

**\$250,000,000**  
**Triborough Bridge and Tunnel Authority**  
**General Revenue Variable Rate Bonds, Series 2003B**

DATED: Date of Delivery

DUE: January 1, 2033

The Series 2003B Bonds are being issued to finance bridge and tunnel projects of Triborough Bridge and Tunnel Authority (TBTA).

The Series 2003B Bonds –

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

TBTA has no taxing power.

The Series 2003B Bonds will constitute Variable Interest Rate Obligations and will bear interest from their date of delivery in the Weekly Mode as herein described. The Series 2003B Bonds will bear interest from the date of delivery to and including December 16, 2003 at a rate established on the day prior to the closing and, thereafter, at the rate determined by the Remarketing Agent as herein described. TBTA reserves the right at any time to convert to an Auction Rate Mode, Commercial Paper Mode, Daily Mode, Fixed Rate Mode or Term Rate Mode. **This official statement is intended to provide disclosure only to the extent the Series 2003B Bonds remain in the Weekly Mode.**

In order to provide for the payment of purchase price in the event of a mandatory or optional tender of the Series 2003B Bonds, as more fully described herein, TBTA will enter into a standby bond purchase agreement with Dexia Crédit Local, acting through its New York Agency, in connection with the Series 2003B Bonds (the Initial Liquidity Facility). The Initial Liquidity Facility is scheduled to expire on December 8, 2008, unless extended or earlier suspended or terminated (in certain cases without notice or without the obligation of the Liquidity Facility Issuer to purchase Series 2003B Bonds that are subject to mandatory tender for purchase as a result of such termination) in accordance with its terms as described in this official statement. The Remarketing Agent will suspend remarketing of the Series 2003B Bonds upon the suspension or termination of the Liquidity Facility.

The Initial Liquidity Facility does not provide security for the scheduled payment of principal of or interest or premium, if any, on the Series 2003B Bonds, and the funds drawn thereunder may not be used for such purposes. Payment of purchase price is not an obligation of TBTA.

U.S. Bank Trust National Association is the Trustee, Paying Agent and Tender Agent for the Series 2003B Bonds.

*In the opinion of Hawkins, Delafield & Wood, Bond Counsel to TBTA, under existing law and relying on certain representations by TBTA and assuming the compliance by TBTA with certain covenants, interest on the Series 2003B 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 2003B 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 2003B Bonds are subject to redemption prior to maturity as described herein.

The Series 2003B 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 December 10, 2003.

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Price – 100%

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This cover page contains certain information for general reference only. It is not intended to be a summary of the security or terms of the Series 2003B 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.

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**Citigroup**

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## SUMMARY OF TERMS RELATING TO WEEKLY MODE\*

INTEREST PAYMENT DATES AND CALCULATION PERIOD	The first Business Day of each month, commencing January 2, 2004, on actual days over a 365-day year (366 in years when February has 29 days)
RECORD DATE	Business Day preceding Interest Payment Date
OWNERS' RIGHTS TO TENDER	On any Business Day by irrevocable written Tender Notice delivered to the Tender Agent and Remarketing Agent at their respective addresses specified below at least seven calendar days prior to Purchase Date
NOTICE OF MODE CHANGE; MODE CHANGE DATE	Trustee to mail notice to holder not later than 15 days before the Mode Change Date, which can be any Business Day
MANDATORY TENDER FOR PURCHASE	On each Mode Change Date, Expiration Date, Termination Date and Substitution Date
RATE DETERMINATION DATE	Each Tuesday, unless such Tuesday is not a Business Day, in which case the rate shall be set on the next succeeding Business Day
RATE ADJUSTMENT DATE	Wednesday of each week
TENDER AGENT'S ADDRESS FOR DELIVERY OF TENDER NOTICE	U.S. Bank Trust National Association 100 Wall Street New York, New York 10005  with a copy to: U.S. Bank Trust National Association 180 East Fifth Street St. Paul, MN 55101 Attn: TFM New York
REMARKETING AGENT'S ADDRESS FOR DELIVERY OF TENDER NOTICE	Citigroup Global Markets Inc. 390 Greenwich Street, 5 <sup>th</sup> Floor New York, NY 10013 Attn: Short Term Tax-Exempt Trading

*The Underwriter may over allot or effect transactions which stabilize or maintain the market price of the Series 2003B Bonds at a level above that which might otherwise prevail in the open market. The Underwriter is not obligated to do this and is free to discontinue it at any time.*

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\* So long as the Series 2003B Bonds are registered in the name of Cede & Co., as Bondholder and Securities Depository Nominee of DTC, mechanics for tender and redemption will be in accordance with procedures established by DTC.

# Triborough Bridge and Tunnel Authority

TRIBOROUGH STATION, BOX 35

New York, New York 10035

(212) 360-3000

Website: [www.mta.info](http://www.mta.info)

Peter S. Kalikow ..... *Chairman*  
David S. Mack ..... *Vice-Chairman*  
Edward B. Dunn ..... *Vice-Chairman*  
Andrew B. Albert ..... *Non-Voting Member*  
James F. Blair ..... *Non-Voting Member*  
Nancy Shevell Blakeman ..... *Member*  
Anthony J. Bottalico ..... *Non-Voting Member*  
Kenneth A. Caruso ..... *Member*  
Thomas J. Cassano ..... *Non-Voting Member*  
Barry L. Feinstein ..... *Member*  
Lawrence W. Gamache ..... *Member*  
James H. Harding, Jr. .... *Member*  
Susan L. Kupferman ..... *Member*  
Mark D. Lebow ..... *Member*  
James L. McGovern ..... *Non-Voting Member*  
Mark Page ..... *Member*  
Ernest J. Salerno ..... *Member*  
Andrew M. Saul ..... *Member*  
James L. Sedore, Jr. .... *Member*  
James S. Simpson ..... *Member*  
Edward A. Vrooman ..... *Member*  
Alfred E. Werner ..... *Member*

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Katherine N. Lapp ..... *Executive Director and Chief Operating Officer*  
Michael C. Ascher ..... *President*  
Stanley Vonasek ..... *Vice President and Chief Engineer*  
Robert M. O'Brien, Esq. .... *General Counsel*  
David Moretti ..... *Chief Financial Officer*

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

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

URS CORPORATION – NY  
New York, New York  
*Independent Engineers*

## SUMMARY OF TERMS

TBTA has prepared this Summary of Terms to describe the specific terms of the Series 2003B 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 TBTA and to TBTA's 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.
Bonds Being Offered .....	General Revenue Variable Rate Bonds, Series 2003B.
Purpose of Issue .....	To finance TBTA's bridge and tunnel projects.
Rates and Maturity .....	The Series 2003B Bonds are Variable Interest Rate Obligations that initially bear interest from their date of delivery in the Weekly Mode and mature on January 1, 2033. See cover.
Denominations in Weekly Mode .....	\$100,000 or any integral multiples of \$5,000 in excess thereof.
Interest Payment Dates in Weekly Mode .....	First Business Day of each month, commencing January 2, 2004.
Redemption .....	See "DESCRIPTION OF SERIES 2003B BONDS – Redemption Provisions During the Weekly Mode" in Part I.
Tender .....	See "DESCRIPTION OF SERIES 2003B BONDS – Tender, Presentation and Purchase Provisions of the Series 2003B Bonds During the Weekly Mode" in Part I.
Sources of Payment and Security .....	Net revenues collected on the bridges and tunnels operated by TBTA as described herein.
Initial Liquidity Facility .....	Standby Bond Purchase Agreement with Dexia Crédit Local, acting through its New York Agency, that expires on December 8, 2008. See "DESCRIPTION OF SERIES 2003B BONDS – Liquidity Facility" 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 and Tender Agent .....	U.S. Bank Trust National Association.
Bond Counsel .....	Hawkins, Delafield & Wood, New York, New York.
Tax Status .....	See "TAX MATTERS" in Part III.
Expected Ratings .....	<i>Rating Agency</i>
	Moody's ..... Aa3/VMIG 1
	Standard & Poor's ..... AA-/A-1+
	Fitch ..... AA/F1+
	See "RATINGS" in Part III.
Financial Advisor .....	Goldman, Sachs & Co.
Underwriter/Remarketing Agent .....	Citigroup Global Markets Inc.
Purchase Price/Underwriter's Discount .....	See "UNDERWRITING" in Part III.
Counsel to the Underwriters .....	Jones Day, New York, New York.
MTA Special Counsel .....	Nixon Peabody LLP, New York, New York.
Independent Engineers .....	URS Corporation – New York, New York, New York.

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- ***No Unauthorized Offer.*** This official statement is not an offer to sell, or the solicitation of an offer to buy, the Series 2003B Bonds in any jurisdiction where that would be unlawful. TBTA 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 2003B 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 2003B 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 TBTA's affairs or in any other matters described herein.
  - ***Forward-Looking Statements.*** Many statements contained in this official statement, including the documents included by specific cross-reference, 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," "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 TBTA 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 TBTA's 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 TBTA. 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 TBTA's independent auditors, nor any other independent accountants, 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, and assume no responsibility for, and disclaim any association with, the prospective financial information.
  - ***No Guarantee of Information by Underwriter.*** The Underwriter has provided the following sentence for inclusion in this official statement: The Underwriter has reviewed the information in this official statement in accordance with, and as part of, its responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriter does not guarantee the accuracy or completeness of such information.
  - ***Initial Liquidity Facility Issuer Information.*** Other than with respect to information concerning the Initial Liquidity Facility Issuer contained in Attachment 4 herein, none of the information in this official statement has been supplied or verified by the Initial Liquidity Facility Issuer and the Initial Liquidity Facility Issuer does not make any representation or warranty, express or implied, as to
    - the accuracy or completeness of information it has neither supplied nor verified,
    - the validity of the Series 2003B Bonds, or
    - the tax-exempt status of the interest on the Series 2003B Bonds.
  - ***SEC Rule 15c2-12.*** SEC Rule 15c2-12 does not require TBTA to enter into a written agreement for the benefit of holders of the Series 2003B Bonds to provide continuing disclosure during the period that such Series 2003B Bonds bear interest in the Weekly Mode. TBTA regularly files continuing disclosure in connection with other debt obligations.

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**Information Included by Specific Cross-reference.** The following portions of MTA’s 2003 Combined Continuing Disclosure Filings, dated April 29, 2003, 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 2003B Bonds, together with any supplements or amendments thereto:

- o Appendix A – The Related Entities\*
- o Appendix D – Audited Financial Statements of Triborough Bridge and Tunnel Authority for the Years Ended December 31, 2002 and 2001

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:

- o Summary of Certain Provisions of the TBTA Resolution
- o Definitions and Summary of Certain Provisions of the Standard Resolution Provisions

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\* The facilities listed under the caption “THE TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY – Present Facilities” in **Appendix A** include TBTA’s seven bridges and two tunnels and the Battery Parking Garage. Only the bridges and tunnels constitute TBTA Facilities under the TBTA Resolution (as herein defined), though the net revenues derived from the operation of the Battery Parking Garage are included as net revenues that are pledged to the payment of the Bonds (as herein defined). Capital projects at the Battery Parking Garage cannot be financed under the TBTA Resolution unless the Battery Parking Garage qualifies as an Additional TBTA Project thereunder.

The following statement is set forth under the caption “TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY – Toll Rates – General Power to Establish Tolls”: “The Public Authorities Law [§2804] provides that certain financial disclosure, reporting and hearing requirements with respect to proposed increases in toll rates be observed prior to the implementation of any such increases, which requirements, in the opinion of General Counsel to TBTA, are not applicable to TBTA.” The reporting and hearing requirements of §2804 were held unconstitutional in 1990 by New York’s highest court, which also questioned, but did not rule on, the legality of the financial disclosure provisions of that section. The Appellate Division of the Supreme Court, in ruling in favor of the TBTA in connection with the latest toll increases effective May 18, 2003, additionally questioned the legality of the financial disclosure provisions of §2804, though it also did not rule on it. However, in light of the fact that no definitive ruling on the financial disclosure provisions has been issued by the courts, as well as the recent recommendations from elected officials and the public that the finances of the Related Entities should be more “transparent,” TBTA is assessing whether or not to comply with the financial disclosure provisions of §2804 in connection with future toll increases.

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## INTRODUCTION

### TBTA, MTA and Other Related Entities

Triborough Bridge and Tunnel Authority, or TBTA, 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”. TBTA is empowered to construct and operate toll bridges and tunnels and other public facilities in New York City. TBTA 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. TBTA’s surplus amounts are used to fund transit and commuter operations and finance capital projects. The board members of MTA also serve as the board members of MTA’s affiliates and subsidiaries, including TBTA.

MTA has responsibility for developing and implementing a single, integrated mass transportation policy for 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 (the Transit Authority) and its subsidiary, the Manhattan and Bronx Surface Transit Operating Authority (MaBSTOA); the Staten Island Rapid Transit Operating Authority (SIRTOA); The Long Island Rail Road Company (LIRR); the Metro-North Commuter Railroad Company (MNCRC); and the Metropolitan Suburban Bus Authority (MSBA). MTA issues debt obligations to finance a substantial portion of the capital costs of these systems, other than MSBA.

MTA, TBTA and the other related entities are described in detail in **Appendix A** to MTA’s 2003 Combined Continuing Disclosure Filings, which is included by specific cross-reference in this official statement.

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

### Recent Developments

**New Budgetary Process.** Earlier this year, the MTA Board adopted new budgeting practices for the Related Entities, including TBTA. The new practices require the following in each year:

- preparation of preliminary budgets for the next calendar year in July,
- preparation of proposed final budgets and an updated four-year financial plan in October,
- solicitation of public comments on the proposed final budgets by November 30,
- adoption of a final budget, after considering public comments, by December 31, and
- update of the four-year financial plan within 60 days of the adoption of a final budget.

Budget documents continue to be distributed to certain elected officials and posted on MTA’s website for review by the public. In its current form, the legislation relating to the corporate restructuring referenced below under “*Corporate Restructuring*” would enact these practices into law. The budgeting practices are subject to change at any time by the MTA Board. In addition, the Legislature, if it decides to incorporate the MTA budget procedures into legislation, may revise or eliminate these practices in whole or in part.

**Current TBTA Financial Information.** On October 28, 2003, MTA, on behalf of the Related Entities, presented an updated 2003 budget and a proposed financial plan for the years 2004-2007 (the 2004-2007 Financial Plan) that includes a proposed final budget for 2004 and a financial plan for the years 2005–2007. A copy of the 2004-2007 Financial Plan is posted on MTA’s website.

In the 2004-2007 Financial Plan, TBTA projected the following:

- for the 2003 budget update,
  - o net operating income (total revenues less net operating expenses) of \$711.1 million, which exceeds the July 2003 mid-year forecast by \$17.5 million,
  - o deductions from operating income (debt service, capitalized assets and reserves) of \$96.3 million, and

- o total support to mass transit (e.g., operating surplus to transit and commuter) of \$614.8 million, and
- for the 2004 final budget,
  - o net operating income (total revenues less net operating expenses) of \$763.0 million, which includes the effect of the annualization of the toll increase that became effective May 18, 2003,
  - o deductions from operating income of \$115.2 million, and
  - o total support to mass transit of \$647.8 million.

TBTA also expects to generate substantial operating surpluses in the years 2005 through 2007.

The projection of estimated revenues set forth in the report by TBTA's Independent Engineers set forth in **Attachment 5** is different from that set forth in the 2004-2007 forecast as the projection is based upon conclusions formed independently based upon their own methodology and assumptions. Investors should read **Attachment 5**, the report of the Independent Engineers, in its entirety.

For the period ending September 30, 2003, TBTA had, on an unaudited basis,

- total revenues (which includes toll revenues, investment income and other income) of \$770.8 million, which was \$13.1 million more than the mid-year forecast,
- toll revenues of \$749.8 million, which was \$14.1 million more than the mid-year forecast,
- personnel expenses of \$117.4 million, which was \$5.0 million less than the mid-year forecast, primarily due to the timing of new security hires and worker's compensation expenses,
- other than personnel expenses of \$119.8 million, which was \$11.5 million less than the mid-year forecast, primarily due to lower than expected costs for E-ZPass tag replacement purchases and major maintenance and painting, and
- debt service of \$236.5 million, which was \$15.8 million less than the mid-year forecast.

**Current MTA Financial Information.** With respect to the Related Entities aggregated as a whole, the 2004-2007 Financial Plan showed the following significant two-year revenue and expense changes relating to the 2003 and 2004 budgets between the July 2003 financial plan and the 2004-2007 Financial Plan:

- increase in TBTA bridge and tunnel revenues of \$33.1 million,
- increase in transit and commuter fare revenue of \$11.8 million,
- increase of \$49.7 million in subsidies primarily due to greater than anticipated mortgage recording taxes,
- less than anticipated debt service costs of \$14.7 million,
- pension cost re-estimate costing an additional \$32.6 million,
- additional expenses and loss of revenues of \$20.6 million due to the regional blackout in August,
- health and welfare benefits inflation re-estimate costing an additional \$19.0 million, and
- other expense needs of \$5.0 million.

MTA projects the following, after taking into consideration the application of TBTA's operating surplus to mass transit:

- the Related Entities will have balanced budgets for 2003 and 2004 on a cash basis,
- the Related Entities will have a net cash balance at the end of 2003 of \$225.1 million (an increase of \$38.8 million over the July 2003 forecast),
- the Related Entities, after the application of the 2003 cash balance, will have a net cash balance at the end of 2004 of \$36.2 million (an increase of \$32.1 million over the July 2003 forecast),
- the Related Entities will have annual cash deficits in 2005, 2006 and 2007 of \$839.7 million, \$1.34 billion and \$1.45 billion, respectively.

The MTA projections for 2005 through 2007 assume 5% additional yields in fares and/or tolls in 2005 and 2007 due to increased ridership or adjustments in discount programs, but not necessarily an increase in the base fare and/or toll. Other than normal growth in expenses due to inflation, the major portions of the projected deficits are caused by substantial growth in debt service costs, additional pension contributions primarily due to market losses during the last few years, additional health and welfare benefit costs and the loss of non-recurring subsidies and cash adjustments.

MTA may update all or any portion of the 2004 budget until its final adoption by the MTA Board. MTA may be forced to institute additional cost reductions or take other actions to close projected budget gaps, which could include seeking additional subsidies and/or raising fares and tolls. The four-year financial plan will assume a level of capital spending for years subsequent to the current Transit and Commuter Capital Programs; however, the proposed capital programs for the transit and commuter systems covering the years 2005-2009 are not scheduled to be submitted to the Capital Program Review Board until October 1, 2004, and the final approved capital spending plan may be different from that assumed in the four-year financial plan. TBTA is expected to formulate its own capital plan for the years 2005-2009 at the same time. Until such proposed capital programs for the transit and commuter systems and for TBTA are adopted and receive all required approvals, it is anticipated that various governmental officials and parties representing various non-governmental entities may issue statements and reports commenting on such capital programs, the projects included therein and the ability of MTA and TBTA to finance the programs. MTA expects to respond to such statements and reports in proper forums when appropriate.

**Quarterly Financial Statement Reports.** On September 30, 2003, MTA issued its first quarterly financial statement report for the MTA on a consolidated basis for the six-month period ending June 30, 2003. The report is posted on MTA's website. The review of the quarterly financial statements was conducted in accordance with the standards established by the American Institute of Certified Public Accountants. As MTA continues to develop its quarterly financial statement reporting procedures, it expects to include a cash-based reconciliation of the then-current financial plan to actual results; however, MTA cannot predict when it will begin to include such reconciliations in its quarterly reports.

**Corporate Restructuring.** MTA has proposed a plan of corporate restructuring and introduced legislation to effectuate that plan. For more information, see **Appendix A** under the caption "THE RELATED ENTITIES – Legal Status and Public Purpose." Certain aspects of the corporate restructuring can proceed without legislation. For example, a new MTA subsidiary, MTA Capital Construction Company (MTA Capital Construction), was recently created. MTA Capital Construction is responsible for the planning, design and construction of current and future major MTA system expansion projects, including East Side Access (bringing LIRR into Grand Central Terminal), extension of the #7 subway line from Times Square to the west side of Manhattan, the Lower Manhattan Fulton Street Transit Center, the new South Ferry station complex in lower Manhattan, system-wide capital security projects and the Second Avenue Subway project.

**Insurance Coverage Effective October 31, 2003.** Effective October 31, 2003, MTA's captive insurance company subsidiary, First Mutual Transportation Assurance Company (FMTAC), insured property damage claims of the Related Entities in excess of a \$25 million per occurrence self-insurance retention, subject to an annual \$75 million aggregate. The aggregate limitation of \$1 billion per occurrence covers all property of the Related Entities. FMTAC is reinsured by the United States under the federal terrorism insurance bill (TRIA), as well as in the domestic, London and European marketplace, for this coverage. The TRIA generally covers foreign acts of terrorism. The \$1 billion policy does not cover acts of terrorism that are not covered by the TRIA; however, MTA has an additional commercial policy that provides coverage against all acts of terrorism in an amount up to \$100 million per occurrence (subject to the \$25 million per occurrence self-insurance retention) if the incident is not covered by the TRIA, or, if the incident is covered by the TRIA, in an amount equal to the remaining 10% (subject to the same retention) not covered by the TRIA. The property insurance, which is subject to annual renewal on October 31, provides replacement cost coverage for all risks of direct physical loss or damage to all real and personal property, with minor exceptions. The policy also provides extra expense and business interruption coverages.

Effective October 31, 2003, the MTA Excess Loss Fund (ELF) was terminated, the ELF assets were transferred to FMTAC and liability insurance was written by FMTAC to provide a \$50 million per occurrence policy, subject to designated self-insured retentions by each of the Related Entities. See **Appendix A** under the caption "INSURANCE – Liability Insurance – *Excess Loss Fund.*" This program covers third-party liability occurrences arising out of the operations of the Related Entities. In addition, the MTA renewed the commercial

excess liability insurance policy that covers the Related Entities for \$150 million in additional limits above the \$50 million per occurrence policy. See **Appendix A** under the caption “INSURANCE – Liability Insurance – *Excess Liability Insurance*.”

***Fare and Toll Litigation.*** Earlier this year, various petitions were filed against the MTA, the Transit Authority and TBTA challenging the fare and toll increases that became effective in May 2003. In July 2003, the Appellate Division, First Department, in a unanimous decision, reversed the trial courts’ judgments in favor of petitioners and dismissed the petitions. Petitioners’ motion to seek leave to appeal to the New York State Court of Appeals was denied in September 2003, thereby concluding the litigation and leaving the fare and toll increases in place.

## **Where to Find Information**

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

- ***Part I*** provides specific information about the Series 2003B Bonds.
- ***Part II*** describes the sources of payment and security for all TBTA General Revenue Bonds, including the Series 2003B Bonds.
- ***Part III*** provides miscellaneous information relating to the Series 2003B Bonds.
- ***Attachment 1*** sets forth certain provisions applicable to the book-entry system of registration to be used for the Series 2003B Bonds.
- ***Attachment 2*** sets forth certain defined terms used in this official statement.
- ***Attachment 3*** is the form of opinion of Bond Counsel in connection with the Series 2003B Bonds.
- ***Attachment 4*** sets forth certain information relating to the Initial Liquidity Facility Issuer.
- ***Attachment 5*** sets forth the history and projection of traffic, toll revenues and expenses and review of physical condition of TBTA’s 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 TBTA file annual and other information with each Nationally Recognized Municipal Securities Information Repository (NRMSIRs). Documents filed by MTA and TBTA 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](mailto:munis@bloomberg.com)

### ***FT Interactive Data***

Attn: NRMSIR  
100 William Street  
New York, NY 10038  
Phone: (212) 771-6999  
Fax: (212) 771-7390 (Secondary Market Information)  
(212) 771-7391 (Primary Market Information)  
Email: [NRMSIR@FTID.com](mailto:NRMSIR@FTID.com)

### ***DPC Data Inc.***

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

### ***Standard & Poor’s J.J. Kenny Repository***

55 Water Street  
45<sup>th</sup> Floor  
New York, NY 10041  
Phone: (212) 438-4595  
Fax: (212) 438-3975  
Email: [nrmsir\\_repository@sandp.com](mailto:nrmsir_repository@sandp.com)

***Information Included by Specific Cross-reference.*** The information listed under the caption “Information Included by Specific Cross-reference” in 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 2003B 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.

## PART I. SERIES 2003B BONDS

*Part I* of this official statement, together with the Summary of Terms, provides specific information about the Series 2003B Bonds.

### APPLICATION OF PROCEEDS

TBTA anticipates that the proceeds of the Series 2003B Bonds, less certain financing, legal and miscellaneous expenses of \$2,767,928, will be applied as follows:

Deposit to Series 2003B Proceeds Account	\$247,232,072
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The net proceeds of the Series 2003B Bonds will be used to finance TBTA's bridge and tunnel projects.

### DESCRIPTION OF SERIES 2003B BONDS

#### General

**Variable Rate Bonds.** The Series 2003B Bonds will be dated their date of delivery and will mature on January 1, 2033. The Series 2003B Bonds are Variable Interest Rate Obligations that initially bear interest from their date of delivery in the Weekly Mode. The Series 2003B Bonds will bear interest from the date of issuance to and including December 16, 2003 at a rate established on the day prior to the closing and, thereafter, at the rate determined by the Remarketing Agent as described below. This official statement is intended to provide disclosure only to the extent the Series 2003B Bonds remain in the Weekly Mode. In the event TBTA elects to convert the Series 2003B Bonds to a different Mode, it expects to circulate a revised disclosure document relating thereto.

Interest on the Series 2003B Bonds is paid in arrears and is computed upon the basis of a 365-day year (366 in years when February has 29 days), for the number of days actually elapsed. The maximum rate of interest on the Series 2003B Bonds (other than Bank Bonds, as hereinafter described) at any time, whether before or after the maturity thereof, is 12% per annum (the Maximum Rate). "Bank Bonds" are Series 2003B Bonds held by the Liquidity Facility Issuer as a result of a draw on the Liquidity Facility to pay the Purchase Price of Series 2003B Bonds that have been tendered and not remarketed and may bear interest at a rate of up to 15% per annum.

TBTA has appointed Citigroup Global Markets Inc. as Remarketing Agent in connection with the remarketing of the Series 2003B Bonds. The Remarketing Agent will determine the interest rate on the Series 2003B Bonds and will remarket Series 2003B Bonds tendered or required to be tendered for purchase on a best efforts basis. The Remarketing Agent may be removed or replaced by TBTA in accordance with the Remarketing Agreement.

**Payment of Series 2003B Bonds Purchase Price.** The Purchase Price (as hereinafter defined) of the Series 2003B Bonds that are tendered and not remarketed on any Purchase Date is payable pursuant to a standby bond purchase agreement (the Initial Liquidity Facility) by and among Dexia Crédit Local, acting through its New York Agency (the Initial Liquidity Facility Issuer), TBTA and U.S. Bank Trust National Association, acting as Trustee and Tender Agent. Pursuant to the Remarketing Agreement, the Remarketing Agent will suspend its obligation to remarket Series 2003B Bonds upon the termination or suspension of the Liquidity Facility.

For more information relating to the Initial Liquidity Facility Issuer, see Attachment 4.

The Initial Liquidity Facility is an obligation of the Initial Liquidity Facility Issuer as described herein. **The obligations of the Initial Liquidity Facility Issuer to purchase Series 2003B Bonds are subject to the satisfaction of certain conditions and may be terminated or suspended, in certain instances without notice or without the obligation of the Liquidity Facility Issuer to purchase Series 2003B Bonds that have been tendered for purchase.** See "—Liquidity Facility" below.

The Purchase Price on the Series 2003B Bonds is payable solely from the proceeds of remarketing the Series 2003B Bonds by Citigroup Global Markets Inc., acting as the Remarketing Agent, and from the proceeds from draws under the Liquidity Facility. Although TBTA has the option to purchase Series 2003B Bonds that have been neither remarketed nor purchased by the Liquidity Facility Issuer, it is not obligated to do so. Payment of the

Purchase Price is not an obligation of TBTA, the Trustee, the Remarketing Agent or the Tender Agent and failure to make that payment shall not constitute an Event of Default under the TBTA Resolution. See “—Source of Funds for Purchase of Series 2003B Bonds” below.

The Initial Liquidity Facility is scheduled to expire on December 8, 2008, unless extended or earlier terminated (in certain cases without notice or without the obligation of the Liquidity Facility Issuer to purchase Series 2003B Bonds that are subject to mandatory tender for purchase as a result of such termination) in accordance with its terms. See “Liquidity Facility” below.

**Book-Entry-Only System.** The Series 2003B 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 2003B Bonds. During the period during which the Series 2003B Bonds bear interest in the Weekly Mode, individual purchases will be made in book-entry-only form, in the principal amount of \$100,000 or any integral multiple of \$5,000 in excess thereof (Authorized Denominations). So long as DTC is the registered owner of the Series 2003B Bonds, all payments on the Series 2003B 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.** Interest on the Series 2003B Bonds is payable on the first Business Day of each month, commencing January 2, 2004. So long as DTC is the sole registered owner of all of the Series 2003B Bonds, all interest payments will be made to DTC by wire transfer of immediately available funds, and DTC’s participants will be responsible for payment of interest to beneficial owners. All Series 2003B Bonds are fully registered in Authorized Denominations.

**Transfers and Exchanges.** So long as DTC is the securities depository for the Series 2003B Bonds, it will be the sole registered owner of the Series 2003B Bonds, and transfers of ownership interests in the Series 2003B Bonds will occur through the DTC Book-Entry-Only System.

**Trustee, Paying Agent and Tender Agent.** U. S. Bank Trust National Association is Trustee, Paying Agent and Tender Agent with respect to the Series 2003B Bonds.

## **Terms Relating to the Weekly Mode**

**Determination of Interest Rate in the Weekly Mode.** The interest rate for the Series 2003B Bonds in a Weekly Mode shall be determined by the Remarketing Agent on each Tuesday or, if that Tuesday is not a Business Day, the next succeeding Business Day (the Rate Determination Date). The interest rate shall be the rate of interest per annum determined by the Remarketing Agent on and as of the applicable Rate Determination Date as the minimum rate of interest that, in the opinion of the Remarketing Agent, would, under then existing market conditions, result in the sale of the Series 2003B Bonds on the Rate Determination Date at a price equal to the principal amount thereof, plus accrued interest, if any. The interest rate shall be effective on Wednesday and shall continue in effect through the next succeeding Tuesday (the Interest Period), provided that if any Series 2003B Bonds subject to a Weekly Mode shall be converted to another Mode prior to such Tuesday, such Weekly Mode for such Series 2003B Bond shall continue in effect only until the day preceding the applicable Mode Change Date.

In the event the Remarketing Agent fails to determine the interest rate or the method of determining the interest rate is held to be unenforceable by a court of law of competent jurisdiction, the Series 2003B Bonds will bear interest at the Alternate Rate for subsequent Interest Periods until such time as the Remarketing Agent again makes that determination or until there is delivered to TBTA and the Trustee a Favorable Opinion of Bond Counsel.

The Alternate Rate is

- the BMA Index (The Bond Market Association Municipal Swap Index released by Municipal Market Data to its subscribers), or
- if the BMA Index is no longer published, the Kenny Index (the rate determined on the basis of the Kenny 30-Day High Grade Index announced on Tuesday or the next preceding Business Day and as computed by Kenny Information Systems, Inc.), or

- if neither the BMA Index nor the Kenny Index are published, an index or a rate selected or determined by the Remarketing Agent and consented to by the Issuer, the Trustee and the Liquidity Facility Issuer.

No Series 2003B Bond (other than a Bank Bond) may at any time bear interest at a rate that is in excess of 12%. No Bank Bond may at any time bear interest at a rate that is in excess of 15%.

**Binding Effect.** Each determination of the interest rate for the Series 2003B Bonds, as provided herein, shall be conclusive and binding upon the holders of the Series 2003B Bonds, TBTA, the Remarketing Agent, the Tender Agent, the Liquidity Facility Issuer and the Trustee.

### **Changes in Mode**

**General.** All or any portion of the Series 2003B Bonds may be changed to any other Mode at the times and in the manner as summarized below.

**Notice of Intention to Change Mode.** TBTA shall give written notice to the Notice Parties of its intention to effect a change in the Mode from the Mode then prevailing (the Current Mode) to another Mode (the New Mode) specified in such written notice, together with the proposed effective date of that change in the Mode (the Mode Change Date). The notice shall be given at least 20 days prior to the Mode Change Date.

#### **General Provisions Applying to Changes from One Mode to Another.**

1. The Mode Change Date must be a Business Day.
2. On or prior to the date TBTA provides the notice to the Notice Parties, TBTA shall deliver to the Trustee (with a copy to all other Notice Parties) a letter from Bond Counsel addressed to the Trustee to the effect that it expects to be able to deliver a Favorable Opinion of Bond Counsel on the Mode Change Date.
3. No change in Mode will become effective unless all conditions precedent thereto have been met and the following items shall have been delivered to the Trustee and the Remarketing Agent by 11:00 a.m., or such later time as is acceptable to TBTA, the Trustee and the Remarketing Agent, on the Mode Change Date:
  - a Favorable Opinion of Bond Counsel dated the Mode Change Date,
  - unless the existing Tender Agency Agreement and Remarketing Agreement is effective on the Mode Change Date, a Tender Agency Agreement and a Remarketing Agreement if required for the New Mode, and
  - a certificate of an authorized officer of the Tender Agent to the effect that all of the Series 2003B Bonds tendered or deemed tendered, unless otherwise redeemed, have been purchased at a price at least equal to the principal amount thereof.
4. If all conditions to the Mode change are met, the interest period for the New Mode shall commence on the Mode Change Date and the interest rate shall be determined by the Remarketing Agent.
5. In the event the foregoing conditions have not been satisfied by the Mode Change Date, the New Mode shall not take effect and the Series 2003B Bonds that are the subject of the Mode change:
  - will not be subject to mandatory tender for purchase, and
  - will continue to be in the Weekly Mode.

### **Tender, Presentation and Purchase Provisions of the Series 2003B Bonds During the Weekly Mode**

**Purchase on Demand of Owners of Series 2003B Bonds in Weekly Mode.** The Owners of the Series 2003B Bonds that are not Bank Bonds or Series 2003B Bonds registered in the name of TBTA may elect to have such Series 2003B Bonds (or portions thereof in Authorized Denominations) purchased on a Business Day at a

price (the Purchase Price) equal to the principal amount so tendered plus accrued interest (if the Purchase Date is not an Interest Payment Date). Owners must deliver a written notice of tender (the Tender Notice) not later than 4:00 p.m. on a Business Day not less than seven (7) days before the Purchase Date specified by the Owner. The Tender Notice, once transmitted to the Tender Agent and the Remarketing Agent, shall be irrevocable and that tender shall occur on the Purchase Date specified in that Tender Notice. The Tender Agent shall notify the Trustee by the close of business on the next succeeding Business Day of the receipt of any Tender Notice.

During any period that Series 2003B Bonds are registered in the name of DTC or a nominee thereof pursuant to the TBTA Resolution,

- any Tender Notice delivered as described in the immediately preceding paragraph shall identify the DTC Participant through whom the beneficial owner will direct transfer,
- on or before the Purchase Date, the beneficial owner must direct (or if the beneficial owner is not a DTC Participant, cause its DTC Participant to direct) the transfer of said Series 2003B Bond on the records of DTC, and
- it shall not be necessary for Series 2003B Bonds to be physically delivered on the date specified for purchase thereof, but such purchase shall be made as if such Series 2003B Bonds had been so delivered, and the Purchase Price thereof shall be paid to DTC.

In accepting a notice of tender as provided above, the Trustee and the Tender Agent may conclusively assume that the person providing such notice of tender is the beneficial owner of Series 2003B Bonds tendered and therefore entitled to tender them. The Trustee and Tender Agent assume no liability to anyone in accepting a notice of tender from a person whom it reasonably believes to be such a beneficial owner of Series 2003B Bonds.

***Mandatory Purchase on any Mode Change Date.*** Except for Bank Bonds or Series 2003B Bonds registered in the name of TBTA, the Series 2003B Bonds to be changed to any Mode from any other Mode are subject to a mandatory tender for purchase on the Mode Change Date at the Purchase Price equal to the principal amount thereof.

***Mandatory Purchase Upon Expiration Tender Date, Termination Tender Date and Substitution Date.*** Except for Bank Bonds or Series 2003B Bonds registered in the name of TBTA, the Series 2003B Bonds are subject to mandatory tender for purchase on:

- the second Business Day preceding the Expiration Date of a Liquidity Facility, which second Business Day is hereinafter referred to as an Expiration Tender Date;
- the fifth calendar day (or if such day is not a Business Day, the preceding Business Day) preceding the Termination Date of a Liquidity Facility, which fifth calendar day is hereinafter referred to as a Termination Tender Date, if the Liquidity Facility permits a draw thereon on the Termination Tender Date (see below “—Liquidity Facility—*Suspension or Termination Events; Remedies*”); and
- the Substitution Date for a Liquidity Facility.

A “Substitution Date” means:

- the date that is specified in a written notice given by TBTA to the Trustee, the Remarketing Agent and the Tender Agent as the date on which an Alternate Liquidity Facility is to be substituted for the then-existing Liquidity Facility (even if the substitution fails to occur on that date), and
- the second Business Day preceding the date that is specified in a written notice given to the Trustee, the Remarketing Agent and the Tender Agent in accordance with the Liquidity Facility as the date on which the assignment of the obligation of the Liquidity Facility Issuer under the Liquidity Facility is effective (even if the assignment fails to occur on that date).

**Notice of Mandatory Tender for Purchase.** The Trustee shall, at least fifteen (15) days prior to the Expiration Tender Date, give notice of the mandatory tender on that Expiration Tender Date if it has not theretofore received confirmation that the Expiration Date has been extended.

Upon receipt of a written notice from the Liquidity Facility Issuer or TBTA that the Liquidity Facility will terminate or the obligation of the Liquidity Facility Issuer to purchase the Series 2003B Bonds will terminate prior to its Expiration Date, the Trustee shall within one (1) Business Day give notice of the mandatory tender of the Series 2003B Bonds that is to occur on such Termination Tender Date if it has not theretofore received from the Liquidity Facility Issuer or TBTA a notice stating that the event which resulted in the Liquidity Facility Issuer or TBTA giving a notice of the Termination Date has been cured and that the Liquidity Facility Issuer or TBTA has rescinded its election to terminate the Liquidity Facility. Notwithstanding anything to the contrary described below, that notice shall be given by Electronic Means capable of creating a written notice. Any notice given substantially as described in this paragraph shall be conclusively presumed to have been duly given, whether or not actually received by each Owner.

The Trustee shall, at least fifteen (15) days prior to the Substitution Date, give notice of the mandatory tender of the Series 2003B Bonds on the Substitution Date.

The Trustee shall, at least fifteen (15) days prior to any Mode Change Date give notice of the mandatory tender for purchase of the Series 2003B Bonds that is to occur on that date.

Except as provided in the third immediately preceding paragraph, notice of any mandatory tender of Series 2003B Bonds shall be provided by the Trustee or caused to be provided by the Trustee by mailing a copy of the notice of mandatory tender by first-class mail to each Owner of Series 2003B Bonds at the respective addresses shown on the registry books. Each notice of mandatory tender for purchase shall identify the reason for the mandatory tender for purchase, and specify:

- the Mandatory Purchase Date,
- the Purchase Price,
- the place and manner of payment,
- that the Owner has no right to retain such Series 2003B Bond, and
- that no further interest will accrue from and after the Mandatory Purchase Date to such Owner.

Each notice of mandatory tender for purchase caused by a change in the Mode applicable to the Series 2003B Bonds shall in addition specify the conditions that have to be satisfied pursuant to the TBTA Resolution in order for the New Mode to become effective and the consequences that the failure to satisfy any of such conditions would have.

In the event a mandatory tender of Series 2003B Bonds shall occur at or prior to the same date on which an optional tender for purchase is scheduled to occur, the terms and conditions of the applicable mandatory tender for purchase shall control. Any notice mailed as described above shall be conclusively presumed to have been duly given, whether or not the Owner of any Series 2003B Bond receives the notice, and the failure of that Owner to receive any such notice shall not affect the validity of the action described in that notice. Failure by the Trustee to give a notice as provided under this caption would not affect the obligation of the Tender Agent to purchase the Series 2003B Bonds subject to mandatory tender for purchase on the Mandatory Purchase Date.

### **Remarketing of Series 2003B Bonds**

The Remarketing Agent shall offer for sale and use its best efforts to find purchasers for (i) all Series 2003B Bonds or portions thereof as to which a Tender Notice has been given and (ii) all Series 2003B Bonds required to be tendered for purchase. No Series 2003B Bond shall be remarketed (x) to TBTA, or any affiliate of TBTA, nor shall any Bank Bonds be remarketed unless the Liquidity Facility, if required, has been or will be, immediately upon such remarketing, reinstated by the amount of the reduction that occurred when such Series

2003B Bonds became Bank Bonds, and (y) at a price that is less than the Purchase Price of such Series 2003B Bonds.

Pursuant to the Remarketing Agreement, the Remarketing Agent will suspend remarketing of the Series 2003B Bonds upon the termination or suspension of the Liquidity Facility.

#### **Source of Funds for Purchase of Series 2003B Bonds**

On or before the close of business on the Purchase Date or the Mandatory Purchase Date with respect to Series 2003B Bonds, the Tender Agent shall purchase the Series 2003B Bonds from the Owners at the Purchase Price. Funds for the payment of such Purchase Price shall be derived in the order of priority indicated:

- immediately available funds transferred by the Remarketing Agent to the Tender Agent derived from the remarketing of Series 2003B Bonds; and
- immediately available funds transferred by the Trustee to the Tender Agent derived from the Liquidity Facility.

Notwithstanding the foregoing, TBTA shall have the option, but shall not be obligated, to transfer immediately available funds to the Tender Agent for the payment of the Purchase Price of any Series 2003B Bond that is tendered or deemed tendered as described in this official statement and the Purchase Price of which is not paid on the Purchase Date or Mandatory Purchase Date from any of the sources identified above. None of TBTA, the Trustee, the Tender Agent nor the Remarketing Agent shall have any liability or obligation to pay or, except from the sources identified above, make available such Purchase Price. The failure to pay any such Purchase Price for Series 2003B Bonds that have been tendered or deemed tendered for purchase from any of the sources identified above shall not constitute an Event of Default under the TBTA Resolution and in the case of that failure those Series 2003B Bonds shall not be purchased and shall remain in the Weekly Mode.

#### **Delivery of Remarketed Series 2003B Bonds**

Except as otherwise required or permitted by DTC's book-entry-only system, remarketed Series 2003B Bonds sold by the Remarketing Agent shall be delivered by the Remarketing Agent to the purchasers of those Remarketed Bonds by 3:00 p.m. on the Purchase Date or Mandatory Purchase Date, as the case may be.

#### **Delivery and Payment for Purchased Series 2003B Bonds; Undelivered Series 2003B Bonds**

As long as the Series 2003B Bonds are registered in the name of DTC or its nominee in DTC's book-entry-only system, the requirements for all deliveries and payments will be in accordance with DTC's procedures.

Except as otherwise required or permitted by DTC's book-entry-only system, Series 2003B Bonds that are to be tendered shall be delivered (with all necessary endorsements) at or before 12:00 noon on the Purchase Date or Mandatory Purchase Date, as the case may be, at the office of the Tender Agent in New York, New York; provided, however, that payment of the Purchase Price of any Series 2003B Bond purchased pursuant to the optional tender provisions shall be made only if such Series 2003B Bond so delivered to the Tender Agent conforms in all respects to the description thereof in the Tender Notice.

Payment of the Purchase Price will be made by wire transfer in immediately available funds by the Tender Agent by the close of business on the Purchase Date or Mandatory Purchase Date, as the case may be, or, if the Owner has not provided wire transfer instructions, by check mailed to the Owner at the address appearing in the Trustee's books.

If Series 2003B Bonds are not delivered by 12:00 noon, the Tender Agent will hold any funds received for the purchase of the Series 2003B Bonds that are tendered or deemed tendered in trust in a separate account and shall pay such funds upon presentation. Any such amounts shall be held uninvested. Those undelivered Series 2003B Bonds shall be deemed tendered and cease to accrue interest as to the former Owners on the Purchase Date or the Mandatory Purchase Date, as the case may be, and moneys representing the Purchase Price shall be available against delivery of those Series 2003B Bonds at the principal office of the Tender Agent; provided, however, that any funds which shall be so held by the Tender Agent and which remain unclaimed by the former Owner of any such Series

2003B Bond not presented for purchase for a period of two years after delivery of those funds to the Tender Agent, shall, to the extent permitted by law, upon request in writing by TBTA and the furnishing of security or indemnity to the Tender Agent's satisfaction, be paid to TBTA free of any trust or lien and thereafter the former Owner of such Series 2003B Bond shall look only to TBTA and then only to the extent of the amounts so received by TBTA without any interest thereon and the Tender Agent shall have no further responsibility with respect to such moneys or payment of the Purchase Price of such Series 2003B Bonds. The Tender Agent shall authenticate a replacement Series 2003B Bond for any undelivered Series 2003B Bond which may then be remarketed by the Remarketing Agent.

### Redemption Provisions During the Weekly Mode

The Series 2003B Bonds are redeemable prior to maturity on such dates and at such prices during the Weekly Mode as are set forth below.

**Mandatory Sinking Fund Redemption.** The Series 2003B Bonds are subject to redemption in part on January 1 of each year and in the respective principal amounts set forth below at 100% of the principal amount thereof, plus accrued interest to the redemption date, from sinking fund installments which are required to be made in amounts sufficient to redeem on January 1 of each year set forth below the principal amount of such Series 2003B Bonds specified for each of the years shown below:

<u>Payment Date (January 1)</u>	<u>Sinking Fund Installment</u>	<u>Payment Date (January 1)</u>	<u>Sinking Fund Installment</u>
2005	\$4,755,000	2020	\$ 8,565,000
2006	4,945,000	2021	8,905,000
2007	5,145,000	2022	9,265,000
2008	5,350,000	2023	9,630,000
2009	5,560,000	2024	10,020,000
2010	5,785,000	2025	10,415,000
2011	6,015,000	2026	10,835,000
2012	6,255,000	2027	11,270,000
2013	6,505,000	2028	11,720,000
2014	6,770,000	2029	12,185,000
2015	7,040,000	2030	12,675,000
2016	7,320,000	2031	13,180,000
2017	7,610,000	2032	13,710,000
2018	7,920,000	2033*	12,415,000
2019	8,235,000		

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\* Final maturity

**Credit Toward Mandatory Sinking Fund Redemption.** TBTA may take credit toward mandatory Sinking Fund Installment requirements as follows, and if taken, thereafter reduce the amount of term Series 2003B Bonds of the same maturity and interest rate otherwise subject to mandatory Sinking Fund Installments on the date for which credit is taken:

- If TBTA directs the Trustee to purchase term Series 2003B 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 TBTA purchases or redeems term Series 2003B Bonds with other available moneys, then the principal amount of those bonds will be credited against future Sinking Fund Installments in any order, and in any annual amount, that TBTA may direct.

**Optional Redemption.** The Series 2003B Bonds are subject to redemption prior to maturity as a whole or in part (in accordance with procedures of DTC, so long as DTC is the Owner, and otherwise by lot in such manner as the Trustee in its discretion deems proper), on any Business Day, subject to applicable notice, at a Redemption Price

equal to the principal amount thereof, without premium, plus accrued interest up to but not including the redemption date. If any such optional redemption shall occur, TBTA will redeem Bank Bonds first.

**State and City Redemption.** Pursuant to the TBTA Act, the State or the City, upon providing sufficient funds, may require TBTA to redeem the Series 2003B Bonds as a whole at any time and at a price and in accordance with the terms upon which the Series 2003B Bonds are otherwise redeemable.

**Redemption of Bank Bonds.** The Bank Bonds shall be subject to optional and mandatory redemption under the same terms and conditions as provided with respect to other Series 2003B Bonds. The Bank Bonds shall also be subject to mandatory redemption at the times and under the terms and conditions as provided in the Liquidity Facility relating to such Bank Bonds.

**Redemption in Part; Bank Bonds To Be Redeemed First.** In the event of a redemption of less than all the Series 2003B Bonds, the Trustee shall in accordance with the TBTA Resolution first select for redemption all then outstanding Bank Bonds prior to selecting for redemption any Series 2003B Bonds which are not Bank Bonds unless the Liquidity Facility Issuer shall be in default under the Liquidity Facility, in which case, the Trustee shall at the written direction of TBTA, select for redemption all then outstanding Series 2003B Bonds in accordance with such direction.

**Redemption Notices.** So long as DTC is the securities depository for the Series 2003B Bonds, the Trustee must mail redemption notices to DTC at least 30 days before the redemption date. If the Series 2003B Bonds are not held in book-entry form, then the Trustee must mail redemption notices directly to bondholders within the same time frame. A redemption of the Series 2003B 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 2003B 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 2003B Bonds, then on the redemption date the Series 2003B 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 2003B Bonds called for redemption, thereafter, no interest will accrue on those Series 2003B Bonds, and a bondholder's only right will be to receive payment of the redemption price upon surrender of those Series 2003B Bonds.

## **Amendments**

The provisions of the TBTA Resolution, with respect to the Series 2003B Bonds, may be modified or amended pursuant to the TBTA Resolution by obtaining, when required by the TBTA Resolution, the consent of the Owners of all Series 2003B Bonds. All Owners of the Series 2003B Bonds will be deemed to have consented to a modification or amendment if on the 30<sup>th</sup> day (or if such day is not a Business Day, on the next succeeding Business Day) after the date on which the Trustee mailed notice of such proposed modification or amendment to the Owners of the Series 2003B Bonds there is delivered to the Trustee –

- a certificate of the Tender Agent to the effect that all Series 2003B Bonds that have been optionally tendered for purchase by their Owners after the date on which the Trustee mailed such notice of the proposed modification or amendment have been purchased at a price equal to the Purchase Price thereof,
- a written consent of the Remarketing Agent to the proposed modification or amendment, and
- a Favorable Opinion of Bond Counsel.

## Liquidity Facility

**General Description.** The Series 2003B Bonds are, under certain conditions, subject to optional and mandatory tender for purchase from specified sources. The purchase by the Tender Agent of Series 2003B Bonds tendered or deemed tendered for optional or mandatory purchase (the Tendered Series 2003B Bonds) will be funded only from (i) remarketing proceeds and (ii) to the extent that remarketing proceeds are not available, proceeds available from the Liquidity Facility. Although TBTA has the option to purchase Series 2003B Bonds that have been neither remarketed nor purchased by the Liquidity Facility Issuer, it is not obligated to do so. See “—Tender, Presentation and Purchase Provisions of the Series 2003B Bonds During the Weekly Mode and Source of Funds for Purchase of Series 2003B Bonds” above. See “**Attachment 4 – Initial Liquidity Facility Issuer**” for information regarding the Initial Liquidity Facility Issuer.

Subject to certain conditions described below, the Initial Liquidity Facility Issuer will purchase from time to time during the period from the date of delivery of the Series 2003B Bonds to and including December 8, 2008 (unless extended) or earlier termination or suspension of the Initial Liquidity Facility, any Tendered Series 2003B Bonds which are required to be purchased due to an optional or mandatory tender for purchase that have not been remarketed at the times and in the manner set forth in the TBTA Resolution. The price to be paid by the Initial Liquidity Facility Issuer pursuant to the Initial Liquidity Facility for purchased Series 2003B Bonds will be equal to the aggregate principal amount of such Series 2003B Bonds plus accrued interest thereon (up to 35 days of interest calculated at an aggregate rate not to exceed 12% per annum based on a year of 365 days), if any, other than defaulted interest, to the date of such purchase. Upon any purchase of Series 2003B Bonds with amounts realized under the Initial Liquidity Facility, the commitment of the Initial Liquidity Facility Issuer to purchase Series 2003B Bonds shall be reduced by the Purchase Price and shall be reinstated by such amount upon the repurchase of such Series 2003B Bonds from the Initial Liquidity Facility Issuer, all in accordance with the Initial Liquidity Facility.

The Initial Liquidity Facility does not provide security for the scheduled payment of principal of or interest or premium, if any, on the Series 2003B Bonds, and the funds drawn thereunder may not be used for such purposes.

**AS DESCRIBED BELOW, THE INITIAL LIQUIDITY FACILITY PROVIDES THAT THE OBLIGATION OF THE INITIAL LIQUIDITY FACILITY ISSUER TO PURCHASE SERIES 2003B BONDS TENDERED OR DEEMED TENDERED FOR PURCHASE MAY BE IMMEDIATELY SUSPENDED OR TERMINATED UPON THE OCCURRENCE OF CERTAIN EVENTS WITHOUT NOTICE TO THE OWNERS. IN SUCH EVENT, SUFFICIENT FUNDS MAY NOT BE AVAILABLE TO PURCHASE SERIES 2003B BONDS TENDERED OR DEEMED TENDERED FOR PURCHASE. FAILURE TO PAY THE PURCHASE PRICE OF SERIES 2003B BONDS TENDERED OR DEEMED TENDERED FOR PURCHASE SHALL NOT CONSTITUTE AN EVENT OF DEFAULT UNDER THE TBTA RESOLUTION.**

**Suspension or Termination Events; Remedies.** The occurrence of certain “termination events” under the Initial Liquidity Facility may result in a suspension or termination of the Initial Liquidity Facility Issuer’s commitment to purchase Tendered Series 2003B Bonds.

**Immediate Termination Events.** In the case of the following termination events, the Available Commitment and the obligation of the Initial Liquidity Facility Issuer to purchase Tendered Series 2003B Bonds shall immediately terminate without notice or demand, and thereafter the Initial Liquidity Facility Issuer shall be under no obligation to purchase Tendered Series 2003B Bonds.

- any principal or interest due on the Series 2003B Bonds (including Bank Bonds), Parity Reimbursement Obligations and Parity Bonds is not paid by TBTA when due; or
- (i) TBTA shall (A) commence a voluntary case under the Federal bankruptcy laws (as now or hereafter in effect), (B) file a petition seeking to take advantage of any other laws, domestic or foreign, relating to bankruptcy, insolvency, reorganization, debt adjustment, winding up or composition or adjustment of debts, (C) consent to or fail to contest in a timely and appropriate manner any petition filed against it in an involuntary case under such bankruptcy laws or other laws, (D) apply for or consent to, or fail to contest in a timely and appropriate manner, the appointment of, or the taking of possession by, a receiver, custodian, trustee or liquidator of itself or of a substantial part of its property, (E) admit in writing its inability to pay, or generally not be

paying, its debts as they become due, (F) make a general assignment for the benefit of creditors, or (G) take any official action for the purpose of effecting any of the foregoing; or (ii) a case or other proceeding shall be commenced against TBTA in any court of competent jurisdiction seeking (A) relief under the Federal bankruptcy laws (as now or hereafter in effect) or under any other laws, domestic or foreign, relating to bankruptcy, insolvency, reorganization, winding up or composition or adjustment of debts, or (B) the appointment of a trustee, receiver, custodian, liquidator or the like of TBTA, or of all or a substantial part of its property, and any such case or proceeding shall continue undismissed or unstayed for a period of 60 consecutive calendar days, or an order granting the relief requested in any such case or proceeding against TBTA (including, but not limited to, an order for relief under such Federal bankruptcy laws) shall be entered; or

- the Initial Liquidity Facility, the Series 2003B Bonds, any Parity Bonds or the TBTA Resolution shall be declared, pursuant to a final and nonappealable order of a court of competent jurisdiction, to be not binding in its entirety on TBTA; or
- any governmental authority with jurisdiction to rule on the validity of the Initial Liquidity Facility, the Series 2003B Bonds, any Parity Bonds or the TBTA Resolution shall publicly find or rule pursuant to a final and nonappealable order that the Initial Liquidity Facility, the Series 2003B Bonds, any Parity Bonds or the TBTA Resolution is not valid or not binding on TBTA; or
- Fitch, S&P and Moody's shall have (i) assigned to the Series 2003B Bonds or any Parity Bonds a rating below "BBB-", in the case of Fitch and S&P, and "Baa3", in the case of Moody's, (ii) withdrawn their ratings of the Series 2003B Bonds or any Parity Bonds, for credit-related reasons and not as a result of non-payment of rating fees, debt maturity, redemption or defeasance or (iii) suspended their ratings of the Series 2003B Bonds or any Parity Bonds, for credit-related reasons and not as a result of non-payment of rating fees, debt maturity, redemption or defeasance.

Promptly after the Initial Liquidity Facility Issuer receives written notice of such termination event, the Initial Liquidity Facility Issuer shall give written notice of the same to the Trustee, TBTA and the Remarketing Agent; provided, that the Initial Liquidity Facility Issuer shall incur no liability or responsibility whatsoever by reason of its failure to give such notice and such failure shall in no way affect the termination of the Initial Liquidity Facility Issuer's Available Commitment and of its obligation to purchase Tendered Series 2003B Bonds pursuant to the Initial Liquidity Facility.

*Immediate Suspension Events.* In the case of the following termination events (each a "Suspension Event"), the obligation of the Initial Liquidity Facility Issuer to purchase Tendered Series 2003B Bonds under the Initial Liquidity Facility shall be immediately suspended without notice or demand and, thereafter, the Initial Liquidity Facility Issuer shall be under no obligation to purchase Tendered Series 2003B Bonds until the Available Commitment (as defined in the Initial Liquidity Facility) is reinstated as described below.

- (i) TBTA's Board shall take an official action claiming that the TBTA Resolution, the Series 2003B Bonds, any Parity Bonds or the Initial Liquidity Facility is/are not valid or binding on TBTA, or repudiate its obligations under the TBTA Resolution, the Series 2003B Bonds, any Parity Bonds or the Initial Liquidity Facility, or (ii) TBTA shall file any legal proceedings to seek an adjudication that the TBTA Resolution, the Series 2003B Bonds, any Parity Bonds or the Initial Liquidity Facility is/are not valid or binding on TBTA; or
- any governmental authority with jurisdiction over TBTA and the affairs of TBTA shall have declared or imposed a debt moratorium, debt adjustment or other action that has the effect of being a debt moratorium or debt adjustment in connection with repayment of the Series 2003B Bonds or any Parity Bonds.

Promptly upon the occurrence of any such Suspension Event, the Initial Liquidity Facility Issuer shall notify TBTA, the Trustee and the Remarketing Agent of such suspension in writing by facsimile promptly confirmed by regular mail; provided, that the Initial Liquidity Facility Issuer shall incur no liability or responsibility whatsoever by reason of its failure to give such notice and such failure shall in no way effect the suspension of the Available Commitment and of the Initial Liquidity Facility Issuer's obligation to purchase Tendered Series 2003B Bonds pursuant to the Initial Liquidity Facility. If a court with jurisdiction to rule on the validity of any one of the

documents referred to in the first paragraph above or if a court with jurisdiction to rule on any action described in the second paragraph above shall find or rule by entry of a final and nonappealable judgment that any of such documents is not valid or not binding on the TBTA or fails to terminate an action described in the second paragraph above by entry of a final and nonappealable judgment to such effect, then, in each such case, the Available Commitment and the obligation of the Initial Liquidity Facility Issuer to purchase Tendered Series 2003B Bonds shall immediately terminate without notice or demand and, thereafter, the Initial Liquidity Facility Issuer shall be under no obligation to purchase Tendered Series 2003B Bonds. If a court with jurisdiction to rule on the validity of any one of the documents referred to in the first paragraph above or if a court with jurisdiction to terminate an action described in the second paragraph above shall find or rule by entry of a final and nonappealable judgment that such document that is the subject of such Suspension Event is valid and binding on TBTA or that such action is to be terminated immediately, then, the Available Commitment and the obligations of the Initial Liquidity Facility Issuer under the Initial Liquidity Facility shall thereupon be reinstated (unless the period within which the Initial Liquidity Issuer is scheduled to purchase Tendered Series 2003B Bonds shall otherwise have expired or the Available Commitment shall otherwise have been terminated or suspended as provided in the Initial Liquidity Facility). Notwithstanding the foregoing, if, three (3) years after the effective date of suspension of the obligations of the Initial Liquidity Facility Issuer, litigation is still pending and a judgment regarding the validity of any one of the documents referred to in the first paragraph above or an action described in the second paragraph above that is the subject of such Suspension Event has not been obtained, then the Available Commitment and the obligation of the Initial Liquidity Facility Issuer to purchase Tendered Series 2003B Bonds shall, at such time, terminate without notice or demand, and, thereafter, the Initial Liquidity Facility Issuer shall be under no obligation to purchase Tendered Series 2003B Bonds. The Trustee shall immediately notify all Bondholders of the suspension and/or termination of the Available Commitment and the obligation of the Initial Liquidity Facility Issuer to purchase Tendered Series 2003B Bonds.

*Other Termination Events.* In the case of the following termination events, the Initial Liquidity Facility Issuer may terminate the Available Commitment by giving written notice of such termination event (the termination notice) to TBTA, the Remarketing Agent and the Trustee specifying the date on which the Available Commitment will terminate (the termination date), which shall be not less than thirty (30) days from the date of receipt of such notice by the Trustee, and on and after the termination date, the Initial Liquidity Facility Issuer shall be under no further obligation to purchase Tendered Series 2003B Bonds other than Series 2003B Bonds which are the subject of a notice of purchase received by the Initial Liquidity Facility Issuer prior to the termination date, and TBTA shall forthwith, upon written request of the Initial Liquidity Facility Issuer, use its best efforts (taking into account current market conditions) to convert all of the Series 2003B Bonds to a fixed rate in accordance with the TBTA Resolution.

- the long-term rating by Fitch, Moody's or S&P of the Series 2003B Bonds or any unenhanced Parity Bonds is reduced below "A-" (or its equivalent), "A3" (or its equivalent), or "A-" (or its equivalent), respectively, or
- any judgment or order for the payment of money in excess of \$25,000,000 shall be rendered against TBTA or the Trust Estate (as hereinafter defined) and either (i) enforcement proceedings shall have been commenced by any creditor upon such judgment or order or (ii) there shall be any period of thirty (30) consecutive days during which a stay of enforcement of such judgment or order, by reason of a pending appeal or otherwise, shall not be in effect; or
- any representation or warranty made by TBTA under or in connection with the Initial Liquidity Facility or any of the Related Documents (as defined in the Initial Liquidity Facility) shall prove to be untrue in any material respect on the date as of which it was made; or
- nonpayment of certain fees and other amounts payable to the Initial Liquidity Facility Issuer under the Initial Liquidity Facility within five (5) Business Days after the Trustee and TBTA have received written notice from the Initial Liquidity Facility Issuer that the same were not paid when due; or
- nonpayment of certain other fees or amounts when due under the Initial Liquidity Facility, if such failure to pay when due shall continue for five (5) Business Days after such non-payment; or
- the breach by TBTA of certain of the terms or provisions of the Initial Liquidity Facility; or

- the breach by TBTA of any of the other terms or provisions of the Initial Liquidity Facility which is not remedied within five (5) Business Days after written notice thereof shall have been received by TBTA from the Initial Liquidity Facility Issuer; or
- any “event of default” shall have occurred and be continuing under the TBTA Resolution and the applicable cure period shall have elapsed.

With respect to a termination event specified in the first paragraph above, the Initial Liquidity Facility Issuer may terminate its Available Commitment no earlier than 90 days after receipt of notice from the Initial Liquidity Facility Issuer by the Trustee. See “—Tender, Presentation and Purchase Provisions of the Series 2003B Bonds During the Weekly Mode,” “—Remarketing of Series 2003B Bonds,” and “—Sources of Funds for Purchase of Series 2003B Bonds” above.

#### **Debt Service on the General Revenue 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 2003B Bonds, and the aggregate senior lien debt service on all Bonds to be outstanding after the issuance of the Series 2003B Bonds. **Table 1** does not include debt service on the subordinate TBTA bonds.

**Table 1**

**Aggregate Senior Lien Debt Service  
(In Thousands)**

Year Ending December 31	Debt Service on General Revenue Bonds		
	Debt Service on Outstanding Bonds <sup>(1)</sup>	Estimated Series 2003B Bonds <sup>(2)</sup>	Aggregate Debt Service <sup>(3)</sup>
2003	\$ 220,951	\$ 603	\$ 221,553
2004	247,706	14,757	262,463
2005	279,832	14,753	294,584
2006	279,834	14,757	294,591
2007	279,889	14,756	294,645
2008	279,834	14,754	294,589
2009	279,829	14,753	294,581
2010	279,830	14,753	294,583
2011	279,830	14,753	294,583
2012	279,830	14,755	294,584
2013	279,824	14,756	294,580
2014	278,323	14,757	293,079
2015	278,328	14,755	293,083
2016	278,330	14,754	293,084
2017	278,327	14,756	293,083
2018	278,322	14,756	293,078
2019	278,318	14,757	293,075
2020	278,324	14,755	293,080
2021	278,315	14,757	293,072
2022	278,324	14,752	293,077
2023	279,818	14,757	294,575
2024	278,318	14,752	293,071
2025	278,319	14,754	293,073
2026	278,309	14,756	293,065
2027	278,307	14,755	293,062
2028	278,311	14,752	293,063
2029	278,311	14,754	293,064
2030	278,305	14,752	293,057
2031	278,309	14,755	293,064
2032	243,529	12,912	256,441
Total	<u>\$8,241,935</u>	<u>\$426,647</u>	<u>\$8,668,582</u>

<sup>(1)</sup> Includes the following variable rate assumptions for debt service: Series 2001B and C and Series 2002C—assumed variable interest rate of 4% per annum and including net payments made by TBTA under the respective swap agreements relating thereto; and Series 2002F – assumed variable interest rate of 4% per annum.

<sup>(2)</sup> Assumes variable interest at the rate of 4% per annum. TBTA does not expect to enter into a swap agreement with respect to the Series 2003B Bonds.

<sup>(3)</sup> Totals may not add due to rounding. Includes the assumptions set forth in footnotes 1 and 2.

## PART II. SOURCES OF PAYMENT AND SECURITY FOR TBTA GENERAL REVENUE BONDS

*Part II* of this official statement describes the sources of payment and security for all TBTA General Revenue Bonds, including the Series 2003B Bonds.

### SOURCES OF PAYMENT

TBTA 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 TBTA's receipts from those sources, after payment of TBTA's operating expenses, are pledged to the holders of the Bonds for payment, as described below.

**The following 7 bridges and 2 tunnels constitute TBTA Facilities for purposes of the TBTA 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.

TBTA is required to fix and collect tolls for the TBTA Facilities, and TBTA's power to establish toll rates is not subject to the approval of any governmental entity. TBTA most recently raised its toll rates effective May 18, 2003. For more information relating to TBTA's power to establish tolls, see "**Appendix A – THE RELATED ENTITIES – The Triborough Bridge and Tunnel Authority – Toll Rates.**"

For more detailed information about TBTA's tolls, see "**Attachment 5 – History and Projection of Traffic, Toll Revenues and Expenses and Review of Physical Conditions of the Facilities of Triborough Bridge and Tunnel Authority.**"

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 TBTA's 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 TBTA's Facilities. Under the TBTA Act, however, the State has covenanted to holders of TBTA's bonds that it will not limit or alter the rights vested in TBTA 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 TBTA bonds or in any way to impair rights and remedies of those bondholders.

**Table 2** sets forth, by TBTA Facility, the amount of revenues for each of the last 5 years on a cash basis, as well as operating expenses.

**Table 2**

**Triborough Bridge and Tunnel Authority  
Historical Revenues, Operating Expenses  
and Senior Lien Debt Service  
(In Thousands)**

	Years Ended December 31,				
	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
Bridge and Tunnel Revenues:					
Triborough Bridge	\$208,325	\$216,413	\$222,612	\$215,241	\$208,905
Verrazano-Narrows Bridge	192,788	196,556	203,172	208,164	216,312
Bronx-Whitestone Bridge	140,083	147,597	155,938	152,881	160,730
Throgs Neck Bridge	149,711	152,134	152,453	150,764	157,988
Henry Hudson Bridge	28,731	30,068	31,938	32,242	34,045
Marine Parkway-Gil Hodges Memorial Bridge	8,577	8,461	8,374	8,344	8,938
Cross Bay Veterans Memorial Bridge	7,021	7,199	7,651	7,965	8,471
Queens Midtown Tunnel	85,628	87,284	89,451	87,067	88,865
Brooklyn-Battery Tunnel	<u>63,576</u>	<u>67,080</u>	<u>69,018</u>	<u>52,188</u>	<u>48,880</u>
Total Bridge and Tunnel Revenues:	\$884,440	\$912,792	\$940,607	\$914,856	\$933,134
Investment Income and Other <sup>(1)</sup>	54,111	39,314	58,205	56,681	27,757
<b>Total Revenues</b>	<b><u>\$938,551</u></b>	<b><u>\$952,106</u></b>	<b><u>\$998,812</u></b>	<b><u>\$971,537</u></b>	<b><u>\$960,891</u></b>
Operating Expenses <sup>(2)</sup> :					
Personnel Costs	\$106,603	\$107,430	\$112,256	\$123,316	\$140,967
Maintenance and Other Operating Expenses	101,587	120,561	129,807	133,198	159,229
<b>Total Operating Expenses</b>	<b><u>\$208,190</u></b>	<b><u>\$227,991</u></b>	<b><u>\$242,063</u></b>	<b><u>\$256,514</u></b>	<b><u>\$300,196</u></b>
<b>Net Revenues Available for Debt Service</b>	<b>\$730,361</b>	<b>\$724,115</b>	<b>\$756,749</b>	<b>\$715,023</b>	<b>\$660,695</b>
<b>TBTA Senior Lien Debt Service <sup>(3)</sup></b>	<b>\$291,918</b>	<b>\$295,652</b>	<b>\$311,610</b>	<b>\$320,451</b>	<b>\$349,478</b>
<b>Senior Lien Coverage</b>	<b>2.50x</b>	<b>2.45x</b>	<b>2.43x</b>	<b>2.23x</b>	<b>1.89x</b>

<sup>(1)</sup> Includes the net revenues from the Battery Parking Garage, as well as E-ZPass administrative fees and miscellaneous other revenues. Investment income includes 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 1998 through 2002, respectively: \$17,581; \$12,205; \$14,659; \$25,696; and \$6,403. Readers should note that, since there is no longer a debt service reserve fund in the TBTA Resolution, investment earnings are expected to be substantially lower in future years. Figures are net of Other Income as included on the TBTA audited financial statements (rail car leases), as follows for the years 1998 through 2002, respectively: \$5,258; \$6,683; \$805; \$620; and \$0. The amounts set forth in this footnote, as well as all of **Table 2**, are derived from TBTA's audited financial statements for the years 1998 through 2002.

<sup>(2)</sup> Excludes depreciation.

<sup>(3)</sup> Represents debt service on the senior lien bonds refunded under the debt restructuring until the date of defeasance thereof in 2002, as well as, beginning in 2002, bonds issued under the TBTA Resolution.

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

- Investment Income and Other – Investment income on debt service and debt service reserve funds declined substantially in 2002 due primarily to the lower market interest rates available in authorized investments. Since debt service reserve funds on all TBTA credits were eliminated at the end of 2002 due to the debt restructuring, investment income will decline substantially again beginning in 2003.
- Operating Expenses—Personnel Costs – Due primarily to security concerns, TBTA began hiring additional bridge and tunnel officers in 2002. Additional hirings have taken place in 2003. Regular salaries, overtime and fringe benefits increased by approximately \$18.8 million from 2001. Due primarily to additional hires, personnel costs are expected to increase in 2003 by approximately an additional \$18.7 million (net of reimbursable capital expenses). However, MTA expects to make a payment (from the mortgage recording taxes not pledged to other bond issues) in the amount of \$26.1 million to TBTA for 2003 security costs, and 2003 personnel costs set forth in **Table 3** have been reduced to reflect such MTA payment. No assurances can be given that MTA will continue to make any or all of these additional security payments in future years.
- Operating Expenses—Maintenance and Other Operating Expenses – Maintenance and other operating expenses were approximately \$26 million higher in 2002 than in 2001 primarily due to the beginning of a program to replace existing E-ZPass tags (approximately \$15.8 million) and an increase in insurance costs attributable to TBTA (approximately \$7.6 million). Maintenance and other operating expenses are budgeted with an increase of approximately \$41.6 million in 2003 primarily due to the following additional expenses: additional tag replacement (approximately \$7.0 million), additional bridge painting, in some cases due to delays from prior years (approximately \$10.3 million), additional costs for roadway repairs and biennial inspections of the bridges (approximately \$3.8 million), clean up of the Brooklyn-Battery Tunnel (approximately \$8.5 million that is expected to be recovered by insurance proceeds, the recovery of which is not reflected in **Table 3**), and new contracts for preventative maintenance (approximately \$1.0 million).
- Total Debt Service (Senior) – Senior debt service increased from \$320.5 million in 2001 to \$349.5 million in 2002. 2002 reflects, on an accrual basis, the payments under the old senior credit and the new senior credit; on a cash basis, some of the debt service was funded by revenues and the remainder was funded by bond proceeds generated by the debt restructuring and reserves released under the defeased bond resolutions.

**Table 3** sets forth, on a cash basis unless otherwise noted, certain revenues and expenses, including debt service, relating to (1) TBTA's operations for 2002 and (2) TBTA's 2003 forecast. The bridge and tunnel revenues for 2002 are set forth by TBTA facility and for 2003 are provided on an aggregate basis. The projection of estimated revenues set forth in the report by TBTA's Independent Engineers set forth in **Attachment 5** is different from that set forth in the 2003 forecast as the projection is based upon conclusions formed independently based upon their own methodology and assumptions. Investors should read **Attachment 5**, the report of the Independent Engineers, in its entirety.

**Table 3**  
**2002 and 2003 Forecast Comparisons**  
**(in thousands)**

	Years Ended December 31,	
	<u>2002</u>	<u>2003</u>
		(forecast)
Bridge and Tunnel Revenues:		
Triborough Bridge	\$ 208,905	
Verrazano-Narrows Bridge	216,312	
Bronx-Whitestone Bridge	160,730	
Throgs Neck Bridge	157,988	
Henry Hudson Bridge	34,045	
Marine Parkway-Gil Hodges Memorial Bridge	8,938	
Cross Bay Veterans Memorial Bridge	8,471	
Queens Midtown Tunnel	88,865	
Brooklyn-Battery Tunnel	<u>48,880</u>	
Total Bridge and Tunnel Revenues:	\$933,134	<u>\$1,009,494</u>
Investment Income and Other <sup>(1)</sup>	<u>27,757</u>	<u>5,529</u>
<b>Total Revenues</b>	<b><u>\$960,891</u></b>	<b><u>\$1,015,023</u></b>
Operating Expenses <sup>(2)</sup>		
Personnel Costs (net of reimbursements) <sup>(3)</sup>	\$140,967	\$159,909
Maintenance and Other Operating Expenses	<u>159,229</u>	<u>189,939</u>
<b>Total Operating Expenses</b>	<b><u>\$300,196</u></b>	<b><u>\$349,848</u></b>
<b>Net Revenues Available for Debt Service</b>	<b>\$660,695</b>	<b>\$665,175</b>
<b>TBTA Senior Lien Debt Service<sup>(4)</sup></b>	<b>\$349,478</b>	<b>\$214,423</b>
<b>Debt Service Coverage Ratio<sup>(5)</sup></b>	<b>1.89x</b>	<b>3.10x</b>

<sup>(1)</sup> Includes the net revenues from the Battery Parking Garage, as well as E-ZPass administrative fees and miscellaneous other revenues. For 2002, investment earnings include \$6,403 earned on bond funds, including debt service and debt service reserve funds that were applied to the payment of debt service. Readers should note that, since there is no longer a debt service reserve fund in the TBTA Resolution, investment earnings are expected to be substantially lower beginning in 2003.

<sup>(2)</sup> Excludes depreciation.

<sup>(3)</sup> For 2002 and 2003, includes regular and overtime salaries and fringe benefits, less capitalized personnel reimbursements. For 2003, personnel costs are further reduced by a \$26.1 million payment expected to be made by MTA to TBTA during 2003 for additional security costs.

<sup>(4)</sup> Represents debt service on the senior lien bonds refunded under the debt restructuring until the date of defeasance thereof in 2002, as well as, beginning in 2002, bonds issued under the TBTA Resolution.

<sup>(5)</sup> Forecasted 2003 Net Revenues Available For Debt Service of \$665,175 provide 2.26x debt service coverage of estimated maximum annual debt service on the Bonds of \$294,645 taking into account the issuance of the Series 2003B Bonds.

## SECURITY

TBTA General Revenue Bonds are general obligations of TBTA payable solely from the trust estate (described below) pledged for the payment of the Bonds and Parity Debt pursuant to the terms of the TBTA Resolution, after the payment of Operating Expenses. Summaries of certain provisions of the TBTA Resolution, including the Standard Resolution Provisions, are included by specific cross-reference herein. The provisions of the new TBTA Resolution are materially different from the TBTA 1980 Resolution.

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

### **Pledge Effected by the TBTA Resolution**

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

Pursuant to, and in accordance with, the TBTA Resolution, TBTA 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 TBTA 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 TBTA Projects**

***Revenues from TBTA Facilities.*** For purposes of the pledge under the TBTA Resolution, revenues of TBTA generally include all tolls, revenues, rates, fees, charges, rents, proceeds of use and occupancy insurance on any portion of the TBTA 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 TBTA, and other income and receipts, as received by TBTA directly or indirectly from any of TBTA’s operations, including the ownership or operation of any TBTA Facilities, subject to certain exceptions.

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

For a discussion of other projects that TBTA is authorized to undertake, see “**Appendix A – THE RELATED ENTITIES – The Triborough Bridge and Tunnel Authority – *Authorized Projects of TBTA.***”

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

- an Authorized Officer certifies that either:
  - the Additional TBTA Project has been in operation (whether or not by TBTA) 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 TBTA Project Revenues derived from the operation of such Additional TBTA Project exceeded the Operating Expenses, or

- the Additional TBTA Project is in operation and, in such Authorized Officer's opinion, the Additional TBTA Project Revenues to be derived from the operation of such Project will exceed the Operating Expenses for such Additional TBTA Project during the first 12 months of operation, and
- an Authorized Officer certifies
  - as to the actual or anticipated Revenues and Operating Expenses of TBTA 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 TBTA Project Revenues and Operating Expenses of the Additional TBTA Project for such 12-month period, and
    - the actual or anticipated Additional TBTA Project Revenues (adjusted up or down to reflect any new toll rate changes) and Operating Expenses of any Additional TBTA Project operated by or under lease from TBTA otherwise than as an Additional TBTA 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 TBTA 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 TBTA Facility, see "SUMMARY OF CERTAIN PROVISIONS OF THE TBTA RESOLUTION – Additional TBTA Facilities" included by specific cross-reference herein.

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

### **Flow of Revenues**

The TBTA Resolution establishes the following funds and accounts, each held by TBTA:

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

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

TBTA 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 TBTA to be required as an operating reserve,

- or (iii) deemed necessary or desirable by TBTA 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 25<sup>th</sup> 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 TBTA for an authorized purpose (excluding transfers to any other pledged Fund or Account), or withdrawn from the General Fund in accordance with the TBTA Resolution, are free and clear of the lien and pledge created by the TBTA Resolution.

Under the TBTA Resolution, TBTA 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 TBTA Resolution authorizes TBTA to release amounts in the General Fund to be paid to TBTA free and clear of the lien and pledge created by the TBTA Resolution.

TBTA 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 TBTA Resolution, TBTA 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 TBTA 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 TBTA 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 TBTA 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 TBTA, 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 TBTA pursuant to the TBTA Resolution, in such amount as may be determined from time to time by TBTA 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 TBTA Facilities, see “SUMMARY OF CERTAIN PROVISIONS OF THE TBTA RESOLUTION – Rates and Fees” included by specific cross-reference herein.

### **Additional Bonds**

Under the provisions of the TBTA Resolution, TBTA may issue one or more series of Additional Bonds on a parity with the Series 2003B Bonds and other Outstanding Bonds to provide for Capital Costs.

*Certain Additional Bonds for TBTA Facilities.* TBTA may issue Additional Bonds without satisfying any earnings or coverage test for the purpose of providing for Capital Costs relating to TBTA Facilities for the purpose

of keeping such TBTA Facilities in good operating condition or preventing a loss of Revenues or Revenues after payment of Operating Expenses derived from such TBTA Facilities.

*Additional Bonds for Other Purposes.* TBTA 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:

- TBTA Transit and Commuter Project,
- any Additional TBTA Project (that does not become a TBTA Facility), or
- any TBTA 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 TBTA Facilities as described under the preceding heading, in addition to meeting certain other conditions, all as more fully described in “SUMMARY OF CERTAIN PROVISIONS OF THE TBTA RESOLUTION – Special Provisions for Capital Cost Obligations” 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 TBTA RESOLUTION – Refunding Obligations” included by specific cross-reference herein.

### **Subordinate Obligations**

The TBTA Resolution authorizes the issuance or incurrence of subordinate obligations.

### PART III. OTHER INFORMATION ABOUT THE SERIES 2003B BONDS

*Part III* of this official statement provides miscellaneous additional information relating to the Series 2003B Bonds.

#### TAX MATTERS

Hawkins, Delafield & Wood is Bond Counsel for the Series 2003B Bonds. Their opinion under existing law, relying on certain statements by TBTA and assuming compliance by TBTA with certain covenants, is that interest on the Series 2003B 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 2003B 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 2003B Bonds are delivered.

The Internal Revenue Code imposes requirements on the Series 2003B Bonds that TBTA must continue to meet after the Series 2003B Bonds are issued. These requirements generally involve the way that Series 2003B Bond proceeds must be used and invested. If TBTA does not meet these requirements, it is possible that a bondholder may have to include interest on the Series 2003B Bonds in its federal gross income on a retroactive basis to the date of issue. TBTA 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 2003B 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 2003B 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 2003B Bonds or affect the market price of the Series 2003B Bonds. For example, the Internal Revenue Code could be changed.

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 2003B Bonds, or under State, local or foreign tax law.

#### LEGALITY FOR INVESTMENT

The TBTA Act provides that the Series 2003B 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 2003B Bonds.

## LITIGATION

There is no pending litigation concerning the bonds being offered.

TBTA is the defendant in numerous claims and actions. TBTA does not believe that any of these claims and actions are material to the payment of principal and interest on the Series 2003B Bonds. A summary of certain of these potentially material claims and actions is set forth in “**Appendix A – THE RELATED ENTITIES – Litigation - TBTA,**” as that filing may be amended or supplemented to date.

## FINANCIAL ADVISOR

Goldman, Sachs & Co. is TBTA’s financial advisor for the Series 2003B Bonds. The financial advisor has provided TBTA advice on the plan of financing and reviewed the pricing of the Series 2003B 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 2003B Bonds.

## UNDERWRITING

Citigroup Global Markets Inc. has agreed, subject to certain conditions, to purchase from TBTA the Series 2003B Bonds at an aggregate purchase price of \$249,444,572, reflecting an Underwriter’s discount of \$555,428, and to reoffer such Series 2003B Bonds at par. Citigroup Global Markets Inc.’s obligation to purchase the Series 2003B Bonds is subject to certain conditions precedent, and it will be obligated to purchase all such Series 2003B Bonds if any Series 2003B Bonds are purchased.

## RATINGS

The Summary of Terms identifies the ratings of the credit rating agencies that are expected to be assigned to the Series 2003B Bonds. Those expected 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	Moody’s Investors Service, Inc.	Standard & Poor’s Ratings Services
One State Street Plaza	99 Church Street	55 Water Street
New York, New York 10004	New York, New York 10007	New York, New York 10041
(212) 908-0500	(212) 553-0300	(212) 438-2000

TBTA has furnished to each rating agency rating the bonds being offered information, including information not included in this official statement, about TBTA 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 TBTA or the bonds. Any downward revision or withdrawal of a rating may have an adverse effect on the market price of the bonds.

*The expected short term ratings on the bonds identified in the Summary of Terms reflect the ratings of the bank providing liquidity support for 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 TBTA will be passed upon by its General Counsel. In addition, certain legal matters will be passed upon by TBTA's special counsel or the counsel to the Underwriter, or both, as also indicated in the Summary of Terms.

### NO CONTINUING DISCLOSURE UNDER SEC RULE 15c2-12

Rule 15c2-12 under the Securities Exchange Act of 1934, as amended, does not require TBTA to provide continuing disclosure during the period that the Series 2003B Bonds bear interest in the Weekly Mode.

### FURTHER INFORMATION

TBTA may place a copy of this official statement on MTA's website at "[www.mta.info](http://www.mta.info)". No statement on the MTA's website or any other website is included by specific cross-reference herein.

Although TBTA 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 TBTA assume no liability or responsibility for errors or omissions contained on any website. Further, MTA and TBTA 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. TBTA 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/ Kim Paparello  
Director, Finance of the  
Metropolitan Transportation Authority

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**ATTACHMENT 1**  
**BOOK-ENTRY-ONLY SYSTEM**

1. The Depository Trust Company (DTC), New York, NY, will act as securities depository for the Series 2003B Bonds. The Series 2003B 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 2003B Bond will be issued for each maturity of the Series 2003B 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 2003B 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 two million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments from over 85 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, Government Securities Clearing Corporation, MBS Clearing Corporation, and Emerging Markets Clearing Corporation (NSCC, GSCC, MBSCC, 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](http://www.dtcc.com).

3. Purchases of Series 2003B Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series 2003B Bonds on DTC's records. The ownership interest of each actual purchaser of each Series 2003B 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 2003B 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 2003B Bonds, except in the event that use of the book-entry system for the Series 2003B Bonds is discontinued.

4. To facilitate subsequent transfers, all Series 2003B 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 2003B 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 2003B Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Series 2003B 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 2003B Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Series 2003B Bonds, such as redemptions, tenders, defaults, and proposed amendments to the Series 2003B Bond documents. For example, Beneficial Owners of the Series 2003B Bonds may wish to ascertain that the nominee holding the Series 2003B 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 2003B 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 2003B 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 2003B 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 2003B 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 TBTA 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 TBTA, 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 TBTA 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. A Beneficial Owner shall give notice to elect to have its Series 2003B Bonds purchased or tendered, through its Participant, to the Tender/Remarketing Agent, and shall effect delivery of such Series 2003B Bonds by causing the Direct Participant to transfer the Participant's interest in the Series 2003B Bonds, on DTC's records, to the Tender/Remarketing Agent. The requirement for physical delivery of Series 2003B Bonds in connection with an optional tender or a mandatory purchase will be deemed satisfied when the ownership rights in the Series 2003B Bonds are transferred by Direct Participants on DTC's records and followed by a book-entry credit of tendered Series 2003B Bonds to the Tender/Remarketing Agent's DTC account.

10. DTC may discontinue providing its services as depository with respect to the Series 2003B Bonds at any time by giving reasonable notice to TBTA or the Trustee. Under such circumstances, in the event that a successor depository is not obtained, certificates for the Series 2003B Bonds are required to be printed and delivered.

11. TBTA 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 2003B Bonds will be printed and delivered

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

## ATTACHMENT 2 DEFINITIONS

This Attachment 2 contains definitions of certain terms used in this official statement. Capitalized terms not otherwise defined in this official statement have the meanings set forth in the Summary of Certain Provisions of the TBTA Resolution or the Definitions and Summary of Certain Provisions of the Standard Resolution Provisions that are included by specific cross-reference in this official statement.

**Alternate Liquidity Facility** means a Liquidity Facility that is issued in substitution for a then-existing Liquidity Facility in accordance with, and pursuant to, the TBTA Resolution, as the same may be amended or supplemented from time to time.

**Auction Rate Mode** means the mode during which any Series 2003B Bonds bear interest at an auction rate.

**Authorized Denominations** means \$100,000 and any integral multiple of \$5,000 in excess thereof.

**Bank Bond** means any Series 2003B Bond during any period commencing on the day such Series 2003B Bond is owned by or held on behalf of the Liquidity Facility Issuer or its permitted assignee as a result of such Series 2003B Bond having been purchased pursuant to the TBTA Resolution from the proceeds of a draw under the Liquidity Facility and ending when such Series 2003B Bond is, pursuant to the provisions of the Liquidity Facility, no longer deemed to be a Bank Bond.

**Business Day** means a day other than (i) a Saturday and Sunday, (ii) a day on which the Trustee, the Tender Agent, the Remarketing Agent, the Liquidity Facility Issuer or banks and trust companies in New York, New York are authorized or required to remain closed, or (iii) a day on which the New York Stock Exchange is closed.

**Commercial Paper Mode** means the mode during which Series 2003B Bonds bear interest at a commercial paper rate or rates.

**DTC** means The Depository Trust Company, New York, New York, or its successors.

**Daily Mode** means the mode during which Series 2003B Bonds bear interest at a daily rate.

**Electronic Means** means telecopy, facsimile transmission, e-mail transmission or other similar electronic means of communication providing evidence of transmission, including a telephonic communication confirmed by any other method set forth in this definition.

**Expiration Date** means the stated expiration date of the Liquidity Facility, or such stated expiration date as it may be extended from time to time as provided therein; provided, however, that the "Expiration Date" shall not mean any date upon which a Liquidity Facility is no longer effective by reason of its Termination Date, the date on which all Series 2003B Bonds bear interest in an Auction Rate Mode or Fixed Rate Mode or the expiration of such Liquidity Facility by reason of the obtaining of an Alternate Liquidity Facility.

**Favorable Opinion of Bond Counsel** means, with respect to any action the occurrence of which requires such an opinion, an unqualified Counsel's Opinion to the effect that such action is permitted under the Issuer Act and the TBTA Resolution and that such action will not impair the exclusion of interest on such Series 2003B Bonds from gross income for purposes of federal income taxation (subject to the inclusion of any exceptions contained in the opinion delivered upon original issuance of the Series 2003B Bonds).

**Fixed Rate Mode** means the mode during which Series 2003B Bonds bear interest at a fixed rate until their maturity date.

**Interest Payment Date** means the first Business Day of each calendar month.

**Interest Period** means the period of time that any interest rate remains in effect, which period shall be the period from and including the date of the delivery of the Series 2003B Bonds to and including the following Tuesday and thereafter commencing on each Wednesday to and including the earlier of the Tuesday of the following week or the day preceding any Mandatory Purchase Date or the maturity date.

**Liquidity Facility** means any Credit Facility which is obtained by TBTA pursuant to the TBTA Resolution and that provides for the payment of the Purchase Price of Series 2003B Bonds tendered or deemed tendered to the Tender Agent during the term thereof, as the same may be amended or supplemented from time to time. Each Initial Liquidity Facility constitutes a Liquidity Facility.

**Liquidity Facility Issuer** means the issuer of a Liquidity Facility.

**Mandatory Purchase Date** means (i) any Mode Change Date, (ii) the Substitution Date, (iii) the Expiration Tender Date and (iv) the Termination Tender Date.

**Mode** means the Commercial Paper Mode, the Daily Mode, the Weekly Mode, the Term Rate Mode, the Auction Rate Mode or the Fixed Rate Mode.

**Mode Change Date** means the date one Mode terminates and another Mode begins.

**Notice Parties** means TBTA, the Trustee, the Remarketing Agent, the Tender Agent and the Liquidity Facility Issuer.

**Purchase Date** means any Business Day upon which a Series 2003B Bond is optionally tendered for purchase by its holder in accordance with the TBTA Resolution.

**Record Date** means the opening of business on the Business Day next preceding an Interest Payment Date.

**Remarketing Agent** means Citigroup Global Markets Inc. or any successor Remarketing Agent.

**Remarketing Agreement** means the remarketing agreement entered into by and between TBTA and the Remarketing Agent with respect to the Series 2003B Bonds pursuant to which the Remarketing Agent has agreed to remarket the Series 2003B Bonds on the Purchase Date or the Mandatory Purchase Date at a price of not less than 100% of the principal amount thereof.

**Tender Agent** means U.S. Bank Trust National Association or any successor Tender Agent.

**Termination Date** means, with respect to a Liquidity Facility, (i) the date on which such Liquidity Facility shall terminate pursuant to its terms or otherwise be terminated prior to its Expiration Date or (ii) the date on which the obligation of the Liquidity Facility Issuer to provide a loan shall terminate; provided, however, that "Termination Date" shall not mean any date upon which a Liquidity Facility is no longer effective by reason of its Expiration Date.

**Term Rate Mode** means the mode during which Series 2003B Bonds bear interest at a fixed rate until the next mandatory purchase date.

**Trustee** means U.S. Bank Trust National Association or any successor Trustee.

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

**Upon delivery of the Series 2003B Bonds in definitive form, Hawkins, Delafield & Wood, 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 \$250,000,000 aggregate principal amount of Triborough Bridge and Tunnel Authority General Revenue Variable Rate Bonds, Series 2003B (the "Series 2003B 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 2003B 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 30, 2003 (collectively, the "Resolution").

The Series 2003B 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 2003B Bonds in order that interest on the Series 2003B 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 2003B Bonds, including, but not limited to, certain representations with respect to the use of the proceeds of the Series 2003B 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 2003B 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 2003B 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 2003B 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 2003B 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 2003B Bonds as executed and, in our opinion, the form of said Series 2003B 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 2003B 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 2003B 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 2003B Bonds.

4. The Series 2003B 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 2003B Bonds is excluded from gross income for federal income tax purposes pursuant to Section 103 of the Code, and (ii) interest on the Series 2003B 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 2003B 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 2003B 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 2003B 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 2003B 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**  
**INITIAL LIQUIDITY FACILITY ISSUER**

*Dexia Crédit Local*

Dexia Crédit Local (“Dexia”) is a subsidiary of the Dexia Group, which was created in 1996. The Dexia Group is a major European banking organization that is the product of several cross-border mergers. Dexia is an authentically European bank in terms of both its management organization and the scope of its different lines of business. The Dexia Group is listed on the Brussels, Paris and Luxembourg stock exchanges. With a stock market capitalization of nearly 14 billion euros as of December 31, 2002, the Dexia Group ranks in the top third of the Euronext 100 companies.

Dexia specializes in the Dexia Group’s first line of business – public and project finance and financial services for the public sector. Dexia has recognized expertise in local public sector financing and project finance. It is backed by a network of specialized banks, which employ over 3,000 professionals. Through this network of subsidiaries, affiliates and branches, Dexia is present in almost all of the countries of the European Union as well as Central Europe and the United States of America. Dexia also has operations in Latin America, the Asian-Pacific Region including Australia, and the countries around the Mediterranean.

Dexia is a bank with its principal office located in Paris, France. In issuing the facility, Dexia will act through its New York Agency, which is licensed by the Banking Department of the State of New York as an unincorporated agency of Dexia Crédit Local, Paris. Dexia is the leading local authority lender in Europe, funding its lending activities in 2002 primarily through the issuance of euro and U.S. dollar-denominated bonds. In 2002, total funding raised by Dexia and Dexia Municipal Agency was 11.2 billion euros.

The Dexia Group is the owner of Financial Security Assurance Holdings Ltd. (“FSA Holdings”), the holding company for Financial Security Assurance Inc., a leading financial guaranty insurer.

As of December 31, 2002, Dexia had total consolidated assets of 168.8 billion euros, outstanding medium and long term loans to customers of 141.8 billion euros and shareholders’ equity of nearly 3.4 billion euros (Tier I plus Tier II), and for the year then ended had consolidated net income of 454 million euros. These figures were determined in accordance with generally accepted accounting principles in France. Dexia maintains its records and prepares its financial statements in euros. At December 31, 2002, the exchange rate was 1.0000 euro equals 1.0492 United States dollar. Such exchange rate fluctuates from time to time.

Dexia is rated Aa2 long-term and P-1 short-term by Moody’s, AA long-term and A-1+ short-term by S&P, and AA+ long-term and F1+ short-term by Fitch.

Dexia will provide without charge a copy of its most recent publicly available annual report. Written requests should be directed to: Dexia Crédit Local, New York Agency, 445 Park Avenue, 7<sup>th</sup> Floor, New York, New York 10022, Attention: General Manager. The delivery of this information shall not create any implication that the information contained or referred to herein is correct as of any time subsequent to its date.

This information above relates to and has been obtained from Dexia Crédit Local. The delivery of the official statement shall not create any implication that there has been no change in the affairs of Dexia Crédit Local since the date hereof or that the information contained or referred to herein is correct as of any time subsequent to its date.

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**ATTACHMENT 5  
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**

**December 3, 2003**

Prepared for the  
**Triborough Bridge and Tunnel Authority**

By

**URS**

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December 3, 2003

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 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 11 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 traffic.

## **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 2002, these facilities carried 303 million total vehicles, of which 300 million were toll paying, and generated \$933 million 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.



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 AM 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 AM 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 5-2.

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 the TBTA facilities and their expressway/parkway connections, New York City's toll-free East River bridges — Brooklyn, Manhattan, Williamsburg and Queensborough — 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 sixteen others beyond the New York Metropolitan Area, are already linked, or are in the process of being 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 New York 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, 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; but for the outlying bridges, 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 May 18, 2003, 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. Current Toll Rates at TBTA Facilities, Effective Since May 18, 2003 @ 3:00 AM**

Classification	Verrazano-Narrows Bridge <sup>(a)</sup>		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, SUV's 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 Each additional axle costs	\$4.00 1.75	\$3.50 1.75	\$ 4.00 1.75	\$3.50 1.75	\$2.00 \$1.00	\$1.50 \$1.00	\$2.00 \$1.00	\$1.33 <sup>(b)</sup> \$1.00
The following discounted prepaid charges are presently available for the two-axle vehicles referenced above:								
Prepaid charges through token roll purchases							1.333	
Prepaid charges per crossing for registered Staten Island Residents using an eligible vehicle with three or more occupants	.875							
Prepaid charges per crossing for registered Staten Island Residents using an eligible vehicle through token roll purchase	2.80							
Registered Staten Island Residents using an eligible vehicle		2.00						
Prepaid charges per crossing for registered Rockaway Peninsula/Broad Channel Residents using an eligible vehicle							1.167	.83 <sup>(c)</sup>
All two axle vehicles greater than 7,000 lbs. and buses (other than franchise buses and motor homes)	8.00	6.40	8.00	6.40			4.00	3.20
Three Axle	13.00	10.40	13.00	10.40			6.00	4.80
Four Axle	17.00	13.60	17.00	13.60	(d)	(d)	9.00	7.20
Five Axle	22.00	17.60	22.00	17.60			11.00	8.80
Six Axle	26.00	20.80	26.00	20.80			13.00	10.40
Seven Axle	31.00	24.80	31.00	24.80			15.00	12.00
Each additional axle over 7 axles	5.00	4.00	5.00	4.00	(d)	(d)	3.00	2.40
Two-axle franchise buses	3.00	2.40	3.00	2.40	(d)	(d)	1.50	1.20
Three-axle franchise buses	3.75	3.00	3.75	3.00	(d)	(d)	2.00	1.60
Motorcycles	1.75	1.75	1.75	1.75	1.75	1.25	1.75	1.25
Each additional axle costs	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75

Notes:

- (a) Under the Verrazano-Narrows one-way crossing charge collection program, all per crossing charges shown should be doubled; toll is collected in westbound direction only.
- (b) Users receive a \$.67 discount
- (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 \$4.00 for the major crossings. The minor crossing passenger car cash toll is \$2.00. 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 bridge and 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 pre-paid account. Passenger cars equipped with *E-ZPass* are allowed a \$0.50 discount per trip for all facilities (\$0.67 for Cross Bay and Marine Parkway-Gil Hodges Memorial Bridge and \$1.00 for Verrazano-Narrows Bridge westbound only).

Toll payment by token had provided a \$0.50 discount per trip; *E-ZPass*, which has replaced the tokens at most facilities, continues the \$0.50 per trip discount. 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 the 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 \$8.00, and ranges from \$4.00 to \$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 westbound direction only. These vehicles are eligible for a 20 percent discount with *E-Z Pass*.

For the minor crossings, the two-axle cash rate for vehicles over 7,000 pounds is \$4.00, with an additional per axle rate ranging from \$2.00 to \$3.00. 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 (ETC)**

The *E-ZPass* electronic toll collection 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 2.78 million *E-ZPass* tags in use. Currently, participation rates are at 70 percent of toll-paying traffic system-wide. The total number of active IAG tags in use as of September 2003 was approximately 8.0 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* system-wide participation rates starting in January 1997, when 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.

**Table 2. Systemwide *E-ZPass* Participation Rates**

Month	<i>E-ZPass</i> Users as a Percent of Toll-Paying Vehicles- Overall Average						
	1997	1998	1999	2000	2001	2002 <sup>(a)</sup>	2003
January	29%	55%	60%	62%	68%	69%	70%
February	35	56	61	63	68	69	70
March	39	57	61	64	68	69	70
April	42	57	60	63	68	69	70
May	43	56	59	63	68	69	70
June	44	57	60	63	67	68	70
July	44	55	58	61	65	67	68
August	44	55	58	63	66	67	67
September	50	58	59	64	69	69	-
October	52	59	60	66	68	70	-
November	52	59	61	67	68	69	-
December	53	59	61	66	67	69	-

Source: TBTA

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

Implementation of the *E-ZPass* system also continues to occur on other regional toll facilities, e.g., 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 Port and 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 7 toll bridges between New Jersey and Pennsylvania operated by the Delaware River Joint Toll Road Commission, the Delaware Memorial Bridge between New Jersey and Delaware operated by the Delaware River and Bay Authority, the two toll roads in Delaware, the toll facilities in Maryland, the West Virginia Turnpike, the Massachusetts Turnpike, the Tobin Bridge operated by the Massachusetts Port Authority and the Pennsylvania Turnpike. The growing number of *E-ZPass*-equipped toll plazas has resulted in an increasing number of tag-equipped vehicles.

### **TBTA's Role in *E-ZPass***

TBTA was a founding member of the *E-ZPass* Interagency Group (IAG), originally comprised of toll authorities in Delaware, Pennsylvania, New Jersey and New York, and now including Maryland, Massachusetts, West Virginia, New Hampshire 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 1995, 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.

As mentioned earlier, 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.

### ***E-ZPass Plus***

*E-ZPass Plus* is a faster, more convenient way to pay for airport parking. It is currently available to *E-ZPass* customers who replenish their accounts with a credit card and established their accounts through the New York or New Jersey Customer Service Centers. It is in use at Albany International Airport, John F. Kennedy International Airport, and Newark International Airport to pay for parking. If the parking fee is less than \$20.00, it will appear as a charge on the user's monthly *E-ZPass* statement and will be deducted from the user's *E-ZPass* account balance.

If the fee is greater than \$20.00, it will be charged directly to the credit card used to replenish the *E-ZPass* account.

*E-ZPass Plus* is also being tested in a pilot program at two fast-food locations on eastern Long Island.

**Passenger Car Toll Rate Trends and Inflation**

Since 1971, toll rates have been periodically increased on the TBTA facilities. Table 3 displays passenger car toll rates for the nine TBTA bridges and tunnels over the past 32 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 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 <sup>(b)</sup>	1.75	1.75	1.00	1.00
1987 – 1989	2.00 <sup>(b)</sup>	2.00	2.00	1.00	1.00
1989 – 1992	2.50 <sup>(b)</sup>	2.50	2.50	1.25	1.25
1993 – 1995	3.00 <sup>(b)</sup>	3.00	3.00	1.50	1.50
1996 – 2003	3.50 <sup>(b)</sup>	3.50	3.50	1.75	1.75
2003 <sup>(a)</sup>	4.00 <sup>(b)</sup>	4.00	4.00	2.00	2.00

Notes:

(a) Last toll rate increase effective May 18, 2003.

(b) 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.

*Verrazano-Narrows Bridge*

The Verrazano-Narrows Bridge one-way cash toll of \$8.00 is collected westbound only. The current one-way cash passenger car toll rate, effective May 18, 2003, for the major crossings is \$4.00, collected in each direction. Cash tolls on the three minor crossings are \$2.00, 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 and again to 24 coupons for \$42.00 in May 2003.

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 \$3.50 set in 1996, alongside the CPI. Also shown is the CPI for September 2003 alongside the \$4.00 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 <sup>(a)</sup>	Tolls Adjusted to 1982-84 Dollars <sup>(b)</sup>
1971	\$0.25	40.5	0.62
1972	0.50	41.8	1.20
1975	0.75	53.8	1.39
1980	1.00	82.4	1.21
1982	1.25	96.5	1.30
1984	1.50	103.9	1.44
1986	1.75	109.6	1.60
1987	2.00	113.6	1.76
1989	2.50	124.0	2.02
1993	3.00	144.5	2.08
1996	3.50	156.9	2.23
September 2003	4.00	185.2	2.16
Ratio 2003/1971	16.0	4.56	3.5

Notes: (a) United States City average, all Urban Consumers. Base period: 1982-1984 = 100.0

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

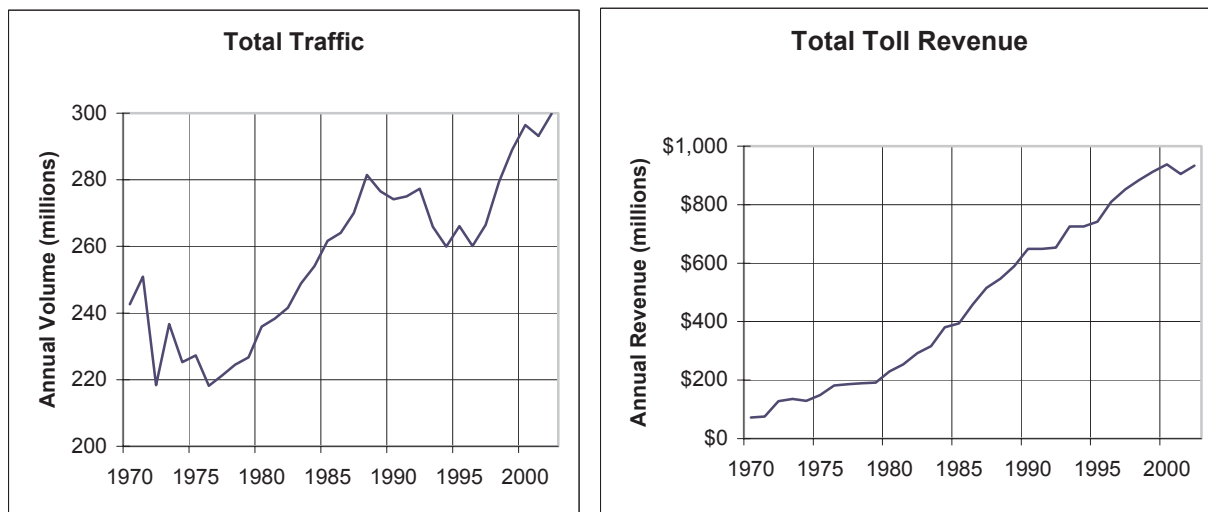
Source: US Department of Labor, Bureau of Labor Statistics.

As indicated in the table, TBTA tolls in nominal dollars have risen faster than the CPI during the 32-year period. As can be seen in Table 4, the current \$4.00 toll in 2003 dollars is equivalent to a toll of \$2.16 in 1982-1984 dollars. The actual 2003 cash toll for passenger cars is 16 times the actual toll in 1971. However, if adjusted for inflation, the toll today is lower than in 1996 and only 3.5 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 2003**

Historical traffic, revenues and expenses were reviewed for the nine TBTA bridges and tunnels. Over the last 32 years, traffic volumes on the crossings have ranged from approximately 220 million in the 1970s to 300 million in 2002. 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 11 periodic toll increases. With tolls in 2003 essentially now at 16 times the 1971 level, toll revenues increased more than 13-fold, from \$72 million to a high of \$941 million in 2000. Revenues then declined to \$915 million in 2001 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 2002, revenue recovered and reached \$933 million, which is greater than the year 2000 peak of \$941 million, if the \$9.7 million write-off of unredeemed tokens and tickets that were included in the year 2000 revenue are taken into account.

**Figure 2: Aggregated TBTA Facilities Traffic and Toll Revenue, 1970-2002**



Since 1970, annual operating expenses for the toll facilities have risen by 12 times, from \$25 million to \$300 million in 2002, during which time the CPI increased by 4.6 times.

**Traffic and Toll Revenue, 1992 - 2002**

Table 5 lists the traffic and toll revenue record for each of the nine crossings for the 1992-2002 period. Total TBTA traffic and toll revenue are shown in Table 6. The peak in paid traffic dur-

ing this period, 300 million crossings, occurred in 2002. 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 two most recent toll increases shown in this table, in 1993 and 1996, are evident in the jump in average tolls in such years. The strong growth of over 3 percent per annum between 1996 and 2000 is due in part to increases in regional population and employment and the introduction of *E-ZPass*.

In 1992, toll revenue was reported at \$654 million. As stated above, revenues rose to \$941 million in 2000, an increase of approximately 45 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 and Bronx-Whitestone bridges. In 2002 residual effects due to September 11 related traffic restrictions can be seen particularly in the results for the Brooklyn-Battery Tunnel and in the positive impact on the Verrazano-Narrows Bridge due to the heavy truck restriction at the Holland Tunnel as well as New York City's single occupancy vehicle restrictions.

**Table 5. Annual Toll-Paying Traffic and Toll Revenue:<sup>(a)</sup> 1992 to 2002**  
(000's)

Year	Verrazano-Narrows Bridge				Triborough Bridge				Bronx-Whitestone Bridge			
	Traffic		Revenue	Average Toll <sup>(c)</sup>	Traffic		Revenue	Average Toll	Traffic		Revenue	Average Toll
	Volume <sup>(b)</sup>	Change			Volume	Change			Volume	Change		
1992	63,063	2.1%	155,112	2.46	60,246	0.2%	151,669	2.52	36,471	1.3%	94,560	2.59
1993	60,927	-3.4	166,935	2.74	57,566	-4.5	169,825	2.95	35,231	-3.4	106,153	3.01
1994	60,213	-1.2	167,249	2.78	54,871	-4.7	165,500	3.02	36,042	2.3	112,259	3.11
1995	61,351	1.9	169,766	2.77	56,913	3.7	171,103	3.01	40,215	11.6	125,106	3.11
1996	60,176	-1.9	178,444	2.97	54,976	-3.4	186,313	3.39	37,258	-7.3	132,434	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 <sup>(e)</sup>	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 <sup>(e)</sup>	67,480	3.4	196,556	2.91	61,929	4.0	216,414	3.49	40,123	5.3	147,597	3.68
2000 <sup>(e)</sup>	69,089	2.4	203,172	2.94	63,642	2.8	222,614	3.50	42,285	5.4	155,938	3.69
2001	70,929	2.7	208,164	2.93	62,506	-1.8	215,241	3.44	42,090	-0.5	152,881	3.63
2002	73,334	3.4	216,312	2.95	60,720	-2.9	208,905	3.44	44,301	+5.2	160,730	3.63

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		
1992	36,868	0.1%	103,003	2.79	20,568	-0.3%	49,064	2.39	26,829	2.5%	65,686	2.45
1993	36,702	-0.4	122,273	3.33	18,277	-11.2	50,706	2.77	25,419	-5.3	72,664	2.86
1994	35,707	-2.7	122,838	3.44	18,550	1.5	53,068	2.86	23,052	-9.3	67,402	2.92
1995	33,440	-6.3	116,732	3.49	18,399	-0.8	52,742	2.87	22,812	-1.0	66,671	2.92
1996	35,208	5.3	136,948	3.89	17,064	-7.3	54,900	3.22	23,506	3.0	77,489	3.30
1997	36,711	4.3	147,106	4.01	17,029	-0.2	56,166	3.30	24,600	4.7	83,543	3.40
1998 <sup>(e)</sup>	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 <sup>(e)</sup>	38,069	1.1	152,134	4.00	20,766	5.7	67,080	3.23	25,961	2.4	87,284	3.36
2000 <sup>(e)</sup>	37,525	-1.4	152,453	4.06	21,288	2.5	69,018	3.24	26,560	2.3	89,451	3.37
2001	37,802	0.7	150,764	3.99	16,452 <sup>(d)</sup>	-22.7	52,188	3.17	26,177 <sup>(d)</sup>	-1.4	87,067	3.33
2002	39,661	4.9	157,988	3.98	15,435 <sup>(d)</sup>	-6.2	48,880	3.17	26,876 <sup>(d)</sup>	2.7	88,865	3.31

Year	Henry Hudson Bridge				Marine Parkway-Gil Hodges Memorial Bridge				Cross Bay Bridge			
	Traffic		Revenue	Average Toll	Traffic		Revenue	Average Toll	Traffic		Revenue	Average Toll
	Volume	Change			Volume	Change			Volume	Change		
1992	19,953	0.7%	20,801	1.04	7,811	-2.5%	7,835	1.00	5,476	-3.3%	5,955	1.09
1993	18,784	-5.9	22,743	1.21	7,656	-2.0	8,153	1.06	5,362	-2.1	6,268	1.17
1994	18,829	0.2	23,329	1.24	7,456	-2.6	7,936	1.06	5,208	-2.9	6,043	1.16
1995	20,364	8.2	25,303	1.24	7,385	-1.0	8,178	1.11	5,184	-0.5	6,214	1.20
1996	19,922	-2.2	28,031	1.41	7,086	-4.0	8,219	1.16	4,967	-4.2	6,460	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 <sup>(e)</sup>	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 <sup>(e)</sup>	21,285	4.8	30,068	1.41	7,391	0.9	8,461	1.14	6,009	6.4	7,199	1.20
2000 <sup>(e)</sup>	22,541	5.9	31,938	1.42	7,206	-2.4	8,370	1.16	6,354	5.7	7,650	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	24,650	5.8	34,045	1.38	7,743	6.6	8,938	1.15	7,089	5.6	8,471	1.19

- Notes: (a) Toll rate increases occurred on January 31, 1993 and March 24, 1996.  
 (b) Westbound toll traffic volume doubled.  
 (c) Average toll on basis of revenues divided by doubled westbound volume.  
 (d) Reflects traffic restrictions and closures beginning September 11, 2001 and ending gradually through November 17<sup>th</sup>, 2003  
 (e) Includes write-offs due to unredeemed tokens and tickets.

The Verrazano-Narrows Bridge reported the highest toll revenue for 2002 at \$216 million, while the Cross Bay Bridge registered the lowest revenue at \$8 million. (The relationship between toll increases and traffic volume is described in the *Toll Impacts and Elasticity* section of this report.)

Traffic volumes and toll revenues on the Throgs Neck Bridge and Bronx-Whitestone Bridge should be considered together since they serve many of the same trips; and, when there is construction activity in the area, traffic shifts between the two facilities. For example, in 1995 some traffic diverted from the Throgs Neck Bridge to the Bronx-Whitestone Bridge when the approach ramps from the Cross Island Parkway to the Throgs Neck Bridge were rehabilitated. Since 2000, traffic again diverted from the Throgs Neck Bridge to the Bronx-Whitestone Bridge due to reconstruction activities on the Cross Bronx Expressway in the vicinity of the Throgs Neck Bridge. Growth in 2002 was approximately 5 percent for both facilities. However, the Bronx-Whitestone Bridge now carries approximately 53 percent of corridor traffic.

Total annual TBTA toll traffic and revenue are shown in Table 6 for the period 1992 through 2002.

**Table 6. Summary of Annual Paid Traffic and Toll Revenue:<sup>(a)</sup> 1992 to 2002**

Year	Total Paid Traffic (000)	Total Revenue (000)
1992	277,285	653,686
1993	265,924	725,720
1994	259,928	725,624
1995	266,063	741,815
1996	260,163	809,256
1997	266,520	851,993
1998	279,463	884,439 <sup>(b)</sup>
1999	289,013	912,792 <sup>(b)</sup>
2000	296,490	940,607 <sup>(c)</sup>
2001	293,220	914,856
2002	299,995	933,134

- Notes: (a) Toll rate increases occurred on January 31, 1993 and March 24, 1996.  
 (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, 2002**

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 2002 traffic volumes by facility. Passenger cars totaled 280 million crossings and represented 93 percent (which

has remained relatively constant over time) of the total toll-paying vehicles. The Verrazano-Narrows Bridge registered the highest two-way traffic volume of 73.3 million toll-paying vehicles. The lowest volume, 7 million vehicles, was recorded at the Cross Bay Bridge.

**Table 7. Traffic by Facility and Vehicle Class, 2002**  
(000's)

Facility	VC 1 Passenger Cars	VC 2 Pass. Cars w/ 1 Axle Trailer	VC 3 Pass. Cars w/ 2 Axles Trailer	VC 4 Trucks 2 Axles	Franchise Buses		VC 6 Trucks 3 Axles	VC 7 Trucks 4 Axles
					VC 5 2 Axles	VC 11 3 Axles		
Throgs Neck Bridge	35,572	48	38	1,499	2		311	387
Bronx-Whitestone Bridge	41,154	16	10	1,455	121		324	215
Triborough Bridge	57,094	23	11	2,269	220	11	419	95
Queens Midtown Tunnel	24,742	7	6	1,481	255	39	260	25
Brooklyn-Battery Tunnel	14,236	3	2	422	116	451	134	6
Verrazano-Narrows Bridge <sup>(a)</sup>	68,184	30	24	2,113	115	359	507	279
Henry Hudson Bridge	24,510	2	2	93			2	
Marine Parkway-Gil Hodges Mem. Br.	7,511	2	1	140	50		18	3
Cross Bay Bridge	6,731	4	2	214	68		36	4
Total	279,734	135	96	9,686	947	860	2,011	1,014
Percent of Paid Vehicles	93.3%	0.0%	0.0%	3.2%	0.3%	0.3%	0.7%	0.3%

Facility	VC 8 Trucks 5 Axles	VC 9 Motor- cycles	VC 12 Trucks 6 Axles	VC 13 Trucks 7 Axles	VC 14 Other Vehicles	Total Paid Vehicles	VC 10 Non-Rev. Vehicles <sup>(b)</sup>	Total Vehicles
Throgs Neck Bridge	1,663	59	76	2	2	39,660	274	39,935
Bronx-Whitestone Bridge	906	55	43	1	1	44,301	287	44,588
Triborough Bridge	475	78	23		1	60,719	1144	61,863
Queens Midtown Tunnel	16	44	2		1	26,878	402	27,280
Brooklyn-Battery Tunnel	13	50	4			15,435	476	15,910
Verrazano-Narrows Bridge <sup>(a)</sup>	1,536	120	64		1	73,332	626	73,958
Henry Hudson Bridge	1	39				24,649	101	24,750
Marine Parkway-Gil Hodges Mem. Br.	8	11				7,744	95	7,839
Cross Bay Bridge	13	15	1			7,088	150	7,238
Total	4,631	471	213	3	6	299,805	3555	303,360
Percent of Paid Vehicles	1.5%	0.2%	0.1%	0.0%	0.0%	100.0%		

Notes: May not add due to rounding. VC = vehicle class  
 (a) Westbound traffic doubled.  
 (b) Includes police, fire and other emergency vehicles and TBTA vehicles.

Source: TBTA.

**Monthly Traffic, 2002**

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 after-

math 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. However, added to these normal impacts was the effect of September 11.

**Table 8. Monthly Traffic Variations, 2002**

Month	Average Daily Toll-Paying Traffic										Ratio to AADT <sup>(b)(c)</sup>
	Throgs Neck	Bronx-Whitestone	Tri-borough	Queens Midtown	B’klyn-Battery	Verrazano - Narrows <sup>(a)</sup>	Henry Hudson	Marine Pkwy	Cross Bay	Total	
Jan.	96,626	105,360	155,706	64,683	21,473	186,368	60,604	17,086	16,726	724,631	0.88
Feb.	102,025	112,089	164,833	69,002	23,944	195,676	64,256	17,678	17,300	766,803	0.93
Mar.	105,396	116,820	167,920	71,936	25,297	199,878	66,001	18,668	18,051	789,966	0.96
Apr.	104,648	123,392	173,344	74,250	40,030	203,256	70,966	19,632	18,871	828,389	1.01
May	110,439	126,073	175,456	75,830	45,127	206,111	71,598	21,622	19,818	852,073	1.04
June	117,612	128,436	179,319	76,374	49,434	211,647	71,488	25,413	23,342	883,064	1.08
July	118,091	127,489	168,838	72,465	46,469	205,265	66,520	27,145	23,462	855,743	1.04
Aug.	122,198	128,032	171,473	76,528	49,118	210,591	65,952	26,116	22,120	872,127	1.06
Sept.	113,607	123,872	160,484	75,246	48,633	200,579	68,113	21,546	19,230	831,308	1.01
Oct.	107,332	125,424	160,267	78,296	53,887	200,580	70,653	20,676	18,776	835,890	1.02
Nov.	105,582	120,500	161,918	75,687	51,967	196,656	69,212	19,668	17,960	819,149	1.00
Dec.	99,945	118,435	156,886	73,093	50,971	194,133	65,036	19,016	17,247	794,762	0.97
AADT <sup>(c)</sup>	108,660	121,373	166,357	73,634	42,288	200,914	67,533	21,214	19,421	821,394	1.00

- Notes: May not add due to rounding.  
 (a) Westbound traffic doubled.  
 (b) For total traffic on the nine crossings.  
 (c) Annual Average Daily Traffic.

The data in Table 8 indicate that total traffic on the nine crossings peaked in the summer, the peak season for recreational travel in the Metropolitan Area. For the combined facilities, the monthly variations in 2002 ranged from 12 percent below the annual average in January to 8 percent above in June. Normally, August is the highest month and was second in 2002. This is indicative of a stable traffic mix comprised of a solid base of commuting and commercial traffic.

**Historical Impacts of the September 11, 2001 Terrorist Attack**

In assessing the impact of the terrorist attacks on toll revenue in the two years following the attack, the following factors had to be considered separately and then in combination: (a) the direct consequences of the operational restrictions at the Brooklyn-Battery and Queens Midtown tunnels (along with the four City-owned bridges south of 63 Street, Queensborough, Williamsburg, Manhattan and Brooklyn); (b) the increase in traffic on the Verrazano-Narrows Bridge due to heavy-truck restrictions at the Holland Tunnel; and (b) the indirect economic impacts in terms of job losses and dislocations and, therefore, reduced trip-making. A discussion of the continuing impact follows in the section covering the factors affecting traffic growth.

The attack on the World Trade Center had a direct effect on transportation facilities through the destruction of the Port Authority Trans Hudson subway (PATH) downtown service between New Jersey and Manhattan and the station at the World Trade Center, and damage to the 1/9 subway line. In addition, the operations of the Brooklyn-Battery Tunnel were affected, as it feeds into West Street, which runs immediately adjacent to the World Trade Center Complex site. West Street was closed until March 29, 2002, and this limited the use of the Brooklyn-Battery Tunnel.

Aside from the direct impact on transportation facilities, most of the measures that were introduced following the attack to cope with the loss of capacity, security issues and the clean up of the affected area around the World Trade Center have been removed

### *Changes in Travel Patterns and Mode Choice*

The impacts on employment and to the transportation infrastructure primarily affected work-related trips during the peak morning and evening commute periods; not only was there a reduction in the total number of people crossing the East River, there were also changes in the mode of transportation used.

The total number of people entering Manhattan, across the East River, during the morning peak period fell by 13 percent from 609,000 to 530,000 in the immediate aftermath of the September 11 attack.

### *Impact on Peak Hour East River Vehicular Traffic*

The introduction of the SOV restrictions on September 27, 2001 resulted in a greater reduction in vehicle-trips than person-trips, because of the increase in the auto-occupancy rates during the morning peak travel period.

The total number of vehicle trips using all the East River crossings in the morning peak period fell by 45 percent, or approximately 40,000 trips during the October 1-17 period. The most significant reduction in traffic occurred on the Brooklyn Bridge and at the Brooklyn-Battery Tunnel, due to the severe restrictions on movement at the southern end of Manhattan during this period. By January 2002, the number of vehicles crossing the East River during the morning peak had increased but was still 31 percent below pre-September 11 levels. The recovery of traffic has differed considerably between the crossings depending on the timing of the lifting of restrictions.

### *Impact on TBTA Facilities*

For the TBTA facilities specifically, the impact of September 11 was most dramatic at the Brooklyn-Battery Tunnel, as mentioned above, followed by the Queens Midtown Tunnel and then the Triborough Bridge and Henry Hudson Bridge, the four crossings that serve Manhattan. The truck restrictions introduced at the Holland Tunnel had a positive impact on the Verrazano-

Narrows Bridge. The outlying bridges, including the Throgs Neck Bridge and the Bronx-Whitestone Bridge, were affected essentially only in September 2001. As stated above, these two bridges should be viewed in combination, as construction activities result in traffic shifts back and forth, and because they serve generally the same areas in Queens and the Bronx.

Table 9 lists the traffic changes that have occurred between January 2002 and August 2003 for which data are now available

**Table 9. Changes in Monthly Traffic – January 2002 through August 2003**

Month	Percent Change in Monthly Traffic								
	Throgs Neck	Bronx-Whitestone	Tri-Borough	Queens Midtown	B'klyn Battery	Verrazano-Narrows	Henry Hudson	Marine <sup>(c)</sup> Parkway	Cross Bay <sup>(c)</sup>
<b>2002 vs 2001</b>									
Jan- Aug	+ 8.1	+ 2.5	-1.6	-2.1	-34.3	+ 5.2	+ 5.4	+ 6.1	+ 7.3
September	+ 6.6	+ 14.9	+ 1.5	+ 19.5	+ 119.0	+ 8.1	+ 20.2	+ 10.6	+ 7.2
October	-4.9	+ 15.3	+1.5	+ 17.5	+ 286.2	-1.3	+ 9.4	+ 10.8	+ 2.4
November	-1.9	+ 8.7	+1.3	+ 10.2	+ 193.0	-2.1	+ 2.3	+ 6.9	-0.1
December	-3.1	+ 7.1	-3.1	+ 5.4	+ 113.2	-4.3	-2.6	+ 2.7	-1.1
<b>2003-vs 2002</b>									
January	-1.3	+ 7.9	-5.6	+ 8.8	+ 116.7	-1.1	+ 3.6	+ 4.7	+ 0.9
February <sup>(b)</sup>	-10.4	-1.9	-13.7	-1.4	+ 83.8	-11.8	-6.9	-5.4	-7.2
March	-3.7	+ 2.5	-7.3	+ 0.9	+ 88.7	-3.4	-0.5	+ 3.6	+ 0.1
April	-0.8	+ 2.0	-7.7	+ 1.1	+ 23.7	-2.7	-3.2	-1.2	-3.1
May	-0.4	+ 0.5	-5.2	+ 1.0	+ 12.4	-3.2	-0.9	-1.4	-3.9
June	-4.1	+ 1.7	-5.4	+ 3.3	+ 3.2	-3.2	+ 0.2	-5.0	-8.4
July	0.7	+ 1.5	-0.6	+ 4.6	+ 2.9	-0.6	+ 1.6	+ 0.5	-0.7
August	-2.8	+ 0.6	-3.4	+ 0.5	-3.8	-3.0	-0.1	-3.3	-5.3

- (a) March and April are affected by the holidays, which fall in either March or April. The two months, therefore, should be viewed in combination.
- (b) Winter traffic volumes were affected by severe blizzard conditions in mid-February
- (c) Traffic levels were affected by the record number of days of rain from June-August.

With the Brooklyn-Battery Tunnel having begun a return to pre- September 11, 2001 operations except for the AM peak SOV restrictions which were lifted on November 17, 2003, there was a significant year-to-year improvement in traffic volumes for the period from January to July, as shown in Table 9. Note also that traffic gains have been consistent for the Queens Midtown Tunnel, where the SOV restrictions south of 63 Street were lifted in April 2002. Traffic has decreased on the Triborough Bridge due to ongoing construction. Additionally, the blackout in the Northeast United States on August 14, 2003 affected the traffic volumes for that month at most TBTA facilities and numerous rain days from June through August had an impact on traffic at the Marine Parkway and Cross Bay Bridges.

These results and the positive trends reflected in Table 9 were used to develop the traffic estimates for 2003.

**Estimated Traffic and Toll Revenue, 2003**

The development of the traffic and toll revenue estimates for 2003 necessarily took into account the continuing, but improving, conditions in the aftermath of the 2001 World Trade Center attack and the toll revision implemented in 2003. The impacts in the long term, regarding the national and regional economies, projected employment in lower Manhattan and the traffic and revenue forecasts beyond 2003, are covered in the following chapters of the report. In developing the traffic and toll revenue estimates for 2003, we assumed that traffic changes for the 4-month period, September through December, would be the same as the change in June through August, the three-month period after the toll increase. The forecasted percent change is shown in Table 10.

**Table 10. Estimated Changes in Monthly Traffic – September-December 2002 vs. 2003**

Facility	Percent Change
Throgs Neck Bridge	-2.04%
Bronx-Whitestone	1.24
Triborough Bridge	-3.17
Queens Midtown	2.76
Brooklyn-Battery Tunnel	0.72
Verrazano-Narrows Bridge	-2.30
Henry Hudson Bridge	0.55
Marine P'kwy Bridge	-2.51
Cross Bay Bridge	-4.74

The extrapolated percentages reflect the toll increase in May, the aforementioned SOV restrictions at the Brooklyn-Battery Tunnel that ended on November 17, 2003, ongoing construction, the effects of a transitioning economy, and the recovery from the depressed traffic levels in the aftermath of September 11. Those for the Throgs Neck Bridge reflect decreased volumes due to ongoing construction in the vicinity of the Bruckner interchange. This is also true for the Triborough Bridge, which has had ongoing construction since 2000. Volumes on the Verrazano-Narrows Bridge reflect the removal of restrictions on single unit trucks at the Holland Tunnel in July 2003

The traffic and toll revenue estimates for 2003 are developed in Table 11. The September-December traffic volumes are estimated based on the actual data for September-December 2002 and the estimated percentages from Table 10.

**Table 11. Estimated 2003 Toll-Paying Traffic and Toll Revenue**

Facility	Traffic				
	Actual Jan-August	Estimated September - December	Total	Avg. Toll	Toll Revenue
Throgs Neck Bridge	26,111,203	12,830,892	38,942,095	\$4.37	\$170,213,517
Bronx-Whitestone Bridge	30,120,676	15,184,077	45,304,753	3.91	177,358,093
Triborough Bridge	39,465,661	19,255,585	58,721,246	3.72	218,414,983
Queens Midtown Tunnel	18,337,340	9,613,983	27,951,323	3.57	99,727,407
Brooklyn Battery Tunnel	12,145,880	6,471,230	18,617,110	3.37	62,754,363
Verrazano-Narrows Bridge*	47,846,958	23,805,638	71,652,596	3.23	231,653,981
Henry Hudson Bridge	16,270,255	8,406,184	24,676,439	1.52	37,547,691
Marine Parkway Bridge	5,284,759	2,432,103	7,716,862	1.43	11,044,551
Cross Bay Bridge	4,785,358	2,169,883	6,955,241	1.26	8,793,845
<b>Total</b>	<b>200,368,090</b>	<b>100,169,575</b>	<b>300,537,665</b>		<b>\$1,017,508,432</b>

\* Westbound toll traffic volume doubled.  
 Note: May not add due to rounding.

The average tolls in Table 11, are the rates for the full year taking into consideration the toll increase that was implemented on May 18<sup>th</sup>. It has been assumed that the average toll rates for June through August would be the same as the rates for September through December.

The \$1.0 billion estimate for 2003 in Table 11 reflects the impact of the May 18 toll increase. The robust 2003 total volume for the nine facilities can be attributed generally to the continuing *E-ZPass* inducement and specifically to the continuing truck restrictions for heavy trucks at the Holland Tunnel that has diverted trucks to the Verrazano-Narrows Bridge, despite the relatively low volumes at the Brooklyn-Battery Tunnel.

Table 11 provides the interface between the historical traffic and revenue data presented on the preceding pages and the 10-year forecasts in Tables 20 and 21. The methodology used to develop the estimated growth rates starting in 2003 is discussed on pages 5-44 through 5-46.

**Operating Expenses 1992 – 2002**

Table 12 displays the historical operating expenses for the TBTA facilities from 1992 through 2002. TBTA divides operating expenses into two major categories: Personnel Services and Other Than Personnel Services (OTPS). Personnel services include salaries, overtime and fringe benefits, net of capital reimbursements. Maintenance, outside services, insurance, Coliseum operations, TBTA’s share of the *E-ZPass* Customer Service Center, and other non-personnel expenses are included in OTPS.

TBTA personnel services expenses increased from \$114.7 million in 1992 to \$141.0 million in 2002. Personnel expenses grew by much less than inflation 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 the period.

OTPS expenses increased from \$53.9 million in 1992 to \$ 159.2 million in 2002. The primary driving factors in TBTA’s OTPS 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 TBTA service life

Timing of major expenses and extraordinary items has also resulted in some year-to-year fluctuations. In 1993, OTPS expenses increased primarily due to one-time expenses associated with lead remediation and an increase in insurance reserves. 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 OTPS expenses starting in 1995.

*E-ZPass* startup costs for tags and customer service center operations were primarily responsible for OTPS 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 OTPS costs in 1999, and rental expenses for TBTA administrative offices at 2 Broadway that were formerly in the New York Coliseum office building increased OTPS costs in 1999 and 2000.

**Table 12. Historical Operating Expenses: 1992-2002**

Year	Operating Expenses (000s)			Percent Change <sup>(c)</sup>
	Personnel <sup>(a)</sup>	OTPS <sup>(b)</sup>	Total	
1992	114,659	53,855	168,514	8.3
1993	113,473	73,844	187,317	11.2
1994	107,417	62,976	170,393	-9.0
1995	112,212	84,858	197,070	15.7
1996	109,256	95,915	205,171	4.1
1997	111,651	112,222	223,873	9.1
1998	106,603	101,587	208,190	-7.0
1999	107,430	120,561	227,961	9.5
2000	112,256	129,002	241,258	6.0
2001	123,316	133,198	256,514	6.4
2002	140,967	159,229	300,196	17.0

- Notes: (a) Includes salaries, overtime and fringe benefits, net of capital reimbursements.  
 (b) OTPS is Other Than Personnel Services and 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 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 and traffic management, 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 assigning personnel to disaster recovery tasks and overtime incurred by represented employees required to make up for lost time as a result of the temporary closure of 2 Broadway, TBTA's main office. The increases associated with these additional costs are expected to be reimbursed to TBTA 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 includes 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.

### **October Forecast, 2003**

Operating expenses have been budgeted by TBTA for 2003 at \$349.8 million. These expenses are divided into the following two categories: Personnel Services of \$159.9 million and OTPS of \$189.9 million.

The 2003 budget reflects a continuation of the security measures noted above and increased security measures including added security guards and cameras. Additional measures are being considered such as additional lighting, alarms, and expansion of the CCTV system.

### **FACTORS AFFECTING TRAFFIC GROWTH**

The previous section of the report set forth the historical traffic and revenue 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 5-8 and 5-9. In addition to these "normal" factors, which are considered when developing traffic growth forecasts, the "extraordinary" circumstances following September 11 were analyzed to estimate the ongoing impact on traffic growth. The effects on regional transportation facilities were covered in connection with the historical data (pages 5-13 through 5-16). In this section of the report, the employment impacts are discussed in preparation for the traffic forecasts. 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 2010 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; however, the scale of the events of September 11 has resulted in reduced traffic levels on the crossings serving lower Manhattan. The short- and intermediate-term impacts of this event are discussed below based on information provided by regional agencies and organizations. 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 December 2000. These forecasts have future year growth levels for New York City similar to previous forecasts developed in 1996, but the estimated year 2000 employment base was higher than had previously been forecast. The year 2000 estimates showed New York City's employment at a higher level than at any time since 1970.

Between 1970 and 1990, 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 2010, in the range of 0.4 to 1.3 percent annually.

**Table 13. Employment Trends and Projections**  
(000s)

Year	New York City						New York Region <sup>(b)</sup>	New Jersey Region <sup>(c)</sup>	Connecticut Region <sup>(d)</sup>
	Manhattan	Bronx	Brooklyn	Queens	Staten Island	Total <sup>(a)</sup>			
1970	2,654.9	247.3	592.2	543.1	45.9	4,083.7	1,561.4	2,453.9	729.9
1980	2,364.8	211.9	485.7	499.8	64.4	3,626.6	1,925.4	2,832.6	872.6
1990	2,565.1	237.8	504.4	567.3	91.5	3,966.2	2,335.9	3,391.5	1,026.8
2000-Estimated	2,621.8	252.0	550.6	604.2	117.4	4,145.9	2,519.3	3,689.7	1,070.3
2005-Projected	2,730.4	266.1	569.5	618.8	125.0	4,309.8	2,615.9	3,900.6	1,126.2
2010-Projected	2,804.7	278.4	580.0	636.7	130.7	4,430.5	2,701.7	4,081.0	1,159.7
Average Annual Percent Change									
1970 to 1980	-1.2%	-1.5%	-2.0%	-0.8%	3.4%	-1.2%	2.1%	1.4%	1.8%
1980 to 1990	0.8	1.2	0.4	1.3	3.6	0.9	2.0	1.8	1.6
1990 to 2000	0.2	0.6	0.9	0.6	2.5	0.4	0.8	0.8	0.4
2000 to 2005	0.8	1.1	0.7	0.5	1.3	0.8	0.8	1.1	1.0
2005 to 2010	0.5	0.9	0.4	0.6	0.9	0.6	0.6	0.9	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 (historical data and projections as of 2002).

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, the most noticeable fluctuations occurred during the toll increase years, when traffic declined while revenues increased.

The disruption to the New York City economy and traffic caused by the September 11 World Trade Center attack, at least in the short-term, combined with the fact that the NYMTC forecasts pre-date both the release of the 2000 census findings and the events of September 2001, necessitated a review of other more recent forecasts of employment as part of the process of developing the traffic and revenue forecasts.

The most current forecasts of intermediate-term employment for the city were developed by the New York City Office of Management and Budget (OMB) and the Office of the Comptroller. OMB produces forecasts as part of the process of developing the mayor’s budget. In May 2003, the Comptroller’s office published a review of the OMB forecast for the period between 2003 and 2007.

As can be seen from Table 14, the difference in growth projections reveals that the economy will continue to falter through 2003 and will have a near complete recovery of the jobs lost between 2001 and 2003 by 2007 under both scenarios.

**Table 14. Forecasts of Payroll Jobs, Total and Year-over-Year Change 2003-2007**  
(000)

Year	2000*	2001*	2002*	2003	2004	2005	2006	2007
Source	Total Payroll Jobs							
Comptroller	3,723	3,702	3,611	3,557	3,570	3,629	3,673	3,717
OMB	3,723	3,702	3,621	3,546	3,566	3,603	3,649	3,689
	Change in Number of Jobs							
Comptroller	NA	-20.9	-91.0	-54.9	12.8	58.5	44.0	44.0
OMB	NA	-20.9	-81.2	-75	20	37.4	46.8	39.7

\*Data for 2000 through 2002 are actual  
Sources: New York City Comptroller’s Office and Office of Management and Budget.

*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 15. 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. The 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 15. Population Trends and Projections**  
(000s)

Year	New York City						New York Region <sup>(b)</sup>	New Jersey Region <sup>(c)</sup>	Connecticut Region <sup>(d)</sup>
	Manhattan	Bronx	Brooklyn	Queens	Staten Island	Total <sup>(a)</sup>			
1970	1,539	1,472	2,602	1,987	295	7,895	4,178	5,006	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	4,990	1,806
2000 Census	1,537	1,333	2,465	2,229	444	8,008	4,681	5,431	1,889
2000-Projected	1,560	1,184	2,267	2,010	417	7,449	4,598	5,278	1,821
2005-Projected	1,585	1,199	2,246	2,014	428	7,472	4,670	5,382	1,887
2010-Projected	1,612	1,205	2,253	2,024	438	7,534	4,747	5,525	1,920
Average Annual Percent Change									
1970 to 1980	-0.7	-2.3	-1.5	-0.5	1.8	1.1	0.3	-0.2	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	0.4
2000 to 2005	0.3	0.1	-0.2	0.0	0.5	0.1	0.3	0.4	0.7
2005 to 2010	0.3	0.1	0.1	0.1	0.5	0.2	0.3	0.5	0.3

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.  
 Sources: New York Metropolitan Transportation Council, US Census Bureau.

NYMTC's latest population projections for the Tri-State region for 2000 to 2010 were prepared in 2000, and 2010 population for New York City is forecast as reaching 7,534,100. As noted above, the Census results for New York City show the population in 2000 exceeded 8,000,000 and NYMTC's forecast for 2010. It should be noted that NYMTC's latest population projections for the Tri-State region for 2000 to 2010 were adopted in December 2000, prior to the release of the Census findings.

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.

#### *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 1992 through 1996 in New York, New Jersey and Connecticut, and decreased slightly in New York City. Motor vehicle registrations grew at a higher pace during the 1997-2001 period, reaching an average annual growth rate of 1.7 percent in New York City and State. The most recent data available indicate that between 1997 and 1999 vehicle registrations grew by an average annual rate of growth of 2.0 percent in New Jersey and, between 1997 and 2001, by 2.4 percent in Connecticut. As illustrated in Table 16, these figures represent a 10-year upward trend in motor vehicle registration growth for the Tri-State area.

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 16. Motor Vehicle Registrations**  
(000s)

Year	New York City	New York State <sup>(a)</sup>	New Jersey	Connecticut
1992	1,898 <sup>(b)</sup>	8,988 <sup>(b)</sup>	5,364	2,527
1993	1,911	9,110	5,410	2,536
1994	1,907	9,149	5,534	2,559
1995	1,896	9,177	5,607	2,582
1996	1,862	9,235	5,632	2,578
1997	1,907	10,027 <sup>(c)</sup>	5,688	2,610
1998	1,943	10,174	5,683	2,663
1999	2,001	10,437	5,917	2,703
2000	2,044	10,661	NA	2,760
2001	2,025	10,707	NA	2,871
Average Annual Growth				
1992-1996	-0.5%	0.7%	1.2%	0.5%
1997-2001	1.7	1.7	2.0 <sup>(d)</sup>	2.4

- Notes: (a) Including New York City.  
 (b) Beginning in 1992 New York State changed the reporting of motor vehicle registrations from the number of registrations issued to the number of registrations in force.  
 (c) A computer change in 1997 resulted in numbers that are not comparable to earlier years.  
 (d) Average annual growth rate for 1997-1999.  
 Source: New York State Statistics Yearbook 1988-1998, 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 next three years.

**Fuel Conditions**

The availability and pricing of motor fuel has affected the use of TBTA facilities. During the past 30 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 Persian Gulf tensions and war in 1990-1991 and, most recently, during 1999 and the beginning of 2000, and again in 2003 when prices increased due to restricted supplies.

In 1974, there was a 4.9 percent decline in TBTA traffic and slower growth in subsequent years (1.5 percent per year in contrast to the 3.8 percent prior to 1974) as the economy slowed

and fuel prices rose. Succeeding fuel shortages caused temporary traffic decreases that resulted in no permanent effects on traffic growth in subsequent years.

The United States has established the Strategic Petroleum Reserve (SPR) to provide protection against short-term disruptions in petroleum supplies. Recent inventory levels provide 52 days of protection based on the United States net import rate for crude and petroleum products as of August 2002. Nevertheless, as the United States becomes increasingly dependent on foreign sources for petroleum and refined products, it becomes more susceptible to foreign disruptions in supplies. There are factors in the world petroleum market, however, that lower these risks. These include the erosion in the market share held by the Organization of Petroleum Exporting Countries (OPEC) during the past 20 years due to the growth in production by non-OPEC nations and a diversity of interests among OPEC members that conditions OPEC's strategic objectives regarding pricing and resource development.

Unadjusted fuel prices declined from 1980 to 1985 and began to increase through the 1990s. However, when adjusted by the consumer price index, fuel prices actually declined between 1980 and 1997 by 51 percent. Prices have increased for the last two years due to OPEC controls on output; however, these price increases did not adversely affect TBTA traffic. In August 2003, the average price was \$1.75 per gallon, compared to \$1.47 in August 2002.

When adjusted to reflect changes in the CPI, the current price of gasoline is significantly below the March 1981 peak price, which, if adjusted for inflation, would be more than \$2.75 per gallon in current dollars. It is anticipated that future increases in gasoline prices will not affect traffic unless they are of a magnitude exceeding that adjusted 1981 value.

Pump prices were relatively steady through the first week in August. However, during a three-week period, prices surged by over \$.20 per gallon. The latest weekly survey by the Energy Information Administration (EIA) set a new nominal high for gasoline prices of \$1.75. Several factors contributed to this late summer price spike. First, since last March both domestic gasoline and crude oil inventories have remained below normal. Second, gasoline demand, which had been sluggish during the first seven months of the year, increased in August and reached a record high. Third, a series of local supply disruptions further constrained supplies. Refinery shutdowns in California, a gasoline pipe rupture in Phoenix, Arizona at the end of July, and the massive loss of electrical power in the Northeast and Midwest on August 14 shutdown several refineries in the Midwest.

By the middle of September, a turnaround in the supply and demand conditions resulted in an easing of retail gasoline prices. Weekly average prices fell approximately \$.16 per gallon from the record high set in August to \$1.57 per gallon. As of October 27, the most recent date for which data are available, the average retail price for gasoline reached \$1.54, compared to \$1.44 in October 2002. Although demand has been normal to high for this time of year, gasoline imports and production are both up and prices should continue to decline through the winter.

In 2004 the annual pump prices are projected to average \$1.43 a gallon (down nearly 10 cents per gallon from the projected 2003 average), as crude oil prices decline and refiner and retail margins ease slightly.

OPEC unexpectedly agreed to cut oil production on November 1, 2003. This reduction by 3.5 percent will result in an output ceiling decreased by 900,000 barrels to 24.5 million barrels per day, 0.9 million barrels per day below June levels and 1.1 million barrels per day below the OPEC production targets that took effect June 1. Non-OPEC production is expected to grow by 1.3 million barrels per day in 2003 and 2004, exceeding the 0.9 million barrels per day growth seen in 2002. The Organization for Economic Cooperation and Development (OECD) inventories from December through May, are at a 5-year low. The EIA believes that with the OPEC production cuts during 2003, reduced exports from Iraq and an anticipated demand recovery, oil prices will continue to rise. The EIA outlook is for world demand growth of over 1 million barrels per day in 2003 beginning in the third quarter of the year with one-eighth of the demand coming from the US.

The Annual Energy Outlook, 2003, issued by the EIA addresses the longer-term trends in energy demand and supply. Fuel supplies in the transportation sector are projected to be sufficient during the next 10 years. Motor gasoline use is projected to increase 2.0 percent per year over the next 20 years. Alternative fuels are projected to displace about 3.2 percent of light-duty vehicle fuel consumption, in response to current environmental and energy legislation intended to reduce petroleum-based fuel use during that 20-year period. Gasoline's share of demand may decrease do to the aforementioned cut in oil production. Over the longer term, economic growth is expected to lead to an increase in freight transportation with a corresponding increase in diesel use.

### **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  $\epsilon$  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 historical toll increases to estimate the impact on traffic and toll revenue when tolls are increased in the future. 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.

While URS has developed elasticity factors following the TBTA general rate increase in May 2003, the elasticity factors are not appropriate, in the opinion of URS, for use in projecting traffic and revenues in reaction to future toll increases on the TBTA facilities. This is due to the interaction among the toll increase and other conditions including: 1) ongoing construction on

TBTA facilities or approach roads; and 2) the slowly recovering economy, which is producing few new jobs. Also, only three months of actual data are available since the toll increase of May 2003, the first increase since the introduction of *E-ZPass*. The time frame to fully measure the impact of a toll increase is generally 6 months to a year. Therefore, while URS has developed new elasticity factors, the use of the historic factors for determining future growth was deemed more appropriate.

**Table 17. Historical Elasticity Factors**

Facility	Elasticity <sup>(a)</sup> Factor
Throgs Neck Bridge, Bronx Whitestone Bridge	-0.085
Triborough Bridge	-0.196
Queens Midtown Tunnel	-0.208
Brooklyn Battery Tunnel	-0.386
Verrazano-Narrows Bridge	-0.120
Henry Hudson Bridge	-0.298
Marine Parkway-Gil Hodges Bridge	-0.110
Cross Bay Bridge	-0.149

(a) 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 .208 %

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 Queensborough Bridge. Further south on the East River at the Triborough Bridge and the Queens Midtown and Brooklyn-Battery tunnels in that order, 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 do not have travel-time constraints.

If the historical increase patterns continue, it can be expected that tolls will be increased again during the forecast period (through 2013). 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 in January 2008 and again in January 2013.

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 \$4.50 and \$2.25, respectively, in January 2008, and to \$5.00 and \$2.50, respectively, in 2013. It was also assumed that the truck tolls would be increased proportionately, and that the *E-ZPass* tolls for passenger cars would consistently be \$0.50 lower than the respective cash tolls. This is consistent with the experience of the May 2003 toll increase. In the context of the assumed toll increase scenario,

the average toll on the major crossings and Verrazano-Narrows Bridge would increase 13.8 percent in 2008 and 12.1 percent in 2013. On the Henry Hudson Bridge, tolls would increase by 15.4 percent in 2008 and 13.3 percent in 2013 and on the Marine Parkway-Gil Hodges and Cross Bay Bridges, by 25.0 percent in 2008 and 20.0 percent in 2013. (These percentages are listed in Table 18 in connection with the elasticity impacts.) The increases in the average tolls themselves are listed in Table 21 as part of the revenue forecast for the toll-increase alternative.

As for the impacts of the toll increases on traffic demand, the elasticity factors from Table 17 were applied in Table 18, assuming the toll increases described previously would occur on January 1, 2008 and January 1, 2013. 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 18. Traffic/Toll Elasticity**

Facility	Elasticity Factor	Estimated Percent Change in Toll Rates and Traffic			
		2008		2013	
		Toll	Traffic	Toll	Traffic
Throgs Neck Bridge and Bronx-Whitestone	-0.085	13.8%	-1.17%	12.1%	-1.03%
Triborough Bridge	-0.196	13.8	-2.70	12.1	-2.37
Queens Midtown Tunnel	-0.208	13.8	-2.87	12.1	-2.52
Brooklyn Battery Tunnel	-0.386	13.8	-5.33	12.1	-4.67
Verrazano-Narrows Bridge	-0.120	13.8	-1.66	12.1	-1.45
Henry Hudson Bridge	-0.298	15.4	-4.59	13.3	-3.96
Marine Parkway-Gil Hodges Bridge	-0.110	25.0	-2.75	20.0	-2.20
Cross Bay Bridge	-0.149	25.0	-3.73	20.0	-2.98

**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* use

at approximately 70 percent during 2003, 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. The last time URS conducted this review (in early 2002), the estimated traffic volumes for the year 2002 were matched against the highest annual volumes recorded, by facility, going back to 1970, due to distortions in actual traffic patterns caused by September 11. Note, in Table 19, that, despite the residual impacts of September 11 during 2002, that four of the nine TBTA crossings carried their highest volumes in 2002. Other reasons for the good performance could be the restrictions placed on the City-owned East River bridges following September 11, and below normal snowfall levels during the first quarter of the year; and, as stated previously, the especially high volume at the Verrazano-Narrows Bridge reflects the continuing restrictions at the Holland Tunnel which were lifted for two and three-axle single-unit trucks in July 2003.

**Table 19. Comparison of 2002 Traffic with Highest Recorded Levels Since 1970**

Facility	Highest Volume Since 1970		2002 Volume* (000s)	2002 Percent of Highest Volumes
	Year	Volume (000s)		
Throgs Neck Bridge	2002	39,661	39,661	100%
Bronx - Whitestone Bridge	2002	44,301	44,301	100
Triborough Bridge	1988	64,215	60,720	95
Queens Midtown Tunnel	1971	28,742	26,876	94
Brooklyn-Battery Tunnel	1971	22,920	15,435	67
Verrazano-Narrows Bridge	2002	73,332	73,332	100
Henry Hudson Bridge	2002	24,650	24,650	100
Marine-Parkway- Gil Hodges Bridge	1971	9,150	7,743	85
Cross Bay Bridge	1972	7,562	7,089	94

\* 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. In addition to projects that are scheduled as part of long-term rehabilitation planning, any of the emergency measures that have been either implemented or proposed to address transportation deficiencies resulting from the events of September 11, 2001, and which are expected to remain in place beyond 2003, are discussed in this section.

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 may adversely affect TBTA traffic volumes or cause traffic to shift from the affected crossing to another TBTA facility. For example, when the approach ramps from the Cross Island Parkway to the Throgs Neck Bridge were rehabilitated in 1995, some traffic diverted from the Throgs Neck Bridge to the Bronx-Whitestone 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 introduced following September 11 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, 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. However, re-decking on the suspended span of the Triborough Bridge necessitates the full-time closure of one lane. Work began on July 9, 2002 and will be complete by the end of 2003. Due to available capacity in the lanes that will remain open, the adverse impact on revenue will be minimal.

On the Verrazano Narrows Bridge, the re-decking of the lower level scheduled for the 2005-2009 capital cycle will be staged to avoid adverse effects on traffic flow, and is not anticipated to cause problems.

The Cross Bay Bridge deck evaluation, which was scheduled to be awarded in September of 2003, will determine what type and to what extent deck rehabilitation is necessary at this structure. Required improvements will be staged to avoid impacts on traffic flow.

#### *Operational Changes Resulting from September 11, 2001*

Of all the measures introduced following the events of September 11, only the following two remain in place as of October 2003:

- Brooklyn Ferry Service, which the New York City DOT implemented between Manhattan and Brooklyn on September 17, 2001, was funded until April 30, 2003. Since April 30, the ferry has continued in service as a fee based service.
- Without specific information from the Port Authority of New York and New Jersey, URS has assumed that the remaining truck restrictions at the Holland Tunnel will be lifted by January 2004.

### *Proposed Operational Changes*

Following September 11, a comprehensive review of all transportation services between Manhattan, the other boroughs and New Jersey was undertaken by FEMA, and a number of changes to the existing transportation services are under consideration or have been implemented. Most of the proposals are for changes to the services between New Jersey and Manhattan and would not affect TBTA facilities, but the following changes were also proposed to services across the East River, between Brooklyn, Queens and Manhattan and between Staten Island and Manhattan:

- **Staten Island to Downtown Ferry Service.** This proposal would allow for the implementation of a new private ferry service from Staten Island's south shore to downtown Manhattan. The primary purpose of this proposed service is to provide an additional viable transportation service for Staten Island residents to access Manhattan. This service would focus on a different market from the existing service, serving residents who live in the central portion of Staten Island. As of May 2003, the Port Authority had allocated \$6.5 million to build a pier, parking lot and develop the landside access for a ferry terminal and identified Midland Beach as the only viable location for the ferry service. There is some opposition from local residents to this location and there is an ongoing discussion as to the best site for the proposed service.
- **Ferry Service between Hunters Point (Queens West) and Pier 11 downtown.** The idea of the service is to construct ferry landings (with the provision to provide outdoor parking for up to 250 vehicles) or a series of ferry landings designed to provide relief from the increased congestion levels on each of the East River crossings. It would also facilitate travel "across" Manhattan to the Jersey City waterfront. The original service commenced on September 3, 2002 with the help of a six-month subsidy from FEMA and has been operating since then. In September 2003, New York Water taxi took over the operation of the ferry service. The impact on the East River crossings is minimal.
- **Water Taxi Landings throughout Downtown and Midtown Manhattan.** This proposal is for the creation of a network of ferry landings connecting waterfront communities in Brooklyn, Queens and Manhattan via small, 24-knot, 75-passenger catamarans. The service would also provide a feeder and distribution service for the large-scale ferries currently serving lower Manhattan. In October 2002 this service, connecting six locations between West 44 Street and Fulton Street in Brooklyn, began operations using three boats. In 2003, additional stops are planned, which will extend the service to the upper west side and Greenpoint in Brooklyn. It is anticipated that the impact on the East River crossings will be minimal.

### *Competing East River Crossings Construction*

- Queensborough Bridge – Since 1989, numerous rehabilitation projects have involved the upper or lower levels, or ramp approaches to the bridge. This work has now been completed and the only closures that occur are for routine maintenance.

It is not anticipated that any of these lane closures will result in significant traffic diversions to the Queens Midtown Tunnel and Triborough Bridge.

- Williamsburg Bridge – Between 1991 and 1995, the bridge cables were rehabilitated and the suspenders were replaced. The south roadways were rehabilitated between 1994 and 1998. The reconstruction of the north roadways, which is a mirror image of the south roadways, started in April 1999 and was completed in 2002.

In February 2003, a rehabilitation project commenced including: rehabilitation of the tower bearings, the truss system, the steel structure of all eight towers, and the replacement/adjustment of cable suspenders, the installation of maintenance travelers (inspection platforms) under the main span, as well as painting of the stiffening granite trusses. Architectural work will include restoration of decorative lights and the Brooklyn granite stone monument. Work inside the anchorage houses on both sides will include the construction of new stairs, a hoisting system, ventilation and lighting, and oiling platforms. Also included is the installation of an Intelligent Transportation System (ITS). This will require lane closures and truck detours. During peak periods, four lanes will be available in the peak direction.

Manhattan Bridge – From August 2001 through May 2003, there were lane closures for construction activity at night and on weekends. Construction was completed and the roadway reopened on June 1, 2003. Brooklyn Bridge – The Brooklyn Bridge emergency design build deck replacement contract started in October 1998 and was completed on April 2000. Current closures are for routine maintenance work.

#### *Major Roadway Construction*

During the forecast period, several major roadway projects, which are part of NYMTC's Transportation Improvement Program (TIP) for 2000-2004, 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.

Roads programmed for construction include:

- Willis Avenue Bridge – Connecting the FDR Drive, Harlem River Drive, Major Deegan Expressway and Bruckner Expressway. Since work began on the rehabilitation of the

Third Avenue Bridge in October 2002 one lane for passenger cars only is reversed westbound to Manhattan on weekdays during the morning peak period.

- Third Avenue Bridge – Rehabilitation work on the bridge is divided into five stages, the first of which began in October 2002, and was completed in April 2003 when work on the second stage began. Lane closures on the bridge and its approaches should have a positive impact on the Triborough Bridge.
- Major Deegan Expressway – Multi-year rehabilitation of roadway structures from the Triborough Bridge to New York City line scheduled for completion in mid-November 2003, has required periodic off-peak lane closures.
- Cross Bronx Expressway – Work on eastbound Cross Bronx Expressway between the Alexander Hamilton Bridge and Castle Hill Avenue. As of mid-November 2003, there are periodic off-peak and weekend lane closures as well as closures on ramps to facilitate construction.

The entire program is scheduled for completion by November 2003. The impact of this work on the Throgs Neck and Bronx-Whitestone bridges traffic should be minimal.

- Bruckner Expressway /Pelham Parkway- Full roadway reconstruction at the Throgs Neck Interchange is scheduled for completion in December 2004. One lane is scheduled to be closed in each direction 24-hours a day, seven days a week. Three lanes will remain open at all times.
- Gowanus Expressway Viaduct Emergency Repairs - Concrete, steel, bridge rail, viaduct painting, and other emergency repairs are anticipated to be completed in July 2004. During peak periods, there will be HOV lane operation from 92 Street to the Battery Tunnel and on the Prospect Expressway from Fourth Avenue to the Battery Tunnel. There will also be lane closures during off-peak periods.
- Brooklyn-Queens Expressway (BQE) – Construction work on the “BQE Reconstruction Project” began in March 2000 and is scheduled for completion in spring 2004. The vertical and horizontal realignment of the road and the deterioration of 16 bridges require reconstruction of the BQE overpasses and the adjacent streets. Work will require lane and ramp closures during off-peak weekday and weekend periods.

In addition to these changes, trucks will be permitted to use the Grand Central Parkway for a limited time. This work is not expected to have a significant impact on bridge traffic.

- Long Island Expressway (LIE) – Reconstruction work is being undertaken to repair and improve structural, operational and safety deficiencies of the roadway and varying temporary lane geometry. The work primarily involves single-lane closures during off-peak periods. The entire project was completed in October 2003. Additionally, reconstruction

of the LIE/Cross Island Parkway (CIP) interchange will necessitate lane closures in each direction on both the LIE and CIP. Completion is anticipated for December 2003.

- Whitestone Expressway – Rehabilitation of the northbound Whitestone Expressway Bridge over the Flushing River, including northbound and southbound Whitestone Expressway pavement rehabilitation. Sporadic off-peak period lane closures may be necessary.
- Throgs Neck Bridge/Expressway approach in the Bronx –Work has begun on the Bruckner Expressway reconstruction between the Throgs Neck Expressway and Pelham Parkway. This project is scheduled for completion in 2005 and involves the closure of one of three lanes between 7:00 AM and 3:00 PM on weekdays. The impact is described on page 5-50 (Table 20).
- Henry Hudson Parkway – Lane closures during off-peak day and nighttime periods of the week to facilitate NYSDOT bridge repair work may continue through to December 2004. As of September 2002, one lane is closed all day on the northbound upper level and southbound lower level for 18 months to facilitate MTA bridge work. This work has had very little effect on Henry Hudson Bridge traffic.
- FDR Rehabilitation Project from 54 Street to 63 Street - This project will rehabilitate the 60 year old, three-level tiered FDR Drive structure between East 56 and East 63 Streets. Work includes repaving the at-grade (lower level) portion on the FDR Drive between East 54 and East 56 Streets, safety improvements to correct roadway geometry including the addition of an acceleration lane to the East 63 Street entrance, and new drainage, signage, and lighting systems. This work is scheduled for completion in April 2007. Starting in March 2004, there will be some lane closures.
- Harlem River Drive – NYSDOT is reconstructing the Harlem River Drive viaduct from East 127 Street to Dyckman Street as well as other spot ramp and geometric improvements on other sections of the Drive. During 2003, one lane may be closed southbound and northbound during off-peak time periods under the Washington Bridge for bridge construction work. Further south, under the Macombs Dam Bridge, one of three lanes northbound and southbound may be closed weekdays during off-peak periods. Occasionally two of the three lanes may be closed in one direction at night both during the week and at weekends for overhead bridge construction work. This may have a minor negative effect on Triborough Bridge traffic.
- Belt Parkway – Four waterway bridges were identified (as of April 2000) in NYMTC's Transportation Improvement Program as in need of rehabilitation: Mill Basin (2001), Fresh Creek (2001), Gerritsen Inlet (2002) and Paerdegat Basin (2003). Work on these bridges has been postponed since the Ocean Parkway/Belt Parkway interchange was identified as a priority. Design work on this interchange is underway and according to NYCDOT's website RFPs are scheduled to be issued in the fall of 2004 through the

winter of 2005. It is anticipated that this would have a minor impact on the Verrazano-Narrows Bridge.

- In September 2003, the Board of Commissioners of the Port Authority of New York and New Jersey approved plans to explore future options for the modernization and expansion of the Goethals Bridge. An Environmental Impact Statement (EIS) will study options, and make recommendations for a preferred alternative to upgrade the bridge in terms of: improving customer service, providing capacity for transit options and enhancing the safety and reliability of the crossing.

### **Other Considerations**

Other considerations in the development of traffic and revenue forecasts for the TBTA facilities include the potential impacts of transit improvements and Clean Air regulations in the Metropolitan Area.

- *Impact of Transit Improvements.* There are significant transit improvements that, when implemented, are expected to affect TBTA traffic levels during the forecast period through the year 2013.
  - o Second Avenue Subway: work is slated to begin at the end of 2004 on the \$16 billion project and will affect approximately nine miles of Second Avenue and adjacent side streets. The 21-foot wide, 8.5-mile, twin tunnels from 125 Street at the north to Hanover Square on the southern tip of Manhattan will provide direct subway access to residents along the east side of Manhattan. The 16-year project will result in the creation of 16 new subway stations on Second Avenue.

For the duration of the project, at least one half of the lanes for three to five block segments of Second Avenue in the vicinity of the proposed stations would be closed. This would permit construction of temporary roadway decking that will provide areas for storage of material and equipment, removal of tunnel debris and construction of the stations. Relocation of on-street parking and temporary suspension of standing rules for trucks will also be required.

During construction on Second Avenue of the 34 Street Station there would be 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 125 Street ramps between the Triborough Bridge and 125 Street would experience a loss of capacity. The high volume ramps between the FDR Drive and the Triborough Bridge would not be affected.

- o The subway connection between the 63 Street tunnel and Northern Boulevard, via the F line was completed in November 2001, and the new V train service started

in December 2001. These new services increased weekday service by 20 percent, or from 41 to 50 trains an hour during the morning rush hour. There was no impact on traffic volumes on the TBTA facilities.

- o The JFK *Airtrain* with connections to the subway line at Howard Beach and the LIRR and subway at Jamaica construction was completed in 2002. The testing of the trains began and was suspended in September 2002 and the opening of the system postponed because of a fatal accident. The testing of the trains resumed in April 2003 and MTA has indicated that the Jamaica Section, MTA's LIRR hub, will open some time during 2003.
- o The 1/9 subway tunnel between Chambers Street and South Ferry that was closed due to the World Trade Center collapse was reopened in September 2002. The Cortland Street station remains closed. There were no impacts on TBTA bridges and tunnels.
- o *Eastside Access Project* to bring LIRR trains into Grand Central Terminal, which LIRR anticipates will result in shifts from other modes, including TBTA facilities.
- o Other long-range projects are the lower Manhattan-Brooklyn improvements to the existing subway tunnels (signalization, etc.), Metro-North Hudson line access to Penn Station (via Amtrak's west side trackage), and LaGuardia Airport subway access.
- *Clean Air Regulations.* In response to Section 182(d)(1)(B) of the Clean Air Act, the State of New York imposes voluntary regulations aimed at increasing the average vehicle occupancy of work-related trips. Known as the Employee Commute Options (ECO) program, the plan encourages employers of 100 or more persons in the severe ozone non-attainment areas to submit a compliance plan that is aimed, through ride sharing, at reducing the number of employees that commute to work alone by automobile. Included in New York State's severe ozone non-attainment areas are all five boroughs of New York City, and the counties of Nassau, Suffolk, Rockland, Westchester, and portions of Orange. Similar programs are currently in place for severe non-attainment areas in New Jersey, Connecticut and Pennsylvania. Since URS' traffic estimates are derived from 2001 and 2002 annual levels that already take into account any impacts the ECO program may have, no further adjustments are necessary to reflect any negative effects this might have on TBTA revenues.

### **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 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 2000-2004 will be implemented as planned 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.
- The heavy commercial vehicle ban at the Holland Tunnel will be lifted by January 2004.
- 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 2003, 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.
- The trends in regional employment and population, forecast by the New York Metropolitan Transportation Council, the New York City OMB and the Office of the Comptroller, and presented in this report, will be realized in the Tri-State area and in New York City.

- Should fuel shortages occur, they will be limited in duration, and motor fuel prices (i.e., the average price for regular gasoline) in the foreseeable future will not increase above the 1981 peak, which, if adjusted for inflation, in current dollars would not be more than \$2.75 per gallon.
- Public transportation systems will not undergo any major construction programs nor schedule changes that would materially alter regional commuter patterns and result in significant traffic diversions from TBTA facilities.
- 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 natural disaster, or local, state or national emergency, over and above the September 11 terrorist attacks, 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 (2003-2013) forecast period for each TBTA facility based on historical trends in traffic and revenue, the impacts of September 11, 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 2003 budget estimate, and growth estimates based on the current CPI-U for OTPS and salary and wage increases, and the CPI-Medical Care Component used for fringe benefit cost escalation, 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 17 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), modified by the residual impact of September 11, 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, Verrazano-Narrows, Bronx-Whitestone and Henry Hudson bridges will increase primarily during the off-peak period, since these bridges have exceeded or are expected to exceed their capacity levels with respect to the highest recorded levels achieved since 1970 (from Table 19) during the forecast period. 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 capacity 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 the other facilities, the use of the selected growth rates will result in volume increases during the forecast period that will remain below the previous highest levels achieved.

On this basis, starting with the 2003 estimated traffic by facility from Table 11 (that now reflects the impact of September 11 and the impact of the use of *E-ZPass* on TBTA facilities as well as the traffic constraints in the highway network), URS projected the traffic by facility in Table 20, and calculated the corresponding toll revenue based on the 2003 average tolls by facility (also from Table 11).

General traffic growth in the range of 0.55 to 1.7 percent annually is estimated in the forecast period. This growth is based on the actual growth in traffic on each facility during the last 10 years, after the impact of toll increases was taken into account, and a review of actual and forecast population and employment growth in the region in the post-September 11 period. Since the actual population growth during the last 10 years exceeded NYMTC's estimated growth during the period and its population forecast for 2010, greater weight was given to the historical trends in developing the forecasts as well as the use of the recent employment forecasts developed by the New York City OMB in the post-September 11 period. The irregularities in the forecast are the result of the construction, capacity and *E-ZPass* participation factors described herein:

1. For the Queens Midtown Tunnel, the growth rates in 2003 reflect the recovery from September 11, with traffic expected to surpass previously highest recorded volumes in 2007.
2. Traffic at the Brooklyn-Battery Tunnel is assumed to regain year 2000 levels in 2006, based on the forecasts of employment growth discussed in the earlier sections of the report.
3. For the Throgs Neck Bridge, Bronx-Whitestone Bridge, Verrazano-Narrows Bridge and Henry Hudson Bridge, the growth rates for traffic are reduced by 50 percent to reflect capacity conditions. Additionally, traffic at the Bronx-Whitestone was approximately 4.5 percent higher than its historical performance due to ongoing construction on the Bruckner Expressway approach to the Throgs Neck Bridge.
4. Verrazano-Narrows Bridge traffic decreased by approximately 2 percent from 2002 following the removal of truck restrictions at the Holland Tunnel.
5. Construction on the main span of the Triborough Bridge reduced capacity and transactions starting in April 2002 traffic. These restrictions are assumed to remain in place until construction is completed in April 2004.

The maintenance work on of the Gowanus Expressway, started during 2000, did not appear to have a significant effect on traffic growth on the Verrazano-Narrows Bridge. For the Brooklyn-Battery Tunnel, any possible impact cannot be disaggregated from the affects of other conditions such as September 11; therefore, there are no additional impacts estimated during the time period included in these forecasts.

### **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 20), to which the elasticity impacts (from Table 18) were applied. URS then applied the appropriate increased average tolls (the 2003 averages from Table 11 increased by the percentages in Table 18) in the years 2008 and 2013 (effective January 1) to calculate the corresponding toll revenues in the respective years. URS made adjustments to the growth rates to reflect the available capacity due to traffic reductions resulting from the impacts of toll rate increases. The traffic and revenue forecasts with periodic toll increases are listed in Table 21.

**Table 20. Traffic and Toll Revenue Forecast, Constant Tolls**

Year	Throgs Neck <sup>(b)</sup>	Bronx-Whitestone <sup>(b)</sup>	Tri-borough <sup>(b)(c)</sup>	Queens Midtown <sup>(d)</sup>	Brooklyn Battery <sup>(d)</sup>	Verrazano-Narrows <sup>(b)</sup>	Henry Hudson <sup>(b)</sup>	Marine-Park-way-Gil Hodges Bridge	Cross Bay	Total
Annual Traffic (000s)										
2003 <sup>(a)</sup>	38,942	45,305	58,721	27,951	18,617	71,653	24,676	7,717	6,955	300,537
2004	38,804	45,665	59,343	28,175	19,287	71,776	24,890	7,740	6,917	302,597
2005	39,017	46,026	59,853	28,400	20,288	71,898	25,107	7,763	8,955	305,307
2006	39,232	46,279	60,183	28,628	21,288	72,509	25,458	7,895	7,073	308,545
2007	39,448	46,533	60,514	28,857	21,458	73,125	25,814	8,029	7,194	310,973
2008	39,665	46,789	60,846	29,087	21,630	73,747	26,176	8,166	7,316	313,423
2009	39,883	47,047	61,181	29,320	21,803	74,374	26,542	8,305	7,440	315,895
2010	40,103	47,305	61,518	29,555	21,977	75,006	26,914	8,446	7,567	318,390
2011	40,323	47,566	61,856	29,791	22,153	75,644	27,291	8,589	7,659	320,908
2012	40,545	47,827	62,196	30,030	22,330	76,287	26,673	8,736	7,826	323,449
2013	40,768	48,090	62,538	30,270	22,509	76,935	28,060	8,884	7,959	326,013
Traffic Growth (Percent)										
2003-2004	-0.35%	0.79%	1.06%	0.80%	3.60%	0.17%	0.87%	0.30%	-0.55%	0.69%
2004-2005	0.55	0.79	0.86	0.80	5.19	0.17	0.87	0.30	0.55	0.90
2005-2006	0.55	0.55	0.55	0.80	4.93	0.85	1.40	1.70	1.70	1.06
2006-2007	0.55	0.55	0.55	0.80	0.80	0.85	1.40	1.70	1.70	0.79
2007-2008	0.55	0.55	0.55	0.80	0.80	0.85	1.40	1.70	1.70	0.79
2008-2009	0.55	0.55	0.55	0.80	0.80	0.85	1.40	1.70	1.70	0.79
2009-2010	0.55	0.55	0.55	0.80	0.80	0.85	1.40	1.70	1.70	0.79
2010-2011	0.55	0.55	0.55	0.80	0.80	0.85	1.40	1.70	1.70	0.79
2011-2012	0.55	0.55	0.55	0.80	0.80	0.85	1.40	1.70	1.70	0.79
2012-2013	0.55	0.55	0.55	0.80	0.80	0.85	1.40	1.70	1.70	0.79
Average Toll										
2003	\$4.37	\$3.91	\$3.72	\$3.57	\$3.37	\$3.23	\$1.52	\$1.43	\$1.26	\$3.39
2004 <sup>(e)</sup>	4.58	4.10	3.84	3.78	3.54	3.44	1.61	1.67	1.34	3.56
Toll Revenues (000s)										
2003	\$170,214	\$177,358	\$218,415	\$ 99,727	\$62,754	\$231,654	\$37,548	\$11,045	\$ 8,794	\$1,017,509
2004	177,575	187,010	227,715	106,330	68,184	246,471	39,955	12,893	9,231	1,075,365
2005	178,552	188,487	229,673	107,181	71,721	246,890	40,303	12,932	9,282	1,085,021
2006	179,534	189,524	230,936	108,038	75,258	248,988	40,867	13,152	9,440	1,095,737
2007	180,521	190,566	232,206	108,902	75,860	251,105	41,439	13,375	9,600	1,103,575
2008	181,514	191,614	233,483	109,774	76,467	253,239	42,019	13,603	9,763	1,111,476
2009	182,512	192,668	234,767	110,652	77,079	255,391	42,607	13,834	9,929	1,119,440
2010	183,516	193,727	236,058	111,537	77,695	257,562	43,204	14,069	10,098	1,127,467
2011	184,525	194,793	237,357	112,429	78,317	259,751	43,808	14,308	10,269	1,135,558
2012	185,540	195,864	238,662	113,328	78,943	261,959	44,422	14,552	10,444	1,143,714
2013	186,560	196,941	239,975	114,235	79,575	264,186	45,043	14,799	10,622	1,151,935

Notes: (a) From Table 11, based on estimates for 2003.  
 (b) Growth rates reduced by 50 percent based on assumption that the capacity level has been reached in the peak period.  
 (c) Traffic reduced to reflect construction impact between April 2002 and April 2004.  
 Growth of traffic reflects return to pre September 11<sup>th</sup> volumes.  
 (e) Average toll adjusted in 2005 and thereafter to reflect increase in E-ZPass usage of 0.5%

**Table 21. Traffic and Toll Revenue Forecast, Periodic Toll Increases**

Years	Throgs Neck <sup>(b)</sup>	Bronx-Whitestone <sup>(b)(c)</sup>	Tri-Borough	Queens Midtown <sup>(d)</sup>	Brooklyn Battery <sup>(d)</sup>	Verrazano-Narrows <sup>(b)</sup>	Henry Hudson <sup>(b)</sup>	Gil Hodges-Marine Parkway	Cross Bay	Total
Traffic Changes (from Table 18) due to Toll Elasticity										
2008 - 2012	-1.17	-1.17	-2.70	-2.87	-5.33	-1.66	-4.59	-2.75	-3.73	
2013	-1.03	-1.03	-2.37	-2.52	-4.67	-1.45	-3.96	-2.20	-2.98	
Annual Traffic (000s)										
2003 <sup>(a)</sup>	38,942	45,305	58,721	27,951	18,617	71,653	24,676	7,717	6,955	300,537
2004	38,804	45,665	59,343	28,175	19,287	71,776	24,890	7,740	6,917	302,597
2005	39,017	46,026	59,853	28,400	20,288	71,898	25,107	7,763	6,955	305,307
2006	39,232	46,279	60,183	28,628	21,288	72,509	25,458	7,895	7,073	308,545
2007	39,448	46,533	60,514	28,857	21,458	73,125	25,814	8,029	7,194	310,973
2008	39,199	46,241	59,201	28,253	20,478	72,526	24,975	7,941	7,043	305,856
2009	39,415	46,495	59,526	28,479	20,642	73,142	25,324	8,076	7,163	308,262
2010	39,632	46,751	59,854	28,706	20,807	73,764	25,679	8,214	7,285	310,690
2011	39,850	47,008	60,183	28,936	20,973	74,391	26,038	8,353	7,409	313,141
2012	40,069	47,266	60,514	29,168	21,141	75,023	26,403	8,495	7,535	315,614
2013	39,875	47,037	59,404	28,661	20,315	74,562	25,711	8,450	7,434	311,449
Average Toll										
2003	\$4.37	\$3.91	\$3.72	\$3.57	\$3.37	\$3.23	\$1.52	\$1.43	\$1.26	
2004-2007	4.58	4.10	3.84	3.78	3.54	3.44	1.61	1.67	1.34	
2008-2012	5.21	4.66	4.37	4.30	4.02	3.91	1.86	2.09	1.67	
2013	5.84	5.22	4.90	4.82	4.51	4.38	2.10	2.50	2.00	
Toll Revenues (000s)										
2003	\$170,214	\$177,358	\$218,415	\$ 99,727	\$62,754	\$231,654	\$37,548	\$11,045	\$ 8,794	\$1,017,509
2004	177,575	187,010	227,715	106,330	68,184	246,471	39,955	12,893	9,231	1,075,365
2005	178,552	188,487	229,673	107,181	71,721	246,890	40,303	12,932	9,282	1,085,021
2006	179,534	189,524	230,936	108,038	75,258	248,988	40,867	13,152	9,440	1,095,737
2007	180,521	190,566	232,206	108,902	75,860	251,105	41,439	13,375	9,600	1,103,575
2008	204,067	215,422	258,425	121,293	82,355	283,313	46,307	16,551	11,760	1,239,494
2009	205,189	216,607	259,846	122,264	83,014	285,721	46,929	16,823	11,953	1,248,346
2010	206,318	217,798	261,275	123,242	83,678	288,149	47,586	17,109	12,156	1,257,311
2011	207,453	28996	262,712	124,288	84,347	290,598	48,252	17,400	12,363	1,266,349
2012	208,593	220,200	264,157	125,221	85,022	293,068	48,928	17,696	12,573	1,275,459
2013	232,667	245,613	290,644	137,914	91,571	326,463	53,983	21,121	14,887	1,414,863

- (a) From Table 11, based on estimates for 2003.
- (b) Growth rates reduced by 50 percent based on assumption that the capacity level has been reached in the peak period.
- (c) Traffic reduced to reflect construction impact between April 2002 and April 2004.
- (d) Growth of traffic reflects return to pre September 11<sup>th</sup> volumes.
- (e) Average toll adjusted in 2005 and thereafter to reflect increase in E-ZPass usage of 0.5%.

## **Effects of Second Avenue Subway Construction in Forecast Years**

As previously mentioned, activity associated with Second Avenue Subway construction will 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. Various stages of the project will result in visible construction activity on one or more three to five block segments of Second Avenue at any given time. 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 north-south roadways.

The construction schedule has not yet been developed; however, URS does not anticipate any changes to current traffic volumes for TBTA's facilities until 2006 when it is anticipated that construction will begin on the new subway stations and the subway tunnels necessitating the rerouting of some traffic as well as a change of street rules (traffic movements, parking restrictions and enforcement). At the present time, since construction phasing is not determined, URS has estimated an order-of-magnitude estimate of potential impacts on TBTA traffic on the Triborough Bridge and Queens Midtown Tunnel.

For the Triborough Bridge, 27.6 percent of the traffic exits onto Second Avenue at 125 Street, 56.0 percent exits onto the FDR Drive, and 17.4 percent exits onto the Harlem River Drive via the 125 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, the Triborough Bridge may lose from 3 to 5 percent of total traffic (6 to 9 percent of traffic on the Manhattan span) for the period when construction is in the vicinity of the bridge.

During the first stage of the project, the relocation of utility lines beneath Second Avenue in the vicinity of the Midtown Tunnel slated for the end of 2004, would affect traffic patterns. As mentioned previously, a 33 percent decrease in access route capacity may be anticipated and could result in a decrease in total traffic of approximately 6 to 8 percent during the period when construction is in the vicinity of the tunnel.

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; however, it is not possible to estimate this impact until the construction plan is finalized.

## **Operating Expenses**

The projection of operating expenses is shown in Table 22. Total operating expenses, consisting of personnel and OTPS (other than personnel services), are estimated to increase from \$349.8 million in 2003 to \$ 501.1 million in 2013. Personnel expenses consist of wages, salaries, overtime and fringe benefits. OTPS includes items such as maintenance, supplies, utilities and other expenses.

The operating expense projections for the year 2003 through 2007 were based on TBTA estimates. For the remainder of the forecast period (2008-2013), URS estimated operating expenses based on the Consumer Price Index (CPI) (All Urban Consumers for the US City average) provided by TBTA. For personnel expenses estimated increases were 3.23 percent per year; OTPS estimated increases were 1.99 percent per year. Included in the projections are additional security measures, which are being introduced gradually since 2002.

In addition, TBTA will continue to replace the outstanding *E-ZPass* tags that are approaching the end of their useful life through 2007. The estimated total cost is \$78.5 million, spread over the five-year period, with annual costs of \$25.1 in 2003, \$9.5 in 2004, \$15.5 in 2005, \$13.9 in 2006, and \$14.5 in 2007. These costs have been included in the OTPS expenses for the appropriate years.

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

**Table 22. Projected Operating Expenses**  
(000s)

Year	Personnel <sup>(a)</sup>	OTPS <sup>(b)</sup>	Total
2003	\$159,908	\$189,939	\$349,847
2004	174,568	176,047	350,615
2005	187,956	184,555	372,511
2006	201,488	201,837	403,325
2007	213,528	215,626	429,154
2008	220,425	219,917	440,342
2009	227,545	224,293	451,838
2010	234,894	228,757	463,651
2011	242,481	233,309	475,790
2012	250,314	237,952	488,265
2013	258,399	242,687	501,086

(a) Includes salaries, overtime and fringe benefits, net of capital reimbursements.

(b) OTPS is Other Than Personnel Services and includes the following categories: maintenance and supplies, outside services, insurance, power, leases and rentals and other expenses. Also includes the replacement of outstanding *E-ZPass* Tags.

(c) For discussion on expense fluctuations, see preceding text.

### 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 23. For 2003, net toll revenue under either scenario is estimated at \$667.1 million. In year 2013, net toll revenue at constant tolls is estimated to be \$650.8 million and, with periodic toll increases, net toll revenue is estimated to be \$913.8 million.

**Table 23. Net Toll Revenue Forecast**  
(000s)

Year	Gross Toll Revenue		Operating Expenses	Net Toll Revenues	
	Constant Tolls	Periodic Toll Increase		Constant Tolls	Periodic Toll Increase
2003	\$1,017,509	\$1,017,509	\$349,847	\$667,662	\$667,662
2004	1,075,365	1,075,365	350,615	724,750	724,750
2005	1,085,021	1,085,021	372,511	712,510	712,510
2006	1,095,737	1,095,737	403,325	692,412	692,412
2007	1,103,575	1,103,575	429,154	674,421	674,421
2008	1,111,476	1,239,494	440,342	671,134	799,152
2009	1,119,440	1,248,346	451,838	667,602	796,508
2010	1,127,467	1,257,311	463,651	663,816	793,660
2011	1,135,558	1,266,349	475,790	659,768	790,558
2012	1,143,714	1,275,459	488,265	655,449	787,194
2013	1,151,935	1,414,863	501,086	650,850	913,777

Note: May not add due to rounding.

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 which, though considered reasonable to us, are inherently subject to significant economic and competitive uncertainties and contingencies, many of which will be beyond our control and that of TBTA. In many instances, a broad range of alternative assumptions could be considered reasonable. Changes in the assumptions used could result in material differences in projected outcomes.
4. 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 require amendment or further adjustments.

## REVIEW OF PHYSICAL CONDITION

The facilities under TBTA's jurisdiction include two tunnels and seven bridges listed in Table 24, 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 Bridge 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 25 lists the agency's capital expenditures for each facility from 1992 through 2004

**Table 24. Opening Dates of TBTA Facilities**

Facility	Open to Traffic	Years in Use
Triborough Bridge	1936	67
Bronx-Whitestone Bridge	1939	64
Throgs Neck Bridge	1961	42
Henry Hudson Bridge	1936	67
Queens Midtown Tunnel	1940	63
Brooklyn-Battery Tunnel	1950	53
Verrazano-Narrows Bridge	1964 <sup>(a)</sup>	39
Cross Bay Bridge	1970 <sup>(b)</sup>	33
Marine Parkway-Gil Hodges Memorial Br.	1937	66

- Notes: (a) Lower level opened in 1969.  
 (b) The present structure replaced the previous structure that had been in service since 1939.

**Table 25. Capital Expenditures by Facility, 1992-2004**  
(Millions of dollars)

Facility	Total by Facility 1992 through 2004 *
Agency Wide **	\$ 252.3
Brooklyn-Battery Tunnel	270.3
Bronx-Whitestone Bridge	330.7
Cross Bay Bridge	14.2
Henry Hudson Bridge	85.0
Marine Parkway Bridge	123.9
Queens Midtown Tunnel	231.0
Triborough Bridge	598.3
Throgs Neck Bridge	145.0
Verrazano-Narrows Bridge	126.6
	\$ 2,177.5

\* Includes actual capital commitments through October 2003 and projected commitments through December 2004.

\*\* Agency-wide refers to projects that have been, or will be, carried out at two or more facilities.

May not add due to rounding.

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 Report,
- Scheduled Tunnel Inspection Report,
- Interim Inspection Report,
- TBTA's 2000-2004 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 2000-2004 Capital Program to verify that the repairs recommended by the latest inspection reports are being addressed; and
- Review of TBTA's Routine Maintenance Program 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. The tunnel inspection frequency is generally every ten years, whereas the bridges are inspected every two years. The TBTA's bridges were last inspected and their physical condition appraised in 2000/2001 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.

The most recent comprehensive condition inspection of the Queens Midtown Tunnel was performed in 1990. The Brooklyn-Battery Tunnel underwent an inspection in 2001. The Queens Midtown Tunnel is planned for a comprehensive inspection in future capital programs, as current construction has addressed the critical needs of the structure at this time. Unlike bridges, federal and state mandated inspection cycles are not specified for tunnels; however, ongoing tunnel rehabilitation projects create ideal access conditions for the monitoring of these structures. As contract work progresses, construction inspection of the work and adjacent areas allows new areas of deterioration to be identified and addressed as part of the ongoing contract. TBTA has performed an assessment of the vulnerability of its tunnels to a major fire, such as the recent one in Mont Blanc, France. Results of this assessment identify significant differences between the TBTA's tunnels and Mont Blanc Tunnel. These include the fact that TBTA's tunnels have two tubes each, with cross passages to allow motorists access to the opposite tube. In addition, TBTA's tunnels provide much better ventilation, a wet fire standpipe system, patrols, several times an hour, 24-hour closed-circuit TV system monitoring, and a superior communication system for emergencies.

These foregoing 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 2000-2004 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 2001 and 2002 biennial and interim bridge inspections or are currently performing the 2003 biennial inspections and those who performed the 1990 or 2001 tunnel inspections for each facility were/are:

<i>Facility</i>	<i>Consulting Firm</i>
Triborough Bridge	Charles H. Sells, Inc./ Lichtenstein Eng. Assoc.(2002)
Throgs Neck Bridge	Charles H. Sells, Inc. (2001) Lichtenstein Engineering Assoc. (2003)

Bronx-Whitestone Bridge	Lichtenstein Engineering Assoc. (2001 & 2002) HNTB Engineering & Architecture (2003)
Henry Hudson Bridge	Ammann & Whitney (2001& 2002) Hardesty & Hanover (2003)
Queens Midtown Tunnel	Ammann & Whitney (2001) (facilities) Sverdrup Corp. (1990) (tunnel)
Brooklyn-Battery Tunnel	Parsons Brinckerhoff (2001)
Verrazano-Narrows Bridge	Amman & Whitney/ Baker Engineering (2002)
Marine Parkway/ Gil Hodges Mem. Br.	HNTB Engineering & Architecture (2001) Parsons Transportation Group (2003)
Cross Bay Bridge	HNTB Engineering & Architecture (2001) Parsons Transportation Group (2003)

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 2001 inspection cycle listed above are currently undergoing 2003 inspections, 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 2000-2004 Capital Program total \$1.0 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 2000-2004 Capital Program that had not been addressed as part of the 1995-1999 Capital Program.

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

*Triborough Bridge* - The electrical, mechanical and deck rehabilitation of the Bronx truss is complete. The rehabilitation of the Bronx approach and the reconstruction of the cellular concrete junction structure are complete. The design phase of the contract for the deck replacement for the Manhattan toll plaza and ramps is underway with construction anticipated for the next capital program. The deck replacement at the suspended span and the Queens viaduct is underway and is approximately 80 percent complete. Design of the Ward's Island and Randall's Island viaducts is complete, with construction expected to start in 2005. The mechanical work associated with the Harlem River and Manhattan lift span is complete and deck replacement is ongoing, with a scheduled completion date in late 2004. Projects completed within recent years include: the replacement of the suspender ropes at the East River suspended span, main cable rewrapping and anchorage rehabilitation, bridge deck rehabilitation at the Queens approach, Harlem River Lift Span mechanical/electrical rehabilitation, a new east ramp auto shop, toll plaza canopy roof improvements, and sidewalk replacement; an electrical upgrade of the facility;

prototype deck panel testing and installation and numerous repair projects such as repair of the bridge deck joint drains, cracked deck, piers, superstructure, and substructure.

*Bronx-Whitestone Bridge* - Oiling of the cable strands in the anchorages is in design and will begin construction in 2004. Portions of the recommendations from recently completed studies that investigated deck replacement with a lightweight deck and improving the aerodynamic and seismic performance of the bridge are being incorporated with various structural repairs in TBTA's maintenance and capital programs. The following describes these programs and their status. The design of the lightweight windfaring to replace the stiffening truss on the suspended span is complete; construction is underway. The design of a lightweight orthotropic deck, required to replace the roadway deck, is complete and actual construction is anticipated in 2005 (awarded in 2003). Construction and testing of the prototype deck replacement for the suspended span was completed in August 2002. Monitoring of the prototype deck for constructability is continuing. The study of feasible methods for complete replacement of the main cables, should that become necessary in the future, is underway with completion of the study anticipated in 2003. Repairs of flagged conditions noted in the most recent biennial inspection reports are continuing. Painting and replacement of the collars of the suspender ropes are complete. The design of the replacement of the roadway deck on the Bronx/Queens approach spans and all on-grade approaches was awarded with construction anticipated in the next capital improvement program. Projects completed within recent years include: addition of three new tollbooths, the reinforcement of eyebars as part of the anchorage rehabilitation, cable rewinding and rehabilitation of the suspension span superstructure, the installation of acoustic sensors for cable monitoring at the main cables, the rehabilitation of the Bronx/Queens approach ramps, the new entry ramp north of Schley Avenue, completion of the Service building expansion, installation of the new gantry and VMS north of the toll plaza and an electrical system upgrade.

*Throgs Neck Bridge* - The new electrical system upgrade, which includes the installation of new electrical switchgear at the four electrical substations, is approximately 95 percent complete. The orthotropic deck prototype and the design of the global deck replacement associated with it are underway. The design of the rehabilitation of the main cable, including lubrication and rewinding in the suspended span and suspender rope testing is scheduled to be awarded in 2003. The design of the scour backfilling at piers 42, 47, 49, 52, 55 and 56 and protection of piers 19, 20, and 46 to 57 is complete. Construction of structural steel rehabilitation and drainage system improvement at the suspended span and viaducts and maintenance painting design was awarded in September 2002, and is approximately 20 percent complete. The design for a prototype light pole and luminaire replacement project is anticipated later in 2003 with award of a construction contract in early 2004. The reconstruction of the Bronx approach slab north of the tollbooths is complete. Projects completed within recent years include: resurfacing of the suspended spans deck, construction of the Bronx approach (slab on grade) south of the toll plaza, rehabilitation of the Queens approach slab on grade and the first eleven spans of the Queens viaduct reinforced concrete deck, ramp reconstruction (Cross Island Parkway to the bridge), replacement of floodlights at the towers, rehabilitation of the Bronx approach, and deck rehabilitation at the suspended span.

*Henry Hudson Bridge* - The contract for replacement of the Dyckman Street Bridge deck and superstructure with reinforced concrete beams and slab is complete. The overlaying of the roadway at all the toll lanes is substantially complete. The conceptual study for the southbound lower level toll plaza expansion is complete and design is anticipated to start in the 2010-2014 Capital Program, as it has been judged a low priority. The design of the replacement of the upper level deck in the vicinity of the toll plaza and the lower level deck is anticipated in the next Capital Program with construction to begin in the next cycle. Repair of spall repairs in the decks is continuing until re-decking can be done. Comprehensive maintenance painting and steel repairs are 60 percent complete for the entire bridge structure. Rock bolting and scaling of the slopes adjacent to the approaches are complete. The installation of a discharge recovery system for groundwater is complete. Major maintenance projects have included steel repairs and spall removal at the lower level garage and the enlargement of the boiler room door for improved access. Safety ladders and platforms are being added to the Dyckman Street electrical rooms, a new guide rail has been designed, and construction is imminent. On the bridge, steel stringer pedestal defects identified in the biennial inspections are being addressed: repair design is complete and construction will begin shortly. Projects completed within recent years include: retaining walls at the Bronx approach have been repaired, a new concrete stairway and sidewalk installed, as well as new lighting and transformer shielding for the electric room, construction of an additional tollbooth at the southbound lower level plaza. Replacement of the northbound approach roadway and drainage system have been completed, upper deck roadway replacement has occurred, the service building has been expanded, and a new tollbooth HVAC system has been installed.

*Queens Midtown Tunnel* - Rehabilitation of tunnel ceiling and walls (tunnel finish and leak repairs and upgrading of the fire standpipe system) is complete. A contract for a study and the development of a master plan for a tunnel ventilation system and electrical controls project has been completed, with construction to begin in 2004. The design of the rehabilitation of the 36 Street and Second Avenue overpasses is awarded. The design for replacement of drainage pumps inside the ventilation building and at the plazas is complete and construction is scheduled to finish in early 2004. Major maintenance projects include the repair and replacement of sidewalks at the ventilation and service buildings that has been completed, and the design of a new air conditioning system at the service building that should be complete this year. Paving in portions of the tunnel and around tollbooths is ongoing. Projects completed within recent years include replacement of the tunnel-officer station booths at the tunnel entrances, various structural repairs in the ventilation building, and a new radio and cellular phone system.

*Brooklyn-Battery Tunnel* - Replacement of the exhaust fans in the ventilation was completed in September 2002. Construction of masonry and roof repairs to the existing service building is planned in the next capital program. Construction of tunnel roadway and drainage system rehabilitation, tunnel leakage repairs and wall tile replacement, and fire standpipe and waterline valve replacement began in November 2002. Pump replacement construction was completed in September 2002. Traffic control and signal system replacement construction is complete. Repaving of the Brooklyn plaza was completed in October 2002. In the ventilation structures the construction of the elevator upgrades, egress improvements and the replacement of the facade in the Governors Island building was begun in June 2003. Projects completed within

recent years include: repaving of one lane of each tube of the tunnels, sidewalks have been replaced and parking lots have been repaved in the service area, Manhattan plaza repaving and the replacement of the tollbooth's HVAC ducts, replacement of all underground fuel tanks, repainting of toll booths, addition of a new manual toll booth at lane 8, and rehabilitation of the Manhattan plaza, as well as replacement of the tunnel ceiling and lighting system.

Rehabilitation of the Battery Parking Garage (located near the Manhattan portal of the Brooklyn-Battery Tunnel) Phase II (facade replacement and related structural rehabilitation) is underway and is approximately 80 percent complete. In addition, also at the Garage, construction of Phase III (mechanical/electrical system replacement) is complete.

*Verrazano-Narrows Bridge* - Painting of the entire suspended spans except the towers and the side and center parapets of the upper roadways is approximately 95 percent complete. The Brooklyn approach pavement rehabilitation is complete. The construction of the rehabilitation and sealing of the anchorages is 50 percent complete and completion is anticipated for 2004. Rehabilitation of the electrical system in the suspended spans is 50 percent complete. As part of the major maintenance program, miscellaneous concrete repairs at the service building and steel repairs near the towers of the bridge have been completed. Future work will include the rehabilitation of the Staten Island and Brooklyn Approach viaducts (lower level) and the Lily Pond Avenue Bridge. Design will begin in the last quarter of 2003 and construction is planned for 2005 to 2008. Projects completed within recent years include: A 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, dehumidifying of the Brooklyn and Staten Island anchorages, oiling of the eyebars and strands in the anchorages, prototype deck repairs at the suspended spans and rehabilitation of flagged floor beam and fascia stringers.

*Marine Parkway-Gil Hodges Memorial Bridge* - The repainting contract is complete. The east and west side structural steel repairs are complete. A design contract to replace the elevators in the towers is complete with construction planned for the end of 2003. The design of a new service building is approximately 70 percent complete with construction scheduled for 2005. The refurbishing of the tollbooths will be let before the end of 2003, and construction will begin in winter of 2004. Toll lane repaving is ongoing, and will be complete by the end of 2004. Priority steel repairs have been completed, and design of the next priority repairs will begin in 2004. Brick pointing, door replacement, boiler replacement and tollbooth painting have been completed under the maintenance program. Projects completed within recent years include: Deck replacement and bridge widening, construction of a utility connection, sanitary line repair, bearing repair in the clutch shaft in the main shaft tower, oil/gas tank replacement, and installation of an HVAC system for the toll booths.

*Cross Bay Bridge* - The design of structural and electrical rehabilitation of the concrete slab on grade at Ramp 'D' (southbound ramp extending from the main bridge lanes), and design of the replacement of the main high voltage feeders from the south abutment to the main service building is complete, with construction anticipated to be completed by the end of 2004. The design of the rehabilitation of the drainage system at the promenade at the Rockaway approach

and the seawall is complete with construction anticipated to be completed by late 2004. The construction of rehabilitation of the air conditioning system in the service building is scheduled to be completed by late 2003. The refurbishing of the tollbooths will be let before the end of 2003, and construction will begin in winter of 2004. Toll lane repaving is ongoing, and will be completed by the end of 2003. A contract to evaluate deck rehabilitation with a comprehensive coring program and substructure including piles and pile caps was awarded in September of 2003, with construction to follow as necessary. Tollbooth painting, door replacement at Pier 8, installation of continuity plates in the median barrier, unit heater replacement inside the garage, and rumble strip repairs has been completed. Projects completed within recent years include door replacement and brick pointing for the service building, an intercom system, boiler replacement, pipe insulation in the garage, and the HVAC system rehabilitation for the tollbooths.

*Agency Wide* -Increased security measures including added security guards and cameras have been implemented at all TBTA facilities since the September 11 attack at the World Trade Center. Additional measures are being considered such as additional lighting, alarms, and expansion of the CCTV system. The design of some security enhancement projects have been completed and have entered the construction bid process. The design for expansion of the Variable Message Sign System (VMS), for Variable Speed Limit Signs (VSLS), and for installation of rotating prism signs at toll lanes is near completion. Sign installation will begin with rotating prism signs during this capital program and will continue into the next capital program.

Intelligent Transportation System (ITS) projects scheduled for the 2000-2004 Capital Program include:

- The installation of weather recording systems at the Cross Bay, Henry Hudson and Marine Parkway-Gil Hodges Memorial bridges which is at the 75 percent level of completion;
- Upgrading and installation of a CCTV network for effective monitoring and managing of traffic and incidents as well as upgrading of the communications network with fiber;
- Upgrading of the operations centers at all TBTA's facilities and integrating them internally with the Randall's Island Operations Center (RIOC), which will also be upgraded and in-turn linked externally to regional transportation operations centers such as TRANSCOM, for improving transportation services both at TBTA facilities and the region as a whole; and
- Installation and expansion of a TRANSMIT system (an *E-ZPass*-based system), traveler information and traffic management systems at TBTA's facilities, and upgrading of the toll registry system which will improve the efficiency and enhance the integrity and reliability of the toll revenue collection.

Projects completed within recent years include: the installation of the Computer Aided Drafting and Design (CADD) 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 toll booths systemwide, facility improve-

ments to comply with Americans with Disabilities Act (ADA) requirements, the installation of main electrical feeders to increase capacity at Randall's Island, and the installation of the HVAC system at the Robert Moses Building. Restoration of the Robert Moses Building at Randall's Island, and the installation of Closed Circuit Television (CCTV) to allow observation of traffic and activity at all bridges and tunnels were also completed. A Capital Programming System has been developed by the TBTA Engineering and Construction Department as part of TBTA's long-term needs assessment to help determine long-range capital and maintenance priorities. The system calculates estimated repair and rehabilitation costs based on mathematical modeling of structural deterioration. The output of this system for previous capital programs provided the foundation upon which the current 20-year needs assessment was prepared by the TBTA.

The 20-year needs assessment is reviewed annually by TBTA personnel. The assessment is compiled from data from biennial inspections, and system improvements suggested by the technical departments, and includes factors such as service life of various structural components and normal replacement cycles. Strategic business plans for scheduling major maintenance under the 20 year 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's 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 in 2003. The review included an on-site or phone meeting with each facility's engineer/manager 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, may 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 other information available to us, 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 to maintain a high level of safety to the traveling public, and maintain the structures for many years to come.

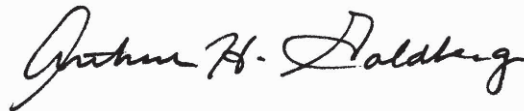
We are of the opinion that all the TBTA facilities are and will be physically capable of accommodating traffic volumes at the levels projected for 2013 through the duration of the outstanding bonds that have been issued and future bonds to be issued based on a pledge of TBTA revenues through 2033, assuming maintenance consistent with past practice.

Respectfully,

**URS CORPORATION – NEW YORK**



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