-------------------|--------------|---|------------------------------------|-------------|
| Traffic Change (from Table 17) due to Toll Elasticity | | | | | | | | | | |
| 2009 | -1.25% | -1.25% | -2.47% | -2.31% | -4.33% | -1.80% | -3.83% | -1.72% | -2.35% | |
| 2012 | -1.11 | -1.11 | -2.19 | -2.06 | -3.84 | -1.55 | -3.35 | -1.44 | -1.95 | |
| 2015 | -1.01 | -1.01 | -1.99 | -1.86 | -3.47 | -1.38 | -3.00 | -1.26 | -1.71 | |
| Annual Traffic (000s) | | | | | | | | | | |
| 2007 ^(a) | 43,129 | 40,197 | 63,281 | 29,351 | 18,265 | 71,093 | 24,276 | 7,823 | 7,568 | 304,982 |
| 2008 | 43,584 | 40,621 | 63,236 | 29,673 | 18,356 | 71,986 | 24,656 | 7,856 | 7,813 | 307,781 |
| 2009 | 43,494 | 40,536 | 61,338 | 29,305 | 17,650 | 71,581 | 23,898 | 7,753 | 7,877 | 303,431 |
| 2010 | 43,953 | 40,964 | 61,626 | 29,626 | 17,738 | 72,030 | 24,085 | 7,786 | 8,132 | 305,940 |
| 2011 | 44,185 | 41,181 | 61,915 | 29,952 | 17,827 | 72,483 | 24,273 | 7,819 | 8,395 | 308,029 |
| 2012 | 43,924 | 40,938 | 61,460 | 29,658 | 17,227 | 71,808 | 23,645 | 7,740 | 8,498 | 304,898 |
| 2013 | 44,156 | 41,154 | 61,749 | 29,984 | 17,314 | 72,259 | 23,830 | 7,772 | 8,773 | 306,990 |
| 2014 | 44,389 | 41,371 | 62,665 | 30,313 | 17,400 | 72,713 | 24,016 | 7,805 | 9,057 | 309,729 |
| 2015 | 44,175 | 41,171 | 61,708 | 30,076 | 16,881 | 72,161 | 23,478 | 7,740 | 9,191 | 306,581 |
| 2016 | 44,408 | 41,389 | 61,998 | 30,406 | 16,965 | 72,614 | 23,662 | 7,773 | 9,489 | 308,702 |
| 2017 | 44,642 | 41,607 | 62,288 | 30,740 | 17,050 | 73,070 | 23,847 | 7,806 | 9,796 | 310,846 |
| Average Toll^(d) | | | | | | | | | | |
| 2007-2008 | \$5.181 | \$4.720 | \$4.572 | \$4.387 | \$4.169 | \$3.895 | \$1.859 | \$1.491 | \$1.580 | \$4.108 |
| 2009-2011 | 5.801 | 5.279 | 5.114 | 4.915 | 4.673 | 4.450 | 2.104 | 1.745 | 1.851 | 4.625 |
| 2012-2014 | 6.418 | 5.836 | 5.654 | 5.440 | 5.174 | 4.997 | 2.348 | 1.994 | 2.116 | 5.138 |
| 2015-2017 | 7.035 | 6.392 | 6.193 | 5.965 | 5.676 | 5.544 | 2.591 | 2.243 | 2.381 | 5.648 |
| Toll Revenue (000s) | | | | | | | | | | |
| 2007 | \$223,459 | \$189,728 | \$289,296 | \$128,765 | \$76,149 | \$276,874 | \$45,119 | \$11,664 | \$11,956 | \$1,253,012 |
| 2008 | 225,790 | 191,707 | 289,051 | 130,162 | 76,521 | 280,317 | 45,820 | 11,712 | 12,342 | 1,263,422 |
| 2009 | 252,320 | 214,002 | 313,680 | 144,031 | 82,478 | 318,513 | 50,291 | 13,533 | 14,582 | 1,403,431 |
| 2010 | 254,952 | 216,235 | 315,111 | 145,594 | 82,880 | 320,474 | 50,678 | 13,589 | 15,052 | 1,414,563 |
| 2011 | 256,266 | 217,349 | 316,548 | 147,173 | 83,284 | 322,446 | 51,068 | 13,645 | 15,538 | 1,423,316 |
| 2012 | 281,919 | 238,900 | 347,467 | 161,345 | 89,142 | 358,803 | 55,511 | 15,434 | 17,980 | 1,566,501 |
| 2013 | 283,372 | 240,131 | 349,052 | 163,095 | 89,576 | 361,011 | 55,938 | 15,498 | 18,561 | 1,576,233 |
| 2014 | 284,832 | 241,368 | 354,186 | 164,864 | 90,013 | 363,233 | 56,369 | 15,561 | 19,159 | 1,589,586 |
| 2015 | 310,784 | 263,172 | 382,166 | 179,417 | 95,809 | 400,032 | 60,832 | 17,359 | 21,879 | 1,731,451 |
| 2016 | 312,385 | 264,528 | 383,909 | 181,363 | 96,276 | 402,494 | 61,301 | 17,431 | 22,585 | 1,742,272 |
| 2017 | 313,995 | 265,891 | 385,660 | 183,331 | 96,746 | 404,971 | 61,773 | 17,503 | 23,314 | 1,753,182 |

- (a) From Table 11.
- (b) Growth rates reduced by 50 percent because volume is at or near previous highest traffic level.
- (c) Reflects impact of construction of Second Avenue Subway between 2008 and 2013.
- (d) Passenger car cash toll increase of \$0.50 at major crossings and \$0.25 at minor crossings, with commensurate increases for other vehicle classes assumed by URS in 2009, 2012 and 2015. These increase are for forecasting purposes only and have not been adopted as TBTA policy. Average toll adjusted in 2008 and each year thereafter to reflect increase in *E-ZPass* usage of 0.5 percent per year.



Effects of Second Avenue Subway Construction in Forecast Years

The foregoing tables forecasting traffic and toll revenues incorporate estimated effects of the construction of the Second Avenue Subway. Activity associated with such construction could result in changes to traffic patterns, possibly resulting in a shift of traffic volumes to other TBTA facilities, as well as the untolled East River Bridges or a diversion to mass transit. Such changes in traffic patterns could have an adverse effect on the forecasts set forth in the foregoing tables as described in the following paragraphs.

Various stages of the project will result in visible construction activity on segments of Second Avenue at any given time. In addition, tunnel construction, either through the use of a tunnel boring machine or cut-and-cover, will affect vehicular activity not only on Second Avenue, but also on adjacent avenues and streets.

The first phase of the project will be between 96th Street and 63rd Street. URS anticipates some changes to current traffic volumes for TBTA's facilities when construction begins, thereby necessitating the rerouting of some traffic, as well as a change of street rules (traffic movements, parking restrictions and enforcement). Accordingly, URS has made an order-of-magnitude estimate of potential impacts on TBTA traffic on the Triborough Bridge.

For the Triborough Bridge, 27.6 percent of the traffic exits onto Second Avenue at 125th Street, 56.0 percent exits onto the FDR Drive, and 17.4 percent exits onto the Harlem River Drive via the 125th Street/Second Avenue intersection. Construction may result in a shift of traffic to the FDR Drive, if capacity were to be available during the peak. If capacity is not available, it is estimated that the Triborough Bridge will lose up to 2 percent of total traffic (3 to 5 percent of traffic on the Manhattan span) for the period when construction is in the vicinity of the bridge.

The relocation of utility lines beneath Second Avenue in the vicinity of the Queens Midtown Tunnel would affect traffic patterns. This could also have an impact on the access route to the Queensboro Bridge. As mentioned previously, a 20 percent decrease in access route capacity may be anticipated and could result in a decrease in total traffic of approximately 3 to 6 percent during the period when construction is in the vicinity of the tunnel; however, this is not anticipated in the period included in the current estimates.

In addition to the potential reduction in traffic noted, it is possible that construction activities limiting access to the toll-free East River crossings could result in traffic diversions to the TBTA facilities.

Operating Expenses

The projection of operating expenses is shown in Table 21. Total operating expenses, consisting of labor and non-labor, are estimated to increase from \$407.8 million in 2007 to \$555.5 million in 2017. Labor expenses consist of wages, salaries, overtime and fringe benefits. Non-labor expenses include items such as maintenance, supplies, utilities and other expenses.



Operating expenses have been budgeted by TBTA for 2007 through 2010 as shown in Table 21. Nonrecurring costs include costs associated with the transition to a new contract for the *E-Zpass* Customer Service Center in 2007, additional bridge painting requirements in 2009 and the start of the next *E-ZPass* Replacement Program in 2010. The decrease in non-labor expenses from 2007 to 2008 is a result of decreases in budget for the Maintenance and Other Operating Contracts category.

The *E-ZPass* replacement program is estimated to be in effect for a five-year period, with an estimated cost of \$26.1 million in 2010 and 2011 and half that level for 2012 through 2014. Other expenses are projected to increase at 4.5 percent in 2011, with growth tapering down to 3.0 percent in 2014 and then remaining at that level through 2017.

URS does not project any variation in operating expenses resulting from the reduced traffic levels brought about by periodic toll increases.

Table 21. Projected Operating Expenses
(000s)

| Year | Labor ^(a) | Non-Labor ^(b) | Total ^(c) |
|---------------------|----------------------|--------------------------|----------------------|
| 2007 ^(d) | \$192,765 | \$215,040 | \$407,805 |
| 2008 ^(d) | 204,269 | 200,334 | 404,602 |
| 2009 ^(d) | 214,512 | 212,042 | 426,554 |
| 2010 ^(d) | 225,449 | 239,465 | 464,914 |
| 2011 ^(e) | 235,594 | 249,066 | 484,661 |
| 2012 ^(e) | 245,018 | 244,935 | 489,953 |
| 2013 ^(e) | 253,594 | 253,051 | 506,645 |
| 2014 ^(e) | 261,201 | 260,251 | 521,453 |
| 2015 ^(e) | 269,037 | 254,617 | 523,655 |
| 2016 ^(e) | 277,109 | 262,256 | 539,364 |
| 2017 ^(e) | 285,422 | 270,123 | 555,545 |

- (a) Salaries, overtime and fringe benefits, net of capital reimbursement.
- (b) Non-labor includes the following categories: maintenance and supplies, outside services, insurance, power, leases, rentals and other expenses.
- (c) Totals may not add due to rounding
- (d) From TBTA estimates.
- (e) Increases in Labor expenses based on NY Region Average CPI, All Consumers; Non-labor expenses based on All U.S. Cities Average CPI, All Consumers.



Net Revenues from Toll Operations

Finally, the projected operating expenses were deducted from the respective toll revenue forecasts to produce the two sets of estimated net revenues, one at constant tolls and the other with periodic toll increases, as shown in Table 22. For 2007, net toll revenue under either scenario is estimated at \$845.2 million. In year 2017, net toll revenue at constant tolls is estimated to be \$789.6 million and, with periodic toll increases, net toll revenue is estimated to be \$1,197.6 million.

Table 22. Net Toll Revenue Forecast
(000s)

| Year | Gross Toll Revenues | | Operating Expenses | Net Toll Revenues | |
|------|---------------------|-------------------------|--------------------|-------------------|-------------------------|
| | Constant Toll | Periodic Toll Increases | | Constant Toll | Periodic Toll Increases |
| 2007 | \$1,253,012 | \$1,253,012 | \$407,805 | \$845,207 | \$ 845,207 |
| 2008 | 1,263,422 | 1,263,422 | 404,602 | 858,820 | 858,820 |
| 2009 | 1,272,232 | 1,403,431 | 426,554 | 845,678 | 976,877 |
| 2010 | 1,282,306 | 1,414,563 | 464,914 | 817,392 | 949,649 |
| 2011 | 1,290,228 | 1,423,316 | 484,661 | 805,567 | 938,655 |
| 2012 | 1,301,185 | 1,566,501 | 489,953 | 811,232 | 1,076,548 |
| 2013 | 1,309,245 | 1,576,233 | 506,645 | 802,600 | 1,069,589 |
| 2014 | 1,320,370 | 1,589,586 | 521,453 | 798,917 | 1,068,133 |
| 2015 | 1,328,572 | 1,731,451 | 523,655 | 804,918 | 1,207,796 |
| 2016 | 1,336,841 | 1,742,272 | 539,364 | 797,477 | 1,202,908 |
| 2017 | 1,345,176 | 1,753,182 | 555,545 | 789,630 | 1,197,637 |

It is our opinion that the revenue and expense projections are reasonable and that they have been prepared in accordance with accepted practice for investment-grade studies. However, given the uncertainties within the current international and economic climate, it is important to note the following limitations:

1. This report presents the results of our consideration of the information available to us as of the date hereof and the application of our experience and professional judgment to that information. It is not a guarantee of any future events or trends.
2. The traffic, revenue and expense forecasts will be subject to future economic and social conditions, demographic developments and metropolitan area transportation construction activities that cannot be predicted with certainty.
3. The projections contained in this report, while presented with numerical specificity, are based on a number of estimates and assumptions that, though considered reasonable to us, are inherently subject to significant economic and competitive uncertainties and contingencies, many of which will be beyond the control of TBTA and cannot be predicted with certainty. In many instances, a broad range of alternative assumptions could be consid-



ered reasonable. Changes in the assumptions used could result in material differences in projected outcomes.

4. URS' net toll revenue projections only represent its best judgment and URS does not warrant or represent that actual net toll revenues will not vary from its projections, estimates and forecasts. The projection of revenues with periodic toll increases is for forecasting purposes only and does not represent adopted TBTA policy.
5. If, for any reason, any of these conditions should change due to changes in the economy or competitive environment, or other factors, URS' opinions or estimates may be affected.

Many statements contained in this report that are not historical facts are forward-looking statements, which are based on TBTA's and the Independent Engineers' beliefs, as well as assumptions made by, and information currently available to, the management and staff of TBTA and the Independent Engineers. 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," "plan," "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 this report.

REVIEW OF PHYSICAL CONDITION

The facilities under TBTA’s jurisdiction include two tunnels and seven bridges listed in Table 23, together with Randall’s Island Facilities and a parking garage in Manhattan near the Brooklyn-Battery Tunnel. Some of these crossings have been in service since the 1930s, i.e., the Triborough, Henry Hudson, Marine Parkway-Gil Hodges Memorial and Bronx-Whitestone bridges. The Queens Midtown Tunnel opened to traffic in 1940, and the Brooklyn-Battery Tunnel in 1950. Two bridges opened to traffic in the 1960s: the Throgs Neck in 1961 and the Verrazano-Narrows in 1964 (lower level in 1969). The present Cross Bay Veterans Memorial Bridge, replacing the previous span, opened to traffic in 1970. The aging of the TBTA facilities will influence the overall upkeep and capital improvements that will be necessary to maintain the infrastructure over the forecast period and beyond. Table 24 lists TBTA’s capital commitments for each facility from 1992 through 2004, and the current commitments for the period 2005 through 2009.

Table 23. Opening Dates of TBTA Facilities

| Facility | Open to Traffic | Years in Use |
|---|---------------------|--------------|
| Triborough Bridge | 1936 | 71 |
| Bronx-Whitestone Bridge | 1939 | 68 |
| Throgs Neck Bridge | 1961 | 46 |
| Henry Hudson Bridge | 1936 ^(a) | 71 |
| Queens Midtown Tunnel | 1940 | 67 |
| Brooklyn-Battery Tunnel | 1950 | 57 |
| Verrazano-Narrows Bridge | 1964 ^(b) | 43 |
| Cross Bay Veterans Memorial Bridge | 1970 ^(c) | 37 |
| Marine Parkway-Gil Hodges Memorial Bridge | 1937 | 70 |

- Notes: (a) Upper deck was added and opened in 1938.
 (b) Lower level opened in 1969.
 (c) The present structure replaced the previous structure that had been in service since 1939.

Table 24. Capital Commitments by Facility, 1992 to 2009
(Millions of dollars)

| Facility | Total by Facility 1992 through 2004 ^(a) | Total by Facility 2005 through 2009 ^(a) |
|----------------------------|--|--|
| Agency Wide ^(b) | \$252.3 | \$91.2 |
| Brooklyn-Battery Tunnel | 270.3 | 39.4 |
| Bronx-Whitestone Bridge | 330.7 | 168.5 |
| Cross Bay Bridge | 14.2 | 65.8 |
| Henry Hudson Bridge | 85.0 | 83.2 |
| Marine Parkway Bridge | 123.9 | 28.1 |
| Queens Midtown Tunnel | 231.0 | 15.5 |
| Triborough Bridge | 598.3 | 394.6 |
| Throgs Neck Bridge | 145.0 | 124.9 |
| Verrazano-Narrows Bridge | 126.6 | 156.8 |
| | \$ 2,177.5 | \$ 1,167.9 |

Notes: (a) Does not add due to rounding.
(b) Agency-wide refers to projects that have been, or will be, carried out at two or more facilities.

Periodic contact with TBTA personnel is maintained by URS to monitor and review material, as it becomes available, pertaining to the physical condition of their seven bridges and two tunnels. This review material includes pertinent sections and updates of the following:

- Biennial Bridge Inspection Reports;
- Scheduled Tunnel Inspection Reports;
- Interim Inspection Reports;
- TBTA’s current Capital Program;
- Current Quality Assurance Plan; and
- TBTA’s Routine and Major Maintenance Program.

The review by URS of the pertinent material consists of the following subtasks:

- Comparison of Conclusions and Recommendations sections of the current inspection reports with the previous inspection reports to note significant changes in observed deterioration, if any;
- Review of the current Capital Program to verify that the repairs recommended by the latest inspection reports are being addressed; and
- Review of TBTA’s Routine Maintenance Program with the facility engineers to verify that the maintenance-related recommendations of the current inspection reports are being addressed.



Review of Inspection Reports

TBTA's seven bridges and two tunnel facilities undergo periodic, comprehensive condition inspections. Bridges are inspected biennially per federal and state mandate, with interim yearly inspections of any components that require monitoring. While there is no federal or state mandate, TBTA has decided that it will adopt biennial inspections for their tunnels as well, with more comprehensive inspections every ten years.

The regular biennial inspection of the Queens Midtown Tunnel has been let and will be completed this year. The Brooklyn-Battery Tunnel will undergo a comprehensive condition inspection in 2008.

The TBTA bridges were last inspected and their physical condition appraised in 2005/2006 by various consultants, under the New York State Biennial Bridge Inspection Program. New cycles of NYSDOT Biennial Bridge Inspection are currently underway. In addition, separate underwater and substructure inspections were performed in accordance with the five-year cycles of NYSDOT to obtain riverbed contours and to assess potential scour conditions at the substructure. These ongoing inspections, performed by the inspection consultants, consisted of visual examination, sounding and chipping concrete, scraping and cleaning steel, and taking appropriate measurements to determine the physical conditions of the bridges and tunnels.

The inspection consultants also prioritized the necessary repairs and provided the TBTA with cost estimates. The results of these facility inspections and appraisals form the basis for much of the rehabilitation and improvement projects to be funded under the 2005-2009 and future TBTA Capital Programs. Results of inspections requiring priority action are addressed on an as needed basis as part of the TBTA maintenance program.

The consulting engineering firms who performed the 2005 and 2006 biennial inspections and those who performed the 2001 and 2005 tunnel inspections for each facility were/are:

| <i>Facility</i> | <i>Consulting Firm</i> |
|------------------------------------|---|
| Triborough Bridge | Charles H. Sells, Inc. (2006) |
| Throgs Neck Bridge | Parsons Brinckerhoff (2005) |
| Bronx-Whitestone Bridge | Charles H. Sells (2005) |
| Henry Hudson Bridge | Lichtenstein Engineering Associates (2005) |
| Queens Midtown Tunnel | Parsons Brinckerhoff (2004-2005); facility approach bridges: Lichtenstein Engineering Associates (2005) |
| Brooklyn-Battery Tunnel | Parsons Brinckerhoff (2001) |
| Verrazano-Narrows Bridge | Lichtenstein Engineering Associates (2006) |
| Marine Parkway/Gil Hodges Mem. Br. | Hardesty and Hanover (2005) |
| Cross Bay Bridge | Hardesty and Hanover (2005) |

These firms are well known in the field of structural inspection and appraisal. Copies of pertinent sections of the final inspection reports for the various facilities were requested and made



available by TBTA. Bridges that are part of the odd-year inspection cycle listed above will be undergoing inspections this summer, but the results of these inspections are not available at this time. These results of these inspections, also done by experts in the field, will generally be available at the end of the year.

Funds programmed for TBTA's 2005-2009 Capital Program total approximately \$1.2 billion dollars. The plan breaks this amount into specific projects by facility as well as agency-wide projects. Comparisons between the Capital Program projects and total repair item lists for each facility, as prepared by inspection consultants, confirm that the Capital Program gives high priority to key rehabilitation projects. Conclusions, recommendations and cost estimates for each facility can be found in the latest biennial bridge and tunnel inspection reports. By prioritizing necessary facility rehabilitation projects, TBTA addresses all high priority recommendations in the current Capital Program or under maintenance programs that have not been addressed as part of the previous Capital Program.

Current major rehabilitation projects (and designs) addressing the recommendations of the latest inspection consultants' reports include:

Triborough Bridge - The design phase of the contract for the deck replacement for the Bronx toll plaza and ramps is underway with construction anticipated for 2011, and Manhattan toll plaza construction anticipated for 2015. Deck widening and replacement construction of Ward's Island and Randall's Island viaducts began in August 2005, and completion is anticipated for spring 2009. The Ward's Island Approach Deck Replacement will include widening by one lane in each direction to minimize the traffic impacts. No significant priority maintenance steel repairs of components noted in the most recent inspection are necessary at this time. Maintenance painting of Ward's Island Viaduct and the superstructure of the suspended spans are ongoing. A contract to perform anchorage rehabilitation and dehumidification was awarded in August 2006 and should be complete by spring of 2009. Projects completed within recent years include the replacement of the suspender ropes at the East River suspended span, main cable rewinding and anchorage rehabilitation, and bridge deck replacement at the Queens approach. Numerous repair projects such as repair of the bridge deck joint drains, cracked deck, piers, superstructure, substructure, and suspended span deck replacement, and mechanical rehabilitation associated with the Harlem River and Manhattan lift span have also been completed.

Bronx-Whitestone Bridge - A major program to paint the main cables, suspender ropes and towers is scheduled to be awarded by late summer in 2007 and will continue until 2009. Design of interior and exterior anchorage rehabilitation is ongoing and construction is scheduled to begin in 2008. Portions of the recommendations from studies that investigated deck replacement with a lightweight deck and improving the aerodynamic and seismic performance of the bridge are continuing to be implemented through TBTA's capital projects. The following describes these projects and their status. The construction of the lightweight windfaring to replace the stiffening truss on the suspended span was completed in 2004. The installation of a lightweight orthotropic deck, required to replace the roadway deck, is substantially complete. The feasibility study for complete replacement of the main cables, should that become necessary in the future, is complete, and it has been concluded that replacement is feasible if it becomes necessary. There is no need to replace the cable in the near future, thus monitoring and maintenance of the main

cables is ongoing. The conceptual designs of the replacement of the Bronx/Queens approach spans and all on-grade approaches were completed with construction anticipated to be phased. The construction of the Bronx Approach span is anticipated to begin in 2008. The Queens replacement design will begin in 2007 with construction in the next capital program. Projects completed within recent years include: replacement of the stiffening truss with lightweight windfaring, painting and replacement of the collars of the suspender ropes, construction and testing of the prototype deck replacement for the suspended span, addition of three new tollbooths, the installation of acoustic sensors for cable monitoring at the main cables, and the rehabilitation of the Bronx/Queens approach ramps.

Throgs Neck Bridge - The orthotropic deck prototype construction and the testing associated with it is complete. The prototype was monitored, and a full-scale design of how to best implement deck replacement is being let now, with construction expected by 2015. The design of the investigation of the suspension system is complete. Construction was let in 2006 as part of a major rehabilitation contract to also include painting and steel repair of the suspended span superstructure, towers, main cables and suspender ropes and catwalk replacement. The construction project including structural steel rehabilitation, drainage system improvements and roadway barrier painting is complete. The monitoring of the prototype light pole and luminaire replacement project is ongoing, with full-scale lighting replacement on the structure scheduled to begin in 2008, phased with the deck replacements. Design of deck rehabilitation and replacement on the Queens approach is scheduled for completion in 2007 with construction expected to start in 2008. Design of rehabilitation of the fenders at the towers and anchorages began in April of 2006 with construction anticipated for January of 2009. Replacement of the slab on grade in the toll plazas, which was awarded in June 2006, is nearly complete. Installation of variable speed limit signs is ongoing. Projects completed within recent years include: the new bridge electrical system upgrade, including the installation of new electrical switchgear at the four electrical substations, reconstruction of the Bronx approach slab north of the tollbooths, rehabilitation of the Bronx approach, south of the tollbooths, scour backfilling at piers 20, 42, 47, 49, 52, 55 and 56 and protection of piers 19, 20, and 46 to 57.

Henry Hudson Bridge - The conceptual study for the southbound lower level toll plaza expansion, replacement of the garage and the south approach replacement is complete with scoping planned by 2009, and design is anticipated to start thereafter. The garage and south approach is expected to be replaced in 2010-2014. The lower level toll plaza expansion is expected to take place in 2015-2019. The design of the replacement of the upper level deck in the vicinity of the toll plaza is ongoing with construction anticipated in 2008. Design of the lower level deck replacement is complete; construction was awarded in September 2006. The design of the removal of the sidewalk and the curb stringers, and the widening of the bridge is ongoing with construction anticipated for the next capital program. The cross drainage of the approaches between Dyckman Street and the main span is undergoing rehabilitation/replacement design with construction anticipated in 2008. Ongoing major maintenance includes limited rehabilitation of the lower level garage consisting of concrete repairs, and repaving and waterproofing the roadway above the garage. A major maintenance project was completed this year for the jacking and repairing of bearings and installation of safety ladders and platforms to the Dyckman Street electrical rooms. On the bridge, steel stringer pedestal defects identified in the biennial inspections were repaired. Projects completed within recent years include: replacement of deck

joints at Staff Street and spall repairs on abutments, and rock bolting, netting and scaling of the slopes adjacent to the approaches, comprehensive maintenance painting and steel repairs for the entire bridge structure including the main span and approaches, and major maintenance projects including spall repairs at the towers, resealing the upper level deck, and light pole rehabilitation on the parkway approaches.

Queens Midtown Tunnel - A contract for a study and the development of a master plan for a tunnel ventilation system and electrical controls project has been completed. As a result, a construction contract to replace the exhaust fans and to perform minor repair to the supply fans is ongoing and scheduled for completion in 2008. Design of electrical rehabilitation on the vent building is in procurement, with construction in the next capital program. The rehabilitation of two overpasses including deck rehabilitation and beam encasement repair in the Manhattan approach area is ongoing, with completion scheduled for 2007. Construction of an annex to the service building and replacement of the facility engineer's building with connection to the Service Building, and exterior rehabilitation of the Service Building is under design with construction scheduled to begin in 2008. Major maintenance projects include completion of a new air conditioning system at the Queens Emergency building. Paving in portions of the tunnel and around tollbooths is complete and will continue periodically as necessary. Projects completed within recent years include the following: the rehabilitation of the pipe gallery connection between the Service Building and the Queens Emergency garage, replacement of drainage pumps inside the ventilation building and at the plazas, rehabilitation of tunnel ceiling and walls (tunnel finish and leak repairs and upgrading of the fire standpipe system), reconfiguration of the traffic island in the Manhattan entrance plaza to provide better traffic flow, and various structural repairs in the ventilation building.

Brooklyn-Battery Tunnel - Construction of a second story addition with recladding, window replacement and masonry and roof repairs to the existing service building is complete. Construction of tunnel roadway and drainage system rehabilitation, tunnel leakage repairs and wall tile replacement, and fire standpipe and waterline valve replacement is complete. The rehabilitation of the Brooklyn plaza pipe chase is ongoing and construction is expected to be finished in fall 2007. Installation of a new ethanol fuel tank was completed. The design of structural and architectural repairs for vent structures is complete and construction is expected to be let as three separate contracts in 2007. Modernization and upgrade of the control room design is complete and construction was awarded and is scheduled for completion in 2008. New electrical generators were recently installed. On Governor's Island, a new pump system to get water runoff into the sanitary system was designed with construction to be completed in summer of 2008. Design of repair of the supply fans and control system upgrade in the ventilation structure is ongoing with construction planned for the next capital program. Electrical design to replace the tunnel feeders is ongoing with construction planned for 2009. Projects completed within recent years include: replacement of the exhaust fans in the ventilation structure, pump replacement, traffic control and signal system replacement, repaving of the Brooklyn plaza and rehabilitation of the Manhattan plaza, the construction of the elevator upgrades in the ventilation structures, egress improvements and the replacement of the facade in the Governor's Island building, and fresh air duct repairs.



Verrazano-Narrows Bridge - Rehabilitation of the Staten Island and Brooklyn Approach viaducts (lower level) and the Lily Pond Avenue Bridge began in December 2006. Detailed design to replace the upper level suspended span deck is ongoing, with utility relocation construction planned for 2009/2010. Re-decking is expected to be included in the 2010-2014 Capital Program. Repairs of priority conditions noted in the most recent biennial inspection reports are being designed, and will be addressed in ongoing maintenance and capital programs. Rehabilitation of the service building roof is substantially complete. Maintenance painting of the Brooklyn approaches is complete and tower painting including drainage rehabilitation of the lower level and top lower strut of the Brooklyn approaches is expected to be completed by the end of 2007. General maintenance paving is ongoing. Rehabilitation of the traveler is ongoing. The rehabilitation of the electrical substation design is expected to be completed by 2008 and should be let in the future, possibly the next capital program. The design of the Salt Storage Facility in Staten Island is complete, and should begin construction by the end of 2007. The installation of sensors for the provision of real time under bridge clearance is under development. Projects completed within recent years include: rehabilitation and upgrade of the electrical system in the suspended spans, miscellaneous concrete repairs at the service building and steel repairs near the towers, bridge painting of the entire suspended spans (except the towers and the side and center parapets of the upper roadways), Brooklyn approach pavement rehabilitation, feasibility study to investigate widening of the Belt Parkway ramps, a feasibility study for the rehabilitation of the tollbooths, plaza, pavement, utility and lighting systems and signage and traffic interchange in the vicinity of the toll plaza, and rehabilitation, sealing and dehumidifying of the Brooklyn and Staten Island anchorages.

Marine Parkway-Gil Hodges Memorial Bridge - A contract to replace the elevators in the towers is complete. The design-build contract for a pre-engineered service building is underway. Repairs of secondary members and at lower priority locations are in construction are expected to be completed in March of 2009. Bike path construction was completed in 2006. Major Maintenance work scheduled for 2008 includes replacement of the span locks, painting of the deck trusses and repairs to the steel roadway and grating. Projects completed within recent years include: major maintenance painting of the superstructure, east and west side structural steel repairs, deck replacement and bridge widening, boiler replacement, navigation lights and signs for mariners, replacement of on-grade slab prototype with pre-cast slab in the toll plaza, priority steel repairs, refurbishing of the tollbooths and main motor shaft west bearing replacement in the towers.

Cross Bay Veterans Memorial Bridge - A contract to rehabilitate the deck and superstructure is ongoing with construction scheduled to be completed in 2010. A construction contract to include substructure rehabilitation including piles and pile caps is planned for 2010. An office engineer's trailer is expected to be installed in 2007. Painting and refurbishing of the exteriors of the tollbooths is planned for 2008. Projects completed within recent years include: a salt dome, rehabilitation of the air conditioning system in the service building, boiler replacement, installation of continuity plates in the median barrier, the construction of structural and electrical rehabilitation of the concrete slab on grade at Ramp 'D' (southbound ramp extending from the main bridge lanes), the replacement of the main high voltage feeders from the south abutment to the main service building, the rehabilitation of the drainage system at the promenade at the



Rockaway approach, repair to the office trailers, refurbishing of the interior of the tollbooths, and the seawall.

Other Systemwide Improvements

Agency-Wide - Since the September 11 attack on the World Trade Center, TBTA has engaged consultants to assess security risks of their facilities. As a result of these risk assessments, increased security improvements including various monitoring, surveillance and hardening projects have been implemented or will enter construction shortly at TBTA facilities. TBTA has also created a security department and incorporates mitigation measures into their operations, capital and maintenance programs.

The agreement that allowed six-axle dump trucks to increase their allowable load from 80,000 lbs. to 105,000 lbs is still in effect. According to the TBTA, this increase in allowable load was demonstrated by computations performed by its consultants to be within safe limits for the structures. Bridges generally can accommodate overweight vehicles safely, but over time, these vehicles can contribute to increased wear on the facility, requiring increased maintenance repairs. In order to mitigate this, future rehabilitation designs on all bridges will allow for heavier vehicles, while more stringent enforcement is also in place. TBTA is currently in the process of instituting a Weigh-In-Motion (WIM) prototype project, which will test the feasibility of WIM technology to identify and restrict the passage of overweight vehicles on their facilities.

Current Intelligent Transportation System project initiatives include:

- Further enhancements (additional sensors, redundant communication paths) to the previously completed weather recording systems at all facilities.
- Installation of additional Closed Circuit Television (CCTV) equipment for effective monitoring and managing of traffic and incidents as well as upgrading of the communications network with fiber.
- Installation of Video Incident Detection Systems (VIDS) is complete at the Brooklyn-Battery and Queens Midtown Tunnels. This system uses video feeds from in-tunnel cameras to automatically detect stopped traffic and alert facility personnel of possible traffic or security issues.
- Upgrading of the operations centers at all TBTA's facilities as well as internal integration with the Randall's Island Operations Control Center (RIOCC) is complete. The RIOCC has also been upgraded and linked externally to regional transportation operations centers such as TRANSCOM, for improving transportation services both at TBTA facilities and the region as a whole. Installation and expansion of TRANSMIT (an *E-ZPass*-based system) and other incident detection systems.
- The Variable Message Sign (VMS) program is proceeding well. Five new VMS have been installed and approximately 23 more are in various stages of design and procurement.



- Variable Speed Limit Signs have been procured and will be installed at various facilities. A total of 73 signs are planned.
- Key elements of the toll registry system are being modernized in order to improve efficiency and maintainability.

Projects completed within recent years include: the installation of the Computer Aided Drafting and Design system, traffic, safety improvements, tank testing and replacements, installation of weather recording system and inspection platform, Randall's Island Garage roof replacement, *E-ZPass* initial installation at 119 tollbooths systemwide, facility improvements to comply with Americans with Disabilities Act requirements, the installation of main electrical feeders to increase capacity at Randall's Island, and the installation of the heating, ventilation and air conditioning system at the Robert Moses Building. Restoration of the Robert Moses Building at Randall's Island, and the installation of CCTV to allow observation of traffic and activity at all bridges and tunnels were also completed.

As part of the Capital Program planning process, TBTA personnel conduct a 20-year capital needs assessment every five years. The assessment is compiled from data from biennial inspections, and system improvements suggested by the technical departments, and include factors such as service life of various structural components and normal replacement cycles. Plans for scheduling major maintenance under the 20-year capital needs assessment are developed with input from operating personnel, which consider how to implement construction properly to maintain the optimal level of service to the traveling public both locally and system wide.

URS' review of pertinent sections of the recent facility inspection reports found them to be extensive and detailed. Report conclusions and rehabilitation recommendations, based on URS' limited review, appear, in the opinion of URS, to be reasonable appraisals of the required effort to maintain the operational integrity of each facility.

URS performed a facility review of each TBTA facility with the facility engineer. The review included an on-site meeting with each facility's engineer to obtain an update of the respective facility's status relative to the following issues:

- Ongoing rehabilitation projects;
- Ongoing maintenance projects;
- Rehabilitation projects addressing the recommendations of the previous inspection reports; and
- Repairs to alleviate the flagged conditions of the previous inspection reports.

The reviews proved informative. Facility projects and agency-wide projects specific to each structure were discussed.



It is important to note, however, that URS' testing or inspection of portions of the work of other parties shall not relieve such other parties from their responsibility for performing their work in accordance with applicable requirements and the customary standard of care. URS shall not be responsible for the acts or omissions of other parties engaged by TBTA.

Long-Term Outlook for TBTA Facilities

The useful lives of bridges and tunnels, in general, could possibly be cut short for two main reasons: (a) they are geometrically and functionally unsatisfactory because they are too narrow, too steep, lacking in clearance or sufficient spatial capacity to handle the traffic; or (b) they are structurally unsafe because of deterioration or because their load-carrying capacity is inadequate to handle the loads imposed under current conditions. Deterioration may occur for a variety of reasons, including aging, but it will occur sooner if there has been inadequate or improper maintenance.

On the basis of the foregoing review and information available to us, from reports of others, it is our opinion that the TBTA bridges, tunnels and approaches are all geometrically and functionally adequate and structurally sound and generally maintained to good standards. Ongoing maintenance requirements of the structures are assessed, prioritized and addressed in an appropriate manner by TBTA to maintain a high level of safety to the traveling public, and maintain the structures for many years to come.

TBTA is looking forward, and planning to add lanes, and sometimes use peak counterflow principles on its structures, in addition to maintaining the structures, to ensure their future serviceability. We are of the opinion that all the TBTA facilities are and will be physically capable of accommodating traffic volumes at the levels projected for 2017 through the duration of the outstanding bonds that have been issued and future bonds to be issued based on a pledge of TBTA revenues through 2037, assuming maintenance consistent with past practice.

Respectfully,

URS CORPORATION – NEW YORK

Kathleen Massarelli, AICP
Vice President

Arthur H. Goldberg, P.E.
Vice President

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