



Metropolitan Transportation Authority

December 2016

MTA Board Action Items



MTA Board Meeting
2 Broadway - 20th Floor Board Room
New York, N.Y. 10004
Wednesday, 12/14/2016
10:00 AM - 12:00 PM ET

1. PUBLIC COMMENT PERIOD

2. APPROVAL OF MINUTES

MTA Regular Board Minutes - November 16, 2016

MTAHQ Minutes - November 16, 2016 - Page 5

NYCT/MaBSTOA/SIR/Bus Company Regular Board Minutes - November 16, 2016

NYCTA Minutes - November 16, 2016 - Page 9

MTA Metro-North Railroad Regular Board Minutes - November 16, 2016

Metro-North Minutes - November 16, 2016 - Page 13

MTA Long Island Rail Road Regular Board Minutes - November 16, 2016

LIRR Minutes - November 16, 2016 - Page 19

Triborough Bridge & Tunnel Authority Regular Board Minutes - November 16, 2016

TBTA Minutes - November 16, 2016 - Page 34

MTA Capital Construction Regular Board Minutes - November 16, 2016

MTACC Minutes - November 16, 2016 - Page 39

3. COMMITTEE ON FINANCE

Action Items

i. MTA and TBTA Reimbursement for Federal Tax Purposes

MTA and TBTA Reimbursement for Federal Tax Purposes - Page 42

ii. Authorization to Issue Transportation Revenue Bonds, Dedicated Tax Fund Bonds, TBTA General Revenue Bonds and TBTA Subordinated Revenue Bonds

Authorization to Issue Transportation Revenue Bonds, Dedicated Tax Fund Bonds, TBTA General Revenue Bonds and TBTA Subordinated Revenue Bonds - Page 45

iii. Approval of Supplemental Resolutions Authorizing Refunding Bonds

Approval of Supplemental Resolutions Authorizing Refunding Bonds - Page 93

iv. Approval of Municipal, Special, and Advisors Contract Authorization

Approval of Municipal, Special, and Advisors Contract Authorization - Page 153

v. Approval of Outside Counsel

Approval of Outside Counsel - Page 155

MTAHQ Procurements Report

MTAHQ Procurement Report - Page 156

i. Non-Competitive (no items)

ii. Competitive

MTAHQ Competitive Procurements - Page 158

iii. Ratifications (no items)

Real Estate Items

i. Real Estate Agenda and Staff Summaries

Real Estate Agenda and Staff Summaries - Page 163

4. COMMITTEE ON NYCT & BUS

NYCT & Bus Procurements Report

NYCT December Procurement Staff Summary and Resolution - Page 170

i. Non-Competitive

NYCT Non-Competitive Actions - Page 174

ii. Competitive

NYCT Competitive Actions - Page 177

iii. Ratifications

MTACC Ratifications - Page 184

5. COMMITTEE ON METRO-NORTH RAILROAD & LONG ISLAND RAIL ROAD

MNR Procurements Report

MNR Procurements - Page 189

i. Non-Competitive

MNR Non-Competitive - Page 193

ii. Competitive

MNR Competitive - Page 195

iii. Ratification (no items)

LIRR Procurements Report

LIRR Procurements - Page 197

i. Non-Competitive (no items)

ii. Competitive

LIRR Competitive Procurements - Page 201

iii. Ratification (no items)

MTACC Procurements Report (no items)

6. COMMITTEE ON MTA BRIDGES & TUNNELS OPERATIONS

B&T Procurements Report

BT Procurements - December 2016 - Page 204

i. Non-Competitive (no items)

ii. Competitive

BT Competitive - Page 207

iii. Ratifications (no items)

7. FIRST MUTUAL TRANSPORTATION ASSURANCE CO (FMTAC) (no items)

8. MTA 2017 BUDGET ADOPTION MATERIALS (action items) (materials distributed separately)

9. EXECUTIVE SESSION

Date of next MTA Board meeting: Wednesday, January 25, 2017

**Metropolitan Transportation Authority
Minutes of
Regular Board Meeting
2 Broadway
New York, NY 10004
Wednesday, November 16, 2016
10:00 a.m.**

The following members were present:

**Hon. Thomas F. Prendergast, Chairman & CEO
Hon. Fernando Ferrer, Vice Chairman
Hon. David Jones
Hon. Susan Metzger
Hon. Charles G. Moerdler
Hon. John J. Molloy
Hon. Mitchell H. Pally
Hon. Andrew Saul
Hon. Polly Trottenberg
Hon. Veronica Vanterpool
Hon. James Vitiello
Hon. Peter Ward
Hon. Carl V. Wortendyke
Hon. Neal Zuckerman**

The following members were absent:

**Hon. John Samuelson
Hon. Lawrence Schwartz**

Donna Evans, Chief of Staff, Jerome F. Page, General Counsel, Robert Foran, Chief Financial Officer, Board Member Andrew Albert, Board Member Norman Brown, Board Member Ira Greenberg, Board Member Vincent Tessitore, Veronique Hakim, President, NYCTA, Patrick Nowakowski, President, Long Island Rail Road, Joseph Giulietti, President, Metro-North Railroad, Donald Spero, President, TBTA, Darryl Irick, SVP, NYCT DoB/President, MTA Bus Company, Michael Horodniceanu, President, MTA Capital Construction, and Stephen Morello, Counselor to the Chairman, also attended the meeting.

The Board of the Metropolitan Transportation Authority also met as the Board of the New York City Transit Authority, the Manhattan and Bronx Surface Transit Operating Authority, the Staten Island Rapid Transit Operating Authority, the Metropolitan Suburban Bus Authority, the Triborough Bridge and Tunnel Authority, the Long Island Rail Road, the Metro-North Commuter Railroad Company, the MTA Capital Construction Company, the MTA Bus Company, and the First Mutual Transportation Assurance Company.

Unless otherwise indicated, these minutes reflect items on the agenda of the Board of the Metropolitan Transportation Authority, the Metropolitan Suburban Bus Authority, and the First

Mutual Transportation Assurance Company. Refer to the other agencies' minutes of this date for items on the agendas of the Boards of the other agencies.

1. **PUBLIC SPEAKERS.** There were three (3) public speakers, none of which addressed items relative to the MTA agenda. Refer to the video recording of the meeting produced by the MTA and maintained in MTA records, and to the other agencies' minutes of this date, for the names of the speakers and the content of speakers' statements.

2. **CHAIRMAN'S REMARKS.**

Chairman Prendergast acknowledged the tragic accident that occurred on the subway system two weeks ago that injured MTA Conductor Jeffrey Flemming and killed Conductor Lewis T. Gray, Jr. The Chairman stated that the accident is a stark reminder of the dangers that the MTA employees face on a daily basis and a reminder that the safety of our employees and the riding public are of the utmost importance. Chairman Prendergast, on behalf of the MTA and the Board, wished Mr. Flemming a speedy recovery, expressed sincere condolences to the Gray family and friends and asked for a moment of silence in honor of NYCT Conductor Lewis T. Gray, Jr.

Chairman Prendergast announced that toward the end of the meeting, Robert Foran, Chief Financial Officer, would give a presentation on the Financial Plan. The Chairman stated that MTA is pleased to continue, as promised, to do everything possible to hold the fare and toll increases to 4% over two years or 2% each year. The MTA continues its aggressive campaign to cut costs, and as a result of these efforts Chairman Prendergast noted that MTA would meet or exceed its 2016 goal of cutting \$1.6 billion in costs annually. By 2020, Chairman Prendergast stated that the goal is to cut cost by almost \$2 billion to help keep fares and tolls as low as possible and allow MTA to make improvements to its system.

3. **MINUTES.** Upon motion duly made and seconded, the Board approved the minutes of the regular Board meeting held on October 28, 2016.

4. **COMMITTEE ON FINANCE.**

A. **Action Item.** Upon motion duly made and seconded, the Board approved the following action item. The specifics are set forth in the staff summary and documentation filed with the meeting materials.

1. **Law Firm Panel Addition.** Approved the addition of the law firm of Loeb & Loeb LLP to the panel of Board approved outside counsel.

B. **Information Item.**

2015-2016 Station Maintenance Receivable. The Board was informed of the 2015-2016 monies billed and received by the MTA for Station Maintenance as of September 30, 2016.

C. **Procurement Item.** Upon motion duly made and seconded, the Board approved the following procurement items. The specifics are set forth in the staff summaries and documentation filed with the meeting materials.

1. **AFT Projects a NYCT Subway Stations.** Approved the award of competitively negotiated contracts to provide technical design, fabrication, crating, storage, delivery and oversight of installation of materials at subway stations on the 4th Avenue Line to Monika Bravo (Prospect Station), Katherine Fischer (Bay Ridge Avenue Station), and Mickalene Thomas (53rd Street Station).

D. **Real Estate Items.** Upon motion duly made and seconded, the Board approved the following real estate items. The specifics are set forth in the staff summaries and documentation filed with the meeting materials.

New York City Transit Authority

1. Modification to a license agreement with Transit Wireless, LLC to support the installation and operation of NYCT's B Division Train arrival system project and, upon completion of satisfactory terms and conditions, to expand the scope of the TW license agreement to include the right to install and operate a distributed antenna system that supports the provision of cellular service and Wi-Fi service at all B Division above ground stations.

Long Island Rail Road

2. License agreements with AT&T, Verizon, Sprint, T-Mobile and other qualified cellular carriers for cellular service in Penn Station, N.Y.

Manhattan and Bronx Surface Transit Operation Authority

3. Lease with Flor Realty for a swing room for bus operators and dispatchers at 250 East 125th Street, Manhattan, N.Y.

5. **COMMITTEE ON AUDIT.** Upon motion duly made and seconded, the Board approved the following item. The specifics are set forth in the staff summary and documentation filed with the meeting materials.

1. **Enterprise Risk Management and Internal Control Guidelines.** Approved the revised Enterprise Risk Management and Internal Control Guidelines.

6. **COMMITTEE ON CORPORATE GOVERNANCE.** Upon motion duly made and seconded, the Board approved the following items. The specifics are set forth in the staff summaries and documentation filed with the meeting materials.

1. **All Agency General Contract Procurement Guidelines and All Agency Service Contract Procurement Guidelines.** Approved the revised All Agency General Contract Procurement Guidelines and the All Agency Service Contract Procurement Guidelines.

2. Travel and Business Expense Policy. Approved revisions to the MTA All-Agency Travel and Business Expense Policy.
3. Personal Property Disposition Guidelines. Approved revisions to the All-Agency Guidelines for the Disposal of Personal Property promulgated in accordance with Sections 2895-2897 of the New York Public Authorities Law.

7. **CHIEF FINANCIAL OFFICER PRESENTATION ON MTA 2017 FINAL PROPOSED BUDGET AND NOVEMBER FINANCIAL PLAN 2017-2020.**

Chairman Prendergast introduced MTA Chief Financial Officer Robert Foran, who presented the MTA 2017 Final Proposed Budget and November Financial Plan for 2017-2020 and Frederica Cuenca, Director of Strategic Initiatives, who described the fare and toll increase proposals. Chairman Prendergast noted that the November budget presentation was for informational purposes only and that the Board would vote on the budget materials at the December 14, 2016 Board meeting and on the fares and tolls in January, 2017.

Copies of the proposed budget and plan were distributed to Board members.

Following the presentation, Chairman Prendergast thanked Mr. Foran and Ms. Cuenca and invited Board discussion concerning the proposed budget and the financial plan. The details of the presentation on the proposed budget and financial plan and Board members' comments and questions with respect thereto are included in the video recording of the meeting produced by the MTA and maintained in MTA records.

Upon motion duly made and seconded, the Board authorized the Chairman and CEO and his designees to take the necessary steps, including publishing any required notices and conducting any required public hearings, in order to complete the administrative process necessary in advance of the Board's consideration of fare and toll pricing changes.

8. **ADJOURNMENT.** Upon motion duly made and seconded, the Board voted to adjourn the meeting at 11:44 a.m.

Respectively submitted,

Victoria Clement
Assistant Secretary

**Minutes of the
Regular Board Meeting
for the New York City Transit Authority,
Manhattan and Bronx Surface Transit Operating Authority,
Staten Island Rapid Transit Operating Authority and
MTA Bus Company**

**2 Broadway
New York, NY 10004**

**Wednesday, November 16, 2016
10:00 a.m.**

The following members were present:

**Hon. Thomas F. Prendergast, Chairman & CEO
Hon. Fernando Ferrer, Vice Chairman
Hon. David Jones
Hon. Susan Metzger
Hon. Charles G. Moerdler
Hon. John J. Molloy
Hon. Mitchell H. Pally
Hon. Andrew Saul
Hon. Polly Trottenberg
Hon. Veronica Vanterpool
Hon. James Vitiello
Hon. Peter Ward
Hon. Carl V. Wortendyke
Hon. Neal Zuckerman**

The following members were absent:

**Hon. John Samuelson
Hon. Lawrence Schwartz**

Donna Evans, Chief of Staff, Jerome F. Page, General Counsel, Robert Foran, Chief Financial Officer, Board Member Andrew Albert, Board Member Norman Brown, Board Member Ira Greenberg, Board Member Vincent Tessitore, Veronique Hakim, President, NYCTA, Patrick Nowakowski, President, Long Island Rail Road, Joseph Giulietti, President, Metro-North Railroad, Donald Spero, President, TBTA, Darryl Irick, SVP, NYCT DoB/President, MTA Bus Company, Michael Horodniceanu, President, MTA Capital Construction, and Stephen Morello, Counselor to the Chairman, also attended the meeting.

1. CHAIRMAN PRENDERGAST CALLED THE MEETING TO ORDER

2. PUBLIC COMMENT PERIOD

There were three (3) public speakers. The following speakers spoke on MTA NYC Transit/Staten Island Rapid Transit Operating Authority /MTA Bus Company matters:

Pedro Valdez, Private Citizen, spoke about the B Division Train arrival system project and countdown clocks for the general public.

Frederick Wells, Private Citizen, discussed issues he has with bus and subway service.

Johnathan Boey, Private Citizen, expressed concerns about service delays.

A video recording of the meeting produced by the MTA and maintained in MTA records provides more detailed content of speakers' statements.

3. CHAIRMAN PRENDERGAST'S COMMENTS

Details of Chairman Prendergast's comments are set forth in minutes recorded by the MTA, copies of which are on file with the records of the meeting of the Board of the MTA NYC Transit/Staten Island Rapid Transit Operating Authority/MTA Bus Company.

4. MINUTES

Upon motion duly made and seconded, the Board unanimously approved the minutes of the regular board meeting of MTA NYC Transit, the Manhattan and Bronx Surface Transit Operating Authority, the Staten Island Rapid Transit Operating Authority, and MTA Bus Company held on October 28, 2016.

5. COMMITTEE ON FINANCE

Real Estate Items:

MTA NYC Transit: Upon motion duly made and seconded, the Board approved a modification to a license agreement with Transit Wireless, LLC to support the installation and operation of NYCT's B Division Train arrival system project and, upon completion of satisfactory terms and conditions, to expand the scope of the TW license agreement to include the right to install and operate a distributed antenna system that supports the provision of cellular service and Wi-Fi service at all B Division above ground stations.

Manhattan and Bronx Surface Transit Operating Authority: Upon motion duly made and seconded, the Board approved a lease with Flor Realty for a swing room for bus operators and dispatchers at 250 East 125th Street, Manhattan, N.Y.

6. COMMITTEE ON TRANSIT & BUS OPERATIONS
MTA NYC Transit & MTA Bus Company

Procurements:

Non-Competitive Procurements: Upon motion duly made and seconded, the Board approved the non-competitive procurements requiring a two-thirds vote (Schedule A in the Agenda) and a majority vote (Schedule I in the Agenda). Details of the above items are set forth in staff summaries, copies of which are on file with the records of the meeting of the Board of MTA NYC Transit /Staten Island Rapid Transit Operating Authority /MTA Bus Company.

Competitive Procurements: Upon motion duly made and seconded, the Board approved the competitive procurements requiring a two-thirds vote (Schedule C in the Agenda) and a majority vote (Schedule F in the Agenda). Details of the above items are set forth in staff summaries, copies of which are on file with the records of the meeting of the Board of MTA NYC Transit /Staten Island Rapid Transit Operating Authority /MTA Bus Company.

Ratifications: Upon motion duly made and seconded, the Board approved ratifications requiring a majority vote (Schedule K in the Agenda). Details of the above items are set forth in staff summaries, copies of which are on file with the records of the meeting of the Board of MTA NYC Transit /Staten Island Rapid Transit Operating Authority /MTA Bus Company.

7. COMMITTEE ON CORPORATE GOVERNANCE

All Agency General Contract Procurement Guidelines and All Agency Service Contract Procurement Guidelines: Upon motion duly made and seconded, the Board approved revisions to the All Agency General Contract Procurement Guidelines and the All Agency Service Contract Procurement Guidelines.

Travel and Business Expense Policy: Upon motion duly made and seconded, the Board approved revisions to the MTA All-Agency Travel and Business Expense Policy.

Personal Property Disposition Guidelines: Upon motion duly made and seconded, the Board approved revisions to the All-Agency Guidelines for the Disposal of Personal Property promulgated in accordance with Sections 2895-2897 of the New York State Public Authorities Law.

8. CHIEF FINANCIAL OFFICER PRESENTATION ON MTA 2017 FINAL PROPOSED BUDGET AND NOVEMBER FINANCIAL PLAN 2017-2020.

Chairman Prendergast introduced MTA Chief Financial Officer Robert Foran, who presented the MTA 2017 Final Proposed Budget and November Financial Plan for 2017-2020, and Frederica Cuenca, Director of Strategic Initiatives, who described the fare and toll increase proposals. Chairman Prendergast noted that the November budget presentation was for informational purposes only and that the Board would vote on the budget materials at the December 14, 2016 Board meeting and on the fares and tolls in January, 2017.

Copies of the proposed budget and plan were distributed to Board members. Following the presentation, Chairman Prendergast thanked Mr. Foran and Ms. Cuenca and invited Board discussion concerning the proposed budget and the financial plan. The details of the presentation on the proposed budget and financial plan and Board members' comments and questions with respect thereto are included in the video recording of the meeting produced by the MTA and maintained in MTA records.

Upon motion duly made and seconded, the Board authorized the Chairman and CEO and his designees to take the necessary steps, including publishing any required notices and conducting any required public hearings, in order to complete the administrative process necessary in advance of the Board's consideration of fare and toll pricing changes.

9. ADJOURNMENT

Upon motion duly made and seconded, the Board voted to adjourn the meeting at 11:44 a.m.

Respectfully submitted,
/s/Mariel A. Thompson
Mariel A. Thompson
Assistant Secretary

Minutes of the Regular Meeting
Metro-North Commuter Railroad Company
2 Broadway – 20th Floor
New York, NY 10004
Wednesday, November 16, 2016
10:00 a.m.

The following members were present:

Hon. Thomas F. Prendergast, Chairman & CEO
Hon. Fernando Ferrer, Vice Chairman
Hon. David Jones
Hon. Susan Metzger
Hon. Charles G. Moerdler
Hon. John J. Molloy
Hon. Mitchell H. Pally
Hon. Andrew Saul
Hon. Polly Trottenberg
Hon. Veronica Vanterpool
Hon. James Vitiello
Hon. Peter Ward
Hon. Carl V. Wortendyke
Hon. Neal Zuckerman

The following members were absent:

Hon. John Samuelson
Hon. Lawrence Schwartz

Donna Evans, Chief of Staff, Jerome F. Page, General Counsel, Robert Foran, Chief Financial Officer, Board Member Andrew Albert, Board Member Norman Brown, Board Member Ira Greenberg, Board Member Vincent Tessitore, Veronique Hakim, President, NYCTA, Patrick Nowakowski, President, Long Island Rail Road, Joseph Giulietti, President, Metro-North Railroad, Donald Spero, President, TBTA, Darryl Irick, SVP, NYCT DoB/President, MTA Bus Company, Michael Horodniceanu, President, MTA Capital Construction, and Stephen Morello, Counselor to the Chairman, also attended the meeting.

Chairman Prendergast called the meeting to order.

1. Public Speakers:

There were three public speakers, none of whom spoke on Metro-North agenda items. Refer to the video recording of the meeting produced by the MTA and maintained in MTA records, and to the other agencies' minutes of this date, for the names of the speakers and the content of speakers' statements.

2. Chairman's Opening Remarks:

Chairman Prendergast acknowledged the tragic accident that occurred on the subway system two weeks ago that injured MTA Conductor Jeffrey Flemming and killed Conductor Lewis T. Gray, Jr. The Chairman stated that the accident is a stark reminder of the dangers that the MTA employees face on a daily basis and a reminder that the safety of our employees and the riding public are of the utmost importance. Chairman Prendergast, on behalf of the MTA and the Board, wished Mr. Flemming a speedy recovery, expressed sincere condolences to the Gray family and friends and asked for a moment of silence in honor of NYCT Conductor Lewis T. Gray, Jr.

Chairman Prendergast announced that toward the end of the meeting, Robert Foran, Chief Financial Officer, would give a presentation on the Financial Plan. The Chairman stated that MTA is pleased to continue, as promised, to do everything possible to hold the fare and toll increases to 4% over two years or 2% each year. The MTA continues its aggressive campaign to cut costs, and as a result of these efforts Chairman Prendergast noted that MTA would meet or exceed its 2016 goal of cutting \$1.6 billion in costs annually. By 2020, Chairman Prendergast stated that the goal is to cut cost by almost \$2 billion to help keep fares and tolls as low as possible and allow MTA to make improvements to its system.

The details of Chairman Prendergast's Opening Remarks are contained in the video recording of the meeting, produced by the MTA and maintained in MTA records, and in the minutes of the other agencies of this date.

3. Approval of Minutes:

Upon motion duly made and seconded, the minutes of the Regular Board Meeting of October 28, 2016 were approved.

4. Committee on Finance:

Action Item:

The Board was presented with the following action item recommended to it by the Committee on Finance that relates to Metro-North.

- Approval to add the law firm Loeb & Loeb, LLP to the panel of Board approved outside counsel to represent the MTA and its commuter railroads in connection with the railroads' occupancy of a portion of the Moynihan Train Hall at the Farley Post Office Building and the negotiation and closing of the associated real estate, operational and commercial transactions.

Upon motion duly made and seconded, the Board approved the foregoing action item, the details of which are contained in the minutes of the MTA Board meeting held this day, a staff summary filed with those minutes and in the video recording of the meeting, produced by the MTA and maintained in MTA records.

Information Item:

The Board was presented with the following information item recommended to it by the Committee on Finance that relates to Metro-North.

- 2015-2016 Station Maintenance Receivable.

The details of the above item are contained in the minutes of the MTA Board meeting held this day, a staff summary filed with those minutes and in the video recording of the meeting, produced by the MTA and maintained in MTA records.

5. Committee on Metro-North Railroad:

Action Item:

The Board was presented with the following action item recommended to it by the Metro-North Committee:

- Approval to modify the existing agreement with Rockland County to incorporate changes to the Uniticket reimbursement rate; expand Saturday Tappan Zee Express service between Rockland County and Metro-North's Hudson and Harlem lines in Westchester County; and institute new Sunday Tappan Zee Express bus service.

Board member Vanterpool stated that this action item represents a wonderful collaboration between MTA and Rockland County and congratulated them for moving this item forward. She stated that the expansion will improve the economy, the environment and will increase access to public transportation.

Upon motion duly made and seconded, the Board approved the foregoing action item. The details of the above item are contained in a staff summary filed with the records of this meeting and in the video recording of the meeting produced by the MTA and maintained in the MTA record, which recording includes Board member Vanterpool's comments regarding the above action item.

Procurements:

The Board was presented with the following non-competitive procurements recommended to it by the Metro-North Committee:

- Approval for a contract change order for additional funding under the current miscellaneous service contract with Brookville Equipment Corporation ("BEC"), in the not to exceed amount of \$ \$2,230,691, for the acquisition and overhaul of a GP35 locomotive, including the installation of a required PTC on-board unit. The addition of this locomotive to the overall fleet will ensure sufficient equipment availability to support all ongoing Maintenance of Way work, as well as, support of revenue service.
- In partnership with CDOT, Metro-North seeks approval to purchase 60 additional M-8 cars from Kawasaki Rail Car Inc., in the not to exceed amount of \$302,610,544 (plus up to 34 option cars, in the not to exceed amount of \$127,267,508), to meet critical service needs on the New Haven Line in the most expeditious and efficient manner, and

approval for other modifications to the M-8 contract to implement Positive Train Control, CCTV and other necessary enhancements.

Board member Pally expressed his concern with regard to the selling of alcohol on trains. He asked for a thorough review of Metro-North and Long Island Rail Road alcohol sales to determine what the policy should be regarding alcohol sales on the commuter railroads. He is concerned about individuals who drink alcohol on trains and drive after they have disembarked. Chairman Prendergast noted that he has had discussions with Board member Pally and will look into the revenue generated by alcohol sales, the policy and legal impacts associated with the sale of alcohol.

The Board was presented with the following competitive procurement recommended to it by the Metro-North Committee:

- Approval to award a 48 month competitively solicited miscellaneous service contract, in the not to exceed amount of \$15,572,869 to MotivePower, Inc. for the overhaul, system redesign and integration, transport and warranty of 12 BL20GH locomotives.

The Board was presented with the following ratification recommended to it by the Metro-North Committee:

- Approval to award a contract change order for additional funding under the current miscellaneous service contract with Masabi, LLC in the total amount of \$3,374,382 to support a pilot program for an interoperable mobile-ticketing solution.

Upon motion duly made and seconded, the Board approved the foregoing procurement items. The details of the above items are contained in staff summaries and reports filed with the records of this meeting and in the video recording of the meeting produced by the MTA and maintained in the MTA records, which recording includes Board member Pally's comments regarding the sale of alcohol.

6. Audit Committee:

The Board was presented with the following item recommended to it by the Audit Committee that relates to Metro-North.

- Approval of revisions to the MTA Enterprise Risk Management and Internal Control Guidelines.

Upon motion duly made and seconded, the Board approved the foregoing item. The details of the above items are contained in a staff summary and report filed with the records of this meeting and in the video recording of the meeting produced by the MTA and maintained in the MTA records, and in the minutes of the other agencies of this date.

7. Committee on Corporate Governance:

The Board was presented with the following items recommended to it by the Committee on Corporate Governance that relate to Metro-North.

- Approval of the revised All-Agency General Contract Procurement Guidelines and the All-Agency Service Contract Procurement Guidelines.
- Approval of revisions to the MT All-Agency Travel and Business Expense Policy.
- Approval of revisions to the All-Agency Guidelines for the Disposal of Personal Property.

Upon motion duly made and seconded, the Board approved the foregoing items. The details of the above items are contained in staff summaries filed with the records of this meeting and in the video recording of the meeting produced by the MTA and maintained in the MTA records, and in the minutes of the other agencies of this date.

8. Chief Financial Officer Presentation on MTA 2017 Final Proposed Budget and November Financial Plan 2017-2020.

Chairman Prendergast introduced MTA Chief Financial Officer Robert Foran, who presented the MTA 2017 Final Proposed Budget and November Financial Plan for 2017-2020 and Frederica Cuenca, Director of Strategic Initiatives, who described the fare and toll increase proposals. Chairman Prendergast noted that the November budget presentation was for informational purposes only and that the Board would vote on the budget materials at the December 14, 2016 Board meeting and on the fares and tolls in January, 2017.

Copies of the proposed budget and plan were distributed to Board members.

Following the presentation, Chairman Prendergast thanked Mr. Foran and Ms. Cuenca and invited Board discussion concerning the proposed budget and the financial plan. The details of the presentation on the proposed budget and financial plan and Board members' comments and questions with respect thereto are included in the video recording of the meeting produced by the MTA and maintained in MTA records.

Upon motion duly made and seconded, the Board authorized the Chairman and CEO and his designees to take the necessary steps, including publishing any required notices and conducting any required public hearings, in order to complete the administrative process necessary in advance of the Board's consideration of fare and toll pricing changes.

9. Adjournment:

Upon motion duly made and seconded, the Board voted to adjourn the meeting at 11:44 a.m.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Linda Montanino".

Linda Montanino
Assistant Secretary

Nov 2016 Board Minutes-DRAFT
Legal/Corporate

Minutes of the Regular Board Meeting
Long Island Rail Road Company
2 Broadway
New York, NY 10004
Wednesday, November 16, 2016
10:00 a.m.

The following members were present:

Hon. Thomas F. Prendergast, Chairman & CEO
Hon. Fernando Ferrer, Vice Chairman
Hon. David Jones
Hon. Susan Metzger
Hon. Charles G. Moerdler
Hon. John J. Molloy
Hon. Mitchell H. Pally
Hon. Andrew Saul
Hon. Polly Trottenberg
Hon. Veronica Vanterpool
Hon. James Vitiello
Hon. Peter Ward
Hon. Carl V. Wortendyke
Hon. Neal Zuckerman

The following members were absent:

Hon. John Samuelson
Hon. Lawrence Schwartz

Donna Evans, Chief of Staff, Jerome F. Page, General Counsel, Robert Foran, Chief Financial Officer, Board Member Andrew Albert, Board Member Norman Brown, Board Member Ira Greenberg, Board Member Vincent Tessitore, Veronique Hakim, President, NYCTA, Patrick A. Nowakowski, President, Long Island Rail Road, Joseph J. Giulietti, President, Metro-North Railroad, Donald Spero, President, TBTA, Darryl Irick, SVP, NYCT DoB/President, MTA Bus Company, Michael Horodniceanu, President, MTA Capital Construction, and Stephen Morello, Counselor to the Chairman, also attended the meeting.

Chairman & CEO Thomas F. Prendergast called the meeting to order.

1. Public Speakers:

Stephen Morello, Counselor to the Chairman, noted that there were three (3) public speakers and he asked all speakers to limit their remarks solely to matters that are on the agenda, and to keep to the time limits for comments.

One (1) of the speakers commented on matters related to the LIRR.

Frederick Wells, a private citizen, stated that the MTA needs to push for the Triboro Rx, a single track running from Brooklyn to the Bronx via Queens, and for the Rockaway Beach rail line.

The details of the speakers' comments are contained in the video recording of the meeting, produced by the MTA and maintained in MTA records, and in the minutes of the other agencies of this date.

2. Chairman's Opening Remarks:

Chairman Prendergast stated that a tragic accident occurred in our subway system two weeks ago, when two MTA conductors, Louis T. Gray, Jr. and Jeffrey Fleming, were hit by a train while working on the tracks. Mr. Gray was killed and Mr. Fleming was injured. Chairman Prendergast expressed condolences on behalf of the MTA, to the family of Mr. Gray. He further stated that this accident reminds us of the dangers of working in the subway system, and why our front line employees are heroes because they put their lives on the line every day to make the system work. He also stated that this reminds us that the safety of our employees and of the public must be our first responsibility. Chairman Prendergast expressed his best wishes to Mr. Fleming for a speedy recovery, and he asked for a moment of silence in memory of Mr. Gray.

Chairman Prendergast stated that Robert Foran, Chief Financial Officer, would present the MTA's financial plan for the next four years towards the end of the meeting. He further stated that MTA is pleased to be keeping its word to hold fare increases to 4% every two years (2% each year), and that MTA continues its aggressive campaign to cut costs, which began with Jay Walder and continued through Joe Lhota. He noted that MTA would meet or exceed its 2016 goal of cutting \$1.63 billion in costs annually, and that by 202 the goal is to cut \$2 billion in costs, which will help keep fares and tolls as low as possible and allow MTA to make improvements to its system.

The details of the Chairman's Opening Remarks are contained in the video recording of the meeting, produced by the MTA and maintained in MTA records, and in the minutes of the other agencies of this date.

3. Approval of Minutes:

Upon motion duly made and seconded, the minutes of the Regular Board Meeting of October 28, 2016 were approved.

4. Committee on Finance:

Action Item - Law Firm Panel Addition:

The Board was presented with the following action item for approval:

- Obtain Board approval to add the law firm of Loeb & Loeb LLP (the “Firm”) to the panel of Board approved outside counsel. The approval of this firm is sought in connection with its representation of the Metropolitan Transportation Authority (“MTA”) and its commuter railroads in connection with such railroads’ occupancy of a portion of the Moynihan Train Hall (the “Train Hall”) at the Farley Post Office Building (the “Farley Building”) and the negotiation and closing of the associated real estate, operational and commercial transactions.

Upon motion duly made and seconded, the Board approved the foregoing action item, the details of which are contained in the minutes of the MTA Board meeting held this day, the staff summary filed with those minutes and in the video recording of the meeting, produced by the MTA and maintained in MTA records.

Information Item:

The Board received, as an information item, an update on station maintenance billing for 2015-2016. Details of this item are contained in the minutes of the MTA Board meeting held this day, the staff summary filed with those minutes and in the video recording of the meeting, produced by the MTA and maintained in MTA records.

Procurements:

The Board was presented with three (3) procurement items recommended to it by the Committee on Finance, none of which relate to Long Island Rail Road.

Real Estate Items:

The Board was presented with three (3) real estate items, one of which related to the Long Island Rail Road:

- Authorization to negotiate and enter into temporary license agreements with AT&T, Verizon, Sprint, T-Mobile and other qualified cellular carriers to improve cellular service at LRR Penn Station on an interim basis, pending completion of recently announced improvements to Penn Station.

Upon motion duly made and seconded, the Board approved the foregoing real estate item, the details of which are contained in the minutes of the MTA Board meeting held this day, the staff summary filed with those minutes and in the video recording of the meeting, produced by the MTA and maintained in MTA records.

5. Committee on Metro-North Railroad:

Procurements:

The Board was presented with four (4) procurement items recommended to it by the Metro-North Committee for approval, one (1) of which related to the Long Island Rail Road:

- Ratification of the award of a contract change order for additional funding under the current miscellaneous service contract with Masabi, LLC (Masabi) in the total amount of \$3,374,382 to support a pilot program for an interoperable mobile-ticketing solution on the NYCT system. Masabi will develop a design and pilot a solution that meet's MTA's requirements on an accelerated timeline. The goal of this modification is to formalize the ongoing project support and to allow the MTA and Masabi to advance this initiative.

The change order relates to the April 2014 MTA Board approval of the award of a joint MNR/LIRR joint procurement to Masabi for the implementation of a Mobile Ticketing Program, providing customers with the ability to purchase tickets on their mobile devices that can be presented for validation. The original contract was for six years and envisioned future interoperability with NYCT.

Upon motion duly made and seconded, the Board approved the foregoing procurement item, the details of which are contained in the minutes of the MTA Board meeting held this day, the staff summary filed with those minutes and in the video recording of the meeting, produced by the MTA and maintained in MTA records.

Before the vote on the foregoing procurement item, Board Member Mitchell H. Pally commented one of the other procurement items presented by the Committee on Metro-North Railroad to the Board for approval. This other procurement item, which did not involve the Long Island Rail Road but raised a policy issue pertaining to the Long Island Rail Road, was: Approval of modifications to the contract with Kawasaki Rail Car Inc. for the Design, Manufacture, Testing and Delivery of M-8 Railcars. The modifications included the purchase, in partnership with the Connecticut Department of Transportation (CDOT), of sixty (60) additional M-8 cars (plus up to 34 option cars) to meet critical service needs on the New Haven Line. CDOT will have the option to procure nine (9) of the new cars as Café Cars, configured to sell snacks and beverages to customers.

Board Member Pally reiterated his concern about the sale of alcohol by the MTA. He stated that he would support this procurement item because the State of Connecticut wanted it, but he remained concerned about the sale of alcohol in the Café Cars. He stated that many people who use the trains drive to the station. He questioned whether MTA should sell alcohol to these people and stated that the State of Connecticut was wrong to do this. He further stated that he felt we could find better things for our employees to do than to sell alcohol. He requested that MTA look further into the issue of the sale of alcohol by both MTA commuter railroads and

have a report presented to the Board. Chairman Prendergast acknowledged that he had had discussions with Mr. Pally on this issue and committed to having such a report prepared.

6. Committee on Long Island Rail Road:

The Board was presented with three (3) procurement items recommended to it by the Committee on Long Island Rail Road for approval:

Competitive:

- **Competitive RFP** – LIRR requests MTA Board Approval to adopt a resolution declaring that competitive bidding is impractical or inappropriate and that it is in the public's best interest to use the Request for Proposal (RFP) procurement method pursuant to Section 1265-a of the Public Authorities Law to award a Design/Build construction contract for the Long Island Rail Road Expansion Project (the "Project"). The Project will add approximately ten miles of third track along Long Island Rail Road's Main Line between Floral Park and Hicksville in Nassau County, New York.
- **Halmar International Inc.** - LIRR requests MTA Board Approval to award a Design/Build contract to Halmar International Inc. ("Halmar") for the lump sum price of \$9,715,000 for the replacement of the Post Avenue Bridge, located in the Village of Westbury, Nassau County on the LIRR Main Line. The existing two bay bridge structure will be replaced with a three bay structure, accommodating a future third track, and providing additional vehicular clearance (14'0") above the roadway in order to meet NYSDOT requirements.
- **Bombardier Transportation/Siemens Rail Automation (f/k/a InvensysRail) – JV** - LIRR requests MTA Board Approval to issue a contract modification in the Not to Exceed amount of \$1,863,919 to the Bombardier Transportation/Siemens Rail Automation, PTC Systems Integrator ("SI") for wiring and assembly of Communications Cases (C-Cases) necessary to accommodate the additional C-Cases required above the initially planned quantity (60 to 108 C-Cases) due to maturation of the Radio Frequency (RF) design. This also increases the work that is required to be performed by LIRR forces. This modification will mitigate the risk of not completing the PTC installation in time to meet Substantial Completion of December 2018.

Upon motion duly made and seconded, the Board approved the foregoing procurement items, the details of which are contained in the minutes of the MTA Board meeting held this day, the staff summaries filed with those minutes and in the video recording of the meeting, produced by the MTA and maintained in MTA records.

7. Audit Committee:

Action Item:

The Board was presented with one (1) action item recommended to it by the Audit Committee for approval:

- Board approval of revisions to the MTA Enterprise Risk Management and Internal Controls Guidelines.

Upon motion duly made and seconded, the Board approved the foregoing action item, the details of which are contained in the minutes of the MTA Board meeting held this day, the staff summary filed with those minutes and in the video recording of the meeting, produced by the MTA and maintained in MTA records.

8. Committee on Corporate Governance:

Action Items:

The Board was presented with three (3) action items recommended to it by the Committee on Corporate Governance for approval:

- Obtain Board approval of the revised All-Agency General Contract Procurement Guidelines and the All-Agency Service Contract Procurement Guidelines.
- Obtain Board authorization of proposed revisions to the MTA All-Agency Travel and Business Expense Policy.
- Obtain Board approval of proposed revisions to the All-Agency Guidelines for the Disposal of Personal Property promulgated in accordance with Sections 2895-2897 of the New York Public Authorities Law.

Upon motion duly made and seconded, the Board approved the foregoing action items, the details of which are contained in the minutes of the MTA Board meeting held this day, the staff summaries filed with those minutes and in the video recording of the meeting, produced by the MTA and maintained in MTA records.

9. Presentation on MTA 2017 Final Proposed Budget and November Financial Plan 2017-2020:

MTA Chief Financial Officer Robert Foran made a presentation on the MTA's 2017 Final Proposed Budget and on the November Financial Plan 2017-2020. Mr. Foran highlighted the following:

- The July Plan projected breakeven cash balances through 2019, with a deficit of \$371 million in 2020.
- The July Plan was based on three key inter-related elements in all of our Financial Plans: biennial fare and toll yield increases of 4% in 2017 and 2019; increased annually recurring savings targets (increasing from \$1.6 billion in 2016 to approximately \$2 billion in 2020); and increased funding for the Capital Program.
- What has changed since the July Plan? Re-estimates and other changes are \$507 million favorable through 2020.
- Highlights of the 2017-2020 November Plan include (among others): (a) Fare and toll increases in 2017 and 2019. The 2017 increase is being changed from a 4% yield to a 4% price increase, saving customers \$94 million over the plan period. (b) \$229 million of the \$756 million unspecified expense reduction target in the July Plan have been identified. (c) 2016 General Reserve of \$145 million will be used to reduce the unfunded liability of the LIRR Additional Pension Plan, saving \$16 million per year starting in 2018. (d) Plan provides for an additional \$395 million investments over the plan period: Maintenance and Operations (\$163 million), Customer Experience (\$160 million), and Service and Service Support (\$72 million).
- MTA is investing an additional \$163 in Maintenance and Operations in the November Plan. Major investments and highlights include: Scheduled Maintenance Systems Reforecast (\$30 million); Lifecycle Asset Maintenance Plan (\$30 million in 2020 to kick off program); Upgrade to All-Weather Tires (\$27 million); Bus Shop Engine Rebuild (\$15 million), and System-wide Right-of-Way Clean-Up Efforts (\$10 million).
- The November Plan Captures further Customer Experience programs. Additional investments proposed for the November Plan include: Open Road Tolling (\$149 million), and 24/7 Social Media (\$9 million).
- The MTA invests an additional \$72 million in Service and Service Support over the plan period. Proposed investments include: Platform Budget Service Adjustments (\$71 million), and Rockland County Bus Service (\$1 million).
- Initiatives have been identified to address \$229 million of prior savings targets.
- Annually recurring savings are expected to reach \$1.6 billion by the end of 2016; absent these savings, an additional 20% fare/toll increase would have been required.
- The Plan funds important investments and continues to address our out year deficit.

- If savings targets are not achieved, deficits will occur earlier and be larger.
- If savings targets are not achieved and projected fare/toll increases are not implemented, our financial situation becomes untenable.
- MTA faces challenges going forward, including: the need for biennial fare and toll increases of 4% in 2017 and 2019; the need for efficiencies/consolidations to achieve recurring cost savings; expiring labor contracts; chronic/looming costs such as workers' compensation, claims and health care; general economic conditions; the possibility of interest rates higher than forecast; and the need for discipline to use non-recurring revenues and/or favorable budget variances to reduce unfunded liabilities or fund capital.

10. Fare and Toll Proposal:

Presentation:

MTA Director of Strategic Initiatives Fredericka Cuenca gave a presentation on the Fare and Toll Proposal. Ms. Cuenca highlighted the following:

- The key policy questions considered when evaluating fare options include: does it meet MTA financial needs; operations; mobility/capacity; and affordability.
- Current NYCT Fare Structure and Ridership – Ridership by fare product: Bonus MetroCard (40%), 30-Day MetroCard (30%); 7-Day MetroCard (22%); Base MetroCard (5%); Coin (2%); Single Ride Ticket (1%)
 - Time-Based Passes: Valid for 7 or 30 days after the first swipe; unlimited number of trips allowed
 - Pay-Per-Ride MetroCard fares: Base MetroCard fare is \$2.75; If a customer adds \$5.50 or more at a time, an additional 11% “bonus” is added to the Card’s value; Effective fare with bonus is \$2.48
 - Non-MetroCard fares: Cash on the Bus - \$2.75; Single ride ticket - \$3.00; No intermodal transfers
- Frequency of travel influences fare product choice.
- Majority of all income groups use Pass or Bonus Pay Per Ride MetroCards. Low and middle class income customers most likely to use 7-Day Pass.
- NYCT: Two options proposed, both limit increase for pass users.
 - In both proposals, most frequent customers and especially those with low incomes, have smallest increase.

- Variation in Pay-Per-Ride fares: Base fare must increase in 25 cents increments; bonus buy-in stays at round trip price; two options tradeoff between increases in base fare and bonus.
- Current Railroad Fare Structure and Ridership: Largest percentage of ridership on both MNR and LIRR is commutation passes (55%-MNR; 57%-LIRR)
 - Commutation fares are monthly and weekly.
 - Non-Commutation are peak and off one-way tickets.
 - MNR's intermediate market continuing to grow.
- Maximum of 3.75% increase for commuters, while keeping to 4% increase for other riders
 - All monthly and weekly tickets capped at 3.75% and not more than \$15
 - One way tickets to City terminals increase up to 6.06%, any increase larger than 6% is \$0.50 or less.
- West of Hudson is a small but unique market:
 - 2% of Metro-North ridership.
 - Recession and Hurricane Irene have continued to affect ridership.
 - Fares some customers impacted by NJT and PATH increases.
 - Recommend 2% increase for West of Hudson.
- B&T Toll Structure Overview – Distribution of crossings, 2015: E-ZPass – Cars (73%), Cash/Tolls by Mail (15%), E-ZPass – Trucks (6%), Non-NYCSC E-ZPass (6%)
 - 79% of crossings pay discounted E-ZPass Toll.
 - E-ZPass market share has increased by 10% since 2010.
 - Non NYCSC customers pay cash/toll by mail amount.
- Increase for NYCSC E-ZPass customers is less than 25 cents.
- Higher Increase for Cash, Tolls by Mail and non-NYCSC E-ZPass Customers.
- A number of different special pricing ideas have been proposed by various constituencies:
 - Half fare for low income New Yorkers.
 - Subsidized fares for college and university students.
 - “Freedom” ticket.
 - Suburban weekend ticket.

- Next steps

- November 16 – Board authorizes start of process.
- November and December – Elicit public comment.
- January – Board reviews public comments and votes on a final proposal.
- March – fare/toll change implemented.

Chief Financial Officer Foran noted that the proposed fare increase is the lowest increase since the MTA started biennial fare increases in 2009.

Board member Neal Zuckerman thanked Mr. Foran for a thoughtful presentation. He stated that speaking for Putnam County, a small county, safety, service and reliability are the most important factors in considering a fare increase. In terms of safety, he noted the deadline for PTC in December 2018 and appreciated the MTA's focus on that effort. In terms of service, he noted no particular issues, but expressed his appreciation for the new infrastructure being built at Grand Central Terminal. In terms of value, he applauded the work of the MTA to manage cost increases and its efforts to flatten out the ends of the system.

Board Member David Jones asked why the fare presentation focused on households earning less than \$28,000 annually when the poverty level in the United States is defined as \$24,000 annually. He further asked whether staff had statistics that took the analysis down to the poverty line.

Director of Strategic Initiatives Cuenca responded that we wanted to have enough people in each slice of the pie chart to make the numbers meaningful. She stated that MTA collects information in greater detail on household size and income, so we could make the poverty determination.

Board Member Jones stated that as a Board member, he would appreciate having that more detailed information. He noted that on the first pie chart on slide 5, approximately 64% of the low income category used Bonus MetroCard, Base MetroCard, or Cash or Single Ride Ticket. He stated that low income people are in the least advantageous area of the fare structure, but when he looks at the fare increase, these categories get hit the hardest. He further stated that it seems like these people are getting the most increases, under any scenario.

Board Member Jones also stated that at \$116 per month, a 30-day pass is beyond the means of many if not most low income people. He further stated that even using a \$24,000 threshold, many New Yorkers are below that. He asked why we seem to be setting such a large increase on a large number of low income people.

Director of Strategic Initiatives Cuenca responded that in one scenario, MTA is not proposing to increase the base fare. She stated that 48% of our riders using Pay Per Ride and there needs to be some increase from them. She further stated that the way we do this if we're not increasing the base is by decreasing the bonus we add. Instead of an 11% bonus, we're only going to give you 5%. This results in a 5.7% increase for the vast majority of people using Pay Per Ride

with Bonus. She also stated that the other proposal under consideration will increase the base fare but also increase the bonus we are giving you. So we wind up with an increase on these customers but it is slightly less, a 4.4% increase for the vast majority of people using Pay Per Ride with bonus.

Chief Financial Officer Foran stated that this is a balancing exercise, trying to make things more affordable for those who need it most. If you look at the pie chart on the left on slide 5 --- households making less than \$28,000 annually, and the pie chart on the right --- households making more than \$75,000, the biggest media used by wealthier people is Pay Per Ride. If we give a benefit to those who use Pay Per Ride, we'd wind up helping the wealthiest. That is the trade-off.

Board Member Jones stated that he understood, but asked if the end result is the same if you take the number of riders earning \$75,000 or more. He asked if each of the pie charts represent an equal number of people.

Director of Strategic Initiatives Cuenca responded no. She stated that about 25% of households are in the low income group, 35% of households are in the middle, and about 40% make up the highest level.

Chairman Prendergast stated that he normally holds his comments to the end, but this is a key point. He further stated that he worked in a number of systems and that the issue of a social fare became prominent in the Pacific Northwest when he worked in Vancouver. He added that systems in Portland and Seattle are trying to deal with this issue, as is San Francisco.

Chairman Prendergast added that in Vancouver, he had a board member who was an elected official, and that this individual was given a pass which allowed him to ride the system a lot for the first time. This Board member remarked that "We shouldn't base the fare on the entire economic spectrum and cut back on what we charge. We should instead figure out ways to subsidize people at the lower end of the spectrum." Do we need lower fares for some or a subsidy? This is a social issue all transit systems in the country are grappling with.

Board Member Charles Moerdler asked whether it would harm the MTA if the City of New York, given its progressive agenda, decided to subsidize people below the poverty line so as get them a fare they could afford.

Chief Financial Officer Foran responded by stating that MTA would not be harmed if the full fare is paid, even if part of it is paid by someone else. But such an arrangement would require discussions with other parties.

Chairman Prendergast stated that what is before the Board is the start of a legislatively required process. We will hold public hearings and the Board will then make a decision based on input from those hearings and discussions with other stakeholders, at the January meeting.

Board Member James Vitiello echoed the comments of Board Member Zuckerman, and thanked staff for thoughtful budget and fare presentations. He stated that it was worth noting that the fare increase will come in short order, and that there were a variety of opinions on the issue of a

social fare. He stated that it would be difficult to resolve the issue of a social fare in this time frame. He further stated that for households earning less than \$75,000, if you lowered the increase on Cash, Base MetroCard, and Single Ride Ticket, you are helping 27% of the households below \$75,000 without really suppressing the fare too much for households over \$75,000, and that this was worth thinking about.

Board Member Vitiello stated that in the Counties, a social fare raises some complicated issues because MTA is one system. He further stated that if you have a social fare, even if it is subsidized, people will look for same kind of policies on commuter rail or on our bus systems. The social fare issue is very complicated and it is unlikely we can resolve it by January. He also stated that in the Counties, there was apprehension about possible subsidies from New York City because in the case of other subsidies agreed to by the City ---notably Student MetroCards -- the promised subsidies disappeared over time.

Board Member Vitiello asked for the balance of the underfunding on the LIRR pension plan, and asked if there was a similar situation with respect to a Metro-North pension plan.

Chief Financial Officer Foran responded that MTA's plan and Metro-North's plan were in the high 60's and there is a clear path forward to get to where we need to be. The LIRR plan was far behind.

Chairman Prendergast stated that the LIRRR and MABSTOA plans were at 20%, and we are trying to get to the same sweet spot as the other plans.

Board Member Vitiello stated that he would like to see the numbers on the LIRR pension plan when staff can get to it.

Board Member Veronica Vanterpool stated it was great to see how proposals about fare increases have changed over time, especially since she spent much time on the other side of the table voicing concerns about inequities in fare policies. She echoed the concerns noted by Board Member Jones and looked forward to hearing the public comments from the hearings.

Board Member Vanterpool also stated that proposals to advance the City Ticket and Freedom Ticket deserved serious consideration and that Brooklyn and Queens have transit infrastructure, the use of which should be maximized. As a native of the Bronx, she stated that the Bronx has a lot of roadway infrastructure but that it cannot be used. The Bronx has the lowest rate of car ownership after Manhattan. Therefore, the City Ticket and Freedom Ticket have the potential the potential for reducing the commute for the Bronx and Queens.

Board Member Vanterpool stated that we've talked about subsidies and using them to reduce costs. She further stated that she was not a fan of the toll subsidy on the Verrazano Narrows Bridge, preferring instead that more money be invested in better transit in Staten Island. She added that subsidies are often handed out in indiscriminate ways.

Board Member Andrew Saul stated that he appreciated the presentations and would like to see the Freedom Ticket advance. He asked how MTA knew about income levels of riders. Was it done by survey?

Director of Strategic Initiatives Cuenca responded that MTA took a representative sample of the City's population, about 1,200 people, as part of its annual Customer Satisfaction Survey.

Chairman Prendergast said that the Board makes informed decisions and staff is charged with giving us the information to make informed decisions. The issue of how we gather the necessary information is something we need to explore in more depth.

Board Member Polly Trottenberg commended Mr. Foran and Ms. Cuenca on a good presentation and stated that she felt TA was right to have regular fare increases, as compared to New Jersey Transit which saw no increases for years and then hit its ridership with a 9% increase. She further stated that in her travels as NYCDOT Commissioner, she's heard a lot about the Freedom Ticket in Southeast Queens, and that the City is interested in being a partner. She also stated that she disagreed with the assertion that the City did not meet its obligations on promised subsidies. As she recalls the situation, the City agreed to pay a portion of the subsidy and the MTA agreed to pay a portion. The City contribution was capped, which some people might not like, but that was the agreed-upon arrangement.

Board Member Trottenberg stated that the City contributes \$2.5 billion to the MTA for capital, and covers the full cost of MTA Bus with no cap, an obligation that is approximately \$.5 billion per year and growing. She further stated that the City is a robust contributor to the MTA, and does not walk away from its commitments. She added that the City would consider participating in a social fare subsidy, but that she expected the State to also pay a portion of the subsidy and that any discussion of this idea would require consultation with the City's elected officials, the Mayor and the members of the City Council.

Board Member Mitchell Pally thanked Mr. Foran and Ms. Cuenca for informative presentations. He stated that in the suburbs, it was interesting that for lower income people, the farther out you go, the more you have to pay. He further stated that this has connotations for both Long Island and the Hudson Valley; in some sense, it is the opposite of the way it should be. He added that we need to understand this, especially in connection with the cap on the increase.

Board Member Pally noted that he was happy LIRR would soon be able to give people more service and this was related to the issue of the fare increase. For most people, the question is "What do I get for a higher fare?"

Board Member Pally stated that he strongly supported the comments made by Board Member Jones, but the issue of a social fare needs to be looked at responsibly. He thanked Chief Financial Officer Foran and Director of Strategic Initiatives Cuenca for continuing to consider the Suburban Ticket. He added that on Long Island, most people wind up at Penn Station, but that an initiative was needed to encourage greater use of the railroad to move between destinations on Long Island. He added that it was important to look at this since, in years past, most people wanted to live

away from train lines but now everyone wants to live near the train, and we need to be a part of the solution.

Board Member Susan Metzger thanked Mr. Foran and Ms. Cuenca staff for a wonderful job on the presentations and agreed with Chairman Prendergast that there was general support on the Board for a social fare. She also agreed with Board Member Pally that consideration of a social fare has to include the suburbs. She stated that West of Hudson was a small but unique market; residents paid the same fees and taxes as other Metro-North communities but were not as affluent, resulting in fees being a burden. She further stated that it was hard to explain to constituents why they did not enjoy hourly service and that they are captive to the fare increases of two other systems.

Board Member Ira Greenberg thanked Mr. Foran and Ms. Cuenca for their excellent presentations. He stated that he appreciated the cap on commuter fares. He further stated that he has supported Freedom Ticket in Southeast Queens for quite some time and that the explanation of why it wasn't being implemented now was the same as it was 20 years ago --- it needs to await greater capacity, presumably meaning East Side Access. On the issue of a social fare, he stated an interest in seeing how the numbers in the categories have changed over time.

Board Member Moerdler stated that he thought someone asserted that because the Bronx had a roadway system, there was no need for more transit service. This is not true. He stated that people in the East Bronx don't have transit but need it and that people in Melrose and in the Marble Hill Houses could use a Freedom Ticket like Queens. He further stated that thanks to Chairman Prendergast, we are now seeing the beginning of a possibility for four new Metro-North stations in the Bronx.

Board Member Moerdler stated that he would be very interested in hearing a presentation by Board Member Trottenberg on how New York City has fulfilled its commitments on subsidies. He added that he understood the subsidy on the Verrazano Narrows Bridge to be coming from MTA and the State, without any contribution from the City. He asked if this was a correct understanding.

Board Member Norman Brown commended Mr. Foran and Ms. Cuenca on an excellent presentation. He stated that he felt the use of the term social fare was imprecise. He further stated that he was on the Board for most of the recent fare increases and he guessed that these have now become social fares. He noted that the further one goes out in the suburbs, lower income people pay higher fares. A subsidy would have to cover a higher percentage of the fare box because fares cover less of the costs farther out. He noted that there are many ways to address social inequality and perhaps there should be consideration of a housing subsidy.

Chairman Prendergast stated that this was an interesting point. He added that a recent Citizens Budget Commission study identified New York City as having the highest costs for housing, but some of the lowest transit costs in the country.

Board Member Vitiello stated he did not in any way intend to slight New York City, and that perhaps he didn't fully understand how the MOU on Student MetroCard subsidies worked. He added that in the Counties, the perception is that the \$200 million subsidy for Student MetroCards is

not being being covered by New York City or New York State, and that this is not in line with the MOU. He asked Chief Financial Officer Foran to look into this.

Board Member Trottenberg stated that she would be happy to give a presentation to the Board on the various prior arrangements with New York City on subsidies. She added that these arrangements could potentially be revised, based on discussions with the City's elected officials.

Action Item:

The Board was presented with the following action item for its approval:

- To seek Board authorization to proceed with the steps necessary to consider proposals for fare and toll changes, including the issuance of public notices and the holding of public hearings to elicit public comment on such proposals.

Upon motion duly made and seconded, the Board approved the foregoing action item, the details of which are contained in the minutes of the MTA Board meeting held this day, the staff summary filed with those minutes and in the video recording of the meeting, produced by the MTA and maintained in MTA records.

11. Adjournment:

Upon motion duly made and seconded, the Board voted to adjourn the meeting at 11:44 a.m.

Respectfully submitted,



Mark D. Hoffer,
Secretary

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

BOARD MINUTES

November 16, 2016

Minutes of the Regular Meeting
Triborough Bridge and Tunnel Authority
November 16, 2016

Meeting Held at
2 Broadway, 20th Floor
New York, New York 10004

10:00 a.m.

The following members were present:

Hon. Thomas F. Prendergast, Chairman & CEO
Hon. Fernando Ferrer, Vice Chairman
Hon. David Jones
Hon. Susan Metzger
Hon. Charles G. Moerdler
Hon. John J. Molloy
Hon. Mitchell H. Pally
Hon. Andrew Saul
Hon. Polly Trottenberg
Hon. Veronica Vanterpool
Hon. James Vitiello
Hon. Peter Ward
Hon. Carl V. Wortendyke
Hon. Neal Zuckerman

The following members were absent:

Hon. John Samuelson
Hon. Lawrence Schwartz

Donna Evans, Chief of Staff, Jerome F. Page, General Counsel, Robert Foran, Chief Financial Officer, Board Member Andrew Albert, Board Member Norman Brown, Board Member Ira Greenberg, Board Member Vincent Tessitore, Veronique Hakim, President, New York City Transit, Patrick Nowakowski, President, Long Island Rail Road, Joseph Giuliatti, President, Metro-North Railroad, Donald Spero, President, Triborough Bridge and Tunnel Authority, Darryl Irick, Senior Vice President, New York City Transit Department of Buses/President, MTA Bus Company, Michael Horodniceanu, President, MTA Capital Construction, and Stephen Morello, Counselor to the Chairman, also attended the meeting.

The Board of the Metropolitan Transportation Authority also met as the Board of the New York City Transit Authority, the Manhattan and Bronx Surface Transit Operating Authority, the Staten Island Rapid Transit Operating Authority, the Metropolitan Suburban Bus Authority, the Triborough Bridge and Tunnel Authority, the Long Island Rail Road Company, the Metro-North Commuter Railroad Company, the MTA Capital Construction Company, the MTA Bus Company, and the First Mutual Transportation Assurance Company.

1. Public Speakers

There were three (3) public speakers. None of the speakers specifically commented on issues regarding the Triborough Bridge and Tunnel Authority.

Refer to the video recording of the meeting produced by the Metropolitan Transportation Authority and maintained in MTA records, and to the other agencies' minutes of this date, for the content of the speakers' statements.

2. Chairman and Chief Executive Officer Prendergast's Opening Comments

Chairman and CEO Prendergast opened his remarks by acknowledging a recent tragic accident involving two conductors, Lewis T. Gray, Jr. and Jeffrey Flemming, who were hit by a subway train as they worked in a Brooklyn tunnel. Mr. Flemming was injured and Mr. Gray was killed. After expressing his deepest condolences, Chairman and CEO Prendergast requested a moment of silence in honor of Conductor Gray. Chairman and CEO Prendergast stated that Robert Foran, MTA Chief Financial Officer, will be giving a presentation on the MTA's next Financial Plan. He stated that he was pleased that fare and toll increases would be kept to 4% every two years or 2% a year. He also expects the MTA to meet or exceed its 2016 target of \$1.6 billion in annually recurring savings and to raise that number to \$2 billion by 2020.

The details of Chairman and CEO Prendergast's comments are contained in the video recording of this meeting, produced by the MTA and maintained in MTA records, and the MTA's and other agencies' minutes of the meeting of this date.

3. Approval of the Minutes of the Regular Meeting October 28, 2016

Upon a motion duly made and seconded, the minutes of the Regular Board Meeting held on October 28, 2016 were approved.

4. Committee on MTA Bridges and Tunnels Operations

Procurements

Commissioner Moerdler stated that there are two (2) procurements totaling \$2.4 million.

Non-Competitive Procurements

Commissioner Moerdler stated that there are no non-competitive procurements.

Competitive Procurements

Commissioner Moerdler stated that there are two (2) competitive procurement totaling \$2.4 million.

Competitive Procurements

Personal Service Contracts

Gannett Fleming Engineers and Architects	Contract No. PSC-16-2987 B&T is seeking Board approval under the All-Agency Service Contract Procurement Guidelines to award a personal service contract for the Initial Tunnel Inspection at the Queens Midtown Tunnel and the Hugh L. Carey Tunnel.	\$2,115,341.30
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Hoguet Newman Regal &
Kenney, LLP

Contract No. PSC-16-2989

\$285,800.00

B&T requires a consultant to provide wage and hour compliance services in order to assist B&T in meeting its compliance obligations under FLSA. The FLSA is the federal statute that sets minimum wage, overtime pay, equal pay, record keeping and child labor standards for workers covered by its provisions. As a public employer, B&T is required to comply with the applicable minimum wage and overtime provisions of FLSA and to ensure that employees are appropriately classified. The consultant shall ensure B&T's legal compliance with FLSA and conduct a job classification review for all positions to determine exempt or non-exempt status with FLSA.

The service requirements were publicly advertised. On June 15, 2016 three firms: Hoguet Newman Regal & Kenney, LLP (Hoguet Newman), Sibson Consultant and Wong Fleming PC submitted proposals. The proposals were evaluated against established criteria set forth in the RFP including qualifications of work for specific personnel proposed, depth of understanding of project and related problems, level of expertise, record of performance of firm and cost. Based on the committee's review of all the proposals, it unanimously selected Hoguet Newman, a NYS certified WBE, based on its: (i) highly qualified personnel; (ii) extensive experience related to FLSA; (iii) complete and responsive proposal addressing all the relevant criteria in the scope of services and (iv) detailed description of the resources that will be brought to the assignment. Sibson Consultant and Wong Fleming each failed to adequately address the scope of services or demonstrate the level of experience necessary to provide these services. The committee unanimously waived oral presentations and recommended that negotiations be conducted with Hoguet Newman, the highest rated firm.

Hoguet Newman submitted a cost proposal of \$365,500. Negotiations with Hoguet Newman resulted in a fixed cost of

\$285,800 for a five year term, which compares favorably with B&T's estimate of \$301,500. Based on the above, the negotiated amount of \$285,800 is considered fair and reasonable. Hoguet Newman is deemed to be a responsible consultant.

Upon a motion duly made and seconded, the Board approved the procurements recommended to it by the Committee for MTA Bridges and Tunnels Operations.

Ratifications

Commissioner Moerdler stated that there are no ratifications.

5. MTA 2017 Final Proposed Budget and November Financial Plan 2017-2020

MTA Chief Financial Officer Robert Foran presented and discussed the MTA's 2017 Final Proposed Budget and November Financial Plan for 2017 through 2020. Mr. Foran noted that \$149 Million will be allocated for Open Road Tolling (ORT), which will augment existing, and adopt next generation, tolling system technology and that tolls will be collected solely through E-ZPass and by mail. Director of Strategic Initiatives Fredericka Cuenca presented and discussed the fare and toll increase proposals.

The details of Mr. Foran's and Ms. Cuenca's presentations and the discussions with regard to same are contained in the minutes of the meeting of the Board of the Metropolitan Transportation Authority.

6. Adjournment

Upon a motion duly made and seconded, the Board unanimously voted to adjourn the meeting at 11:44 a.m.

Respectfully submitted,



Julia R. Christ
Secretary

**Regular Board Meeting
MTA Capital Construction Company
2 Broadway
New York, NY 10004
Wednesday, November 16, 2016
10:00 AM**

The following members were present:

Hon. Thomas F. Prendergast, Chairman & CEO
Hon. Fernando Ferrer, Vice Chairman
Hon. David Jones
Hon. Susan Metzger
Hon. Charles G. Moerdler
Hon. John J. Molloy
Hon. Mitchell H. Pally
Hon. Andrew Saul
Hon. Polly Trottenberg
Hon. Veronica Vanterpool
Hon. James Vitiello
Hon. Peter Ward
Hon. Carl V. Wortendyke
Hon. Neal Zuckerman

The following members were absent:

Hon. John Samuelson
Hon. Lawrence Schwartz

Board Member Andrew Albert, Board Member Norman Brown, Board Member Ira Greenberg, Board Member Vincent Tessitore, and Michael Horodniceanu, President, MTA Capital Construction Company also attended the meeting as did various other agency presidents and staff including Donna Evans, Chief of Staff, MTA, Jerome F. Page, General Counsel, MTA, Robert Foran, Chief Financial Officer, MTA, Stephen Morello, Counselor to the Chairman, Veronique Hakim, President, NYCTA, Patrick Nowakowski, President, Long Island Rail Road, Joseph Giulietti, President, Metro-North Railroad, Donald Spero, President, TBTA, Darryl Irick, SVP, NYCT DoB/President, MTA Bus Company, Evan M. Eisland, Sr. Vice President, General Counsel and Secretary, MTA Capital Construction Company and David K. Cannon, Sr. Director, Chief Procurement Officer & Assistant Secretary, MTA Capital Construction Company.

The Board of the Metropolitan Transportation Authority met as the Board of the New York City Transit Authority, the Manhattan and Bronx Surface Transit Operating Authority, the Staten Island Rapid Transit Operating Authority, the Triborough Bridge and Tunnel Authority, the Long Island Rail Road, the Metro-North Commuter Railroad Company, the MTA Capital Construction Company, the MTA Bus Company, and the First Mutual Transportation Assurance Company.

Chairman and Chief Executive Officer ("Chairman") Prendergast called the meeting to order.

Public Comment Period

There were three public speakers none of whom spoke on MTA Capital Construction matters. The names of the speakers and their remarks are contained in the minutes of the Regular Meeting of the Board of the Metropolitan Transportation Authority and in the minutes of the other agencies of this date.

Chairman's Remarks

The Chairman mentioned a recent accident in which two New York City Transit employees, Mr. Jeffery Fleming and Mr. Louis Gray Jr., were struck by a subway train. Mr. Fleming was injured and Mr. Gray was killed. The Chairman expressed his wishes for a speedy recovery for Mr. Fleming and offered his condolences to the family and friends of Mr. Gray. A moment of silence was then held in Mr. Gray's memory.

The remainder of the Chairman's remarks are contained in the minutes of the Regular Meeting of the Board of the Metropolitan Transportation Authority and in the minutes of the other agencies of this date.

Approval of Minutes

Upon motion duly made and seconded, the Board approved the minutes of the Regular Meeting of the Board of the Metropolitan Transportation Authority and the MTA Capital Construction Company held on October, 28, 2016.

Committee on NYCT and Bus

Procurement

Upon motion duly made and seconded, the Board approved the following competitive procurement items:

1. Award of a competitively solicited contract (CM-1191) for the preparation of the supplemental environmental review and environmental support services for Phase 2 of the Second Avenue Subway Project to AKRF, Inc. in the not-to-exceed amount of \$2,342,188 and for a duration of 90 months.
2. Award of a competitively solicited contract (CM-1190) for engineering design services for Phase 2 of the Second Avenue Subway Project to Phase 2 Partnership ("P2P"), a Joint Venture of WSP/Parsons Brinckerhoff ("WSP/PB") and STV Incorporated in the not-to-exceed amount of \$120,453,095 and for duration of 90 months.

The Chairman recused himself from the vote on these two items.

Upon motion duly made and seconded, the Board ratified the following procurement items:

3. A modification to the 86th St. Station Cavern, Mining and Heavy Civil Structural (C-26008) contract for the Second Avenue Subway Project to fill overbreak in Pump Room No. 16 and to provide additional concrete tunnel lining in three locations in the west tunnel in the amount of \$1,295,000.
4. A modification to the 86th St. Station Cavern, Mining and Heavy Civil Structural (C-26008) contract for the Second Avenue Subway Project to pay impact costs associated with previously established excusable and impactable time extensions in the amount of \$1,460,000.

A copy of the Resolution and Staff Summaries for the above items are filed with the records of the Regular Meeting of the Board of the Metropolitan Transportation Authority held on this date.

Committee on Audit

Upon motion duly made and seconded, the Board approved the following action item:

Revisions to the MTA Enterprise Risk Management and Internal Controls Guidelines.

A copy of the Staff Summary for the above item is filed with the records of the Regular Meeting of the Board of the Metropolitan Transportation Authority held on this date.

Committee on Corporate Governance

Upon motion duly made and seconded, the Board approved the following action items:

1. Revisions to the MTA All Agency General Contract Procurement Guidelines.
2. Revisions to the MTA All Agency Service Contract Procurement Guidelines.
3. Revisions to the MTA All Agency Travel and Business Expense Policy.
4. Revisions to the All Agency Guidelines for the Disposal of Personal Property promulgate in accordance with Sections 2895-2897 of the New York State Public Authorities Law.

A copy of the Staff Summaries for the above items are filed with the records of the Regular Meeting of the Board of the Metropolitan Transportation Authority held on this date.

Other Business**Presentation on MTA 2017 Final Proposed Budget and November Financial Plan 2017-2020**

Robert Foran, MTA's Chief Financial Officer presented the MTA's 2017 Final Proposed Budget and November Financial Plan for 2017 - 2020. A discussion among the Board members followed.

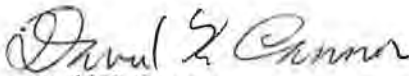
The Board members remarks are more fully noted in the minutes of the Regular Meeting of the Board of the Metropolitan Transportation Authority held on this date.

A copy of the of the 2017 Final Proposed Budget and the 2017 - 2020 Financial Plan are filed with the records of the Regular Meeting of the Board of the Metropolitan Transportation Authority held on this date.

Adjournment

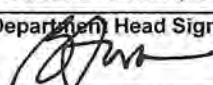

Upon motion duly made and seconded, the Board voted to adjourn the public meeting at 11:44 a.m.



Respectfully submitted,



David K. Cannon
Assistant Secretary

Staff Summary

Subject MTA and TBTA Reimbursement for Federal Tax purposes	Date December 14, 2016
Department Chief Financial Officer	Vendor Name
Department Head Name Robert E. Foran, Chief Financial Officer	Contract Number
Department Head Signature 	Contract Manager Name
Project Manager Name Josiane Codio, Director of Treasury 	Table of Contents Ref #

Board Action						Internal Approvals			
Order	To	Date	Approval	Info	Other	Order	Approval	Order	Approval
	Finance Comm.	12/12	X			1	Legal 	2	Chief of Staff 
	Board	12/14	X						

To obtain MTA and TBTA adoption of the annexed reimbursement resolutions, which are required by Federal tax law to preserve the ability to finance certain capital projects on a tax-exempt basis.

PURPOSE:

As it has in the past, the Metropolitan Transportation Authority (the "MTA") intends to finance the MTA's transit and commuter capital improvement program, including MTA Bus Company and Staten Island Rapid Transit Operating Authority, and Triborough Bridge and Tunnel Authority ("TBTA" or "MTA Bridges and Tunnels") intends to finance the MTA Bridges and Tunnels' bridge and tunnel capital improvement program.

It is important that MTA and MTA Bridges and Tunnels preserve the ability to finance capital projects in these capital improvement programs on a tax-exempt or tax-advantaged basis. To maintain the ability of MTA and MTA Bridges and Tunnels to finance capital projects in the capital improvement programs on such tax-exempt or tax-advantaged basis, consistent with Federal tax law, the MTA and TBTA Boards periodically adopt reimbursement resolutions. Federal tax law requires that official action that sets forth the issuer's intent to spend tax-exempt bond proceeds on a project must be taken by an issuer that wants to reimburse itself from tax-exempt bond proceeds for capital project costs that were funded from another source of revenue. Copies of the 2017 reimbursement resolutions submitted for Board adoption are attached hereto.

For purposes of the attached reimbursement resolutions, (i) in the case of MTA, the Project refers to the capital programs approved by the Metropolitan Transportation Authority Capital Program Review Board (CPRB), including, particularly, the 2000-2004 Transit and Commuter Capital Program, the 2005-2009 Transit and Commuter Capital Program, the 2010-2014 Transit and Commuter Capital Program, and the 2015-2019 Transit and Commuter Capital Program, and (ii) in the case of TBTA, the Project refers to the capital programs approved by the TBTA Board, including, particularly, the 2000-2004 TBTA Capital Program, the 2005-2009 TBTA Capital Program, the 2010-2014 TBTA Capital Program, the 2015-2019 TBTA Capital Program, and the security projects authorized to be constructed and/or installed at the TBTA bridges and tunnels.

ALTERNATIVES:

There is no alternative to preserve the ability to finance certain capital projects on a tax-exempt or tax-advantaged basis under Federal tax law.

RECOMMENDATION:

The MTA and TBTA Boards approve the above-referenced resolutions. This authorization shall continue in effect until the adoption in 2017 by the MTA and TBTA Boards of subsequent reimbursement resolutions.

RESOLUTION

WHEREAS, Metropolitan Transportation Authority (“MTA”) intends to finance the MTA’s transit and commuter capital improvement program, including MTA Bus Company and Staten Island Rapid Transit Operating Authority, as more fully described in the accompanying staff summary and capital program documents referenced therein (the “MTA Project”);

WHEREAS, MTA desires to finance the MTA Project through the issuance of tax-exempt debt or tax-advantaged debt, if available, and other sources as described in the approved capital programs, and expects to reimburse expenditures made from other sources with proceeds of such tax-exempt or tax-advantaged debt;

NOW THEREFORE, BE IT:

RESOLVED, that the statements contained in this Resolution with respect to the reimbursement of the expenditures described in this resolution are intended to be statements of official intent as required by, and in conformance with, the provisions of Treasury Regulation Section 1.150-2(e); and

RESOLVED, that the expenditures in connection with the MTA Project to be reimbursed pursuant to this Resolution have been incurred and paid not more than 60 days prior to the date hereof or will be incurred and paid after the date hereof in connection with the MTA Project; and

RESOLVED, that the MTA reasonably expects that the maximum principal amount of tax-exempt or tax-advantaged debt (including bonds, commercial paper and bond anticipation notes) to be issued by MTA subsequent to the date hereof to pay MTA Project expenditures in 2017 (whether directly or as a reimbursement) is \$2,300 million (plus associated financing costs); and

RESOLVED, that this Resolution shall take effect immediately.

December 14, 2016

RESOLUTION

WHEREAS, Triborough Bridge and Tunnel Authority (“MTA Bridges and Tunnels”) intends to finance the MTA Bridges and Tunnels’ bridge and tunnel capital improvement program, as more fully described in the accompanying staff summary and capital program documents referenced therein (the “Project”);

WHEREAS, MTA Bridges and Tunnels desires to finance the Project through the issuance of tax-exempt debt or tax-advantaged debt, if available, and other sources as described in the approved capital programs, and expects to reimburse expenditures made from other sources with proceeds of such tax-exempt or tax-advantaged debt;

NOW THEREFORE, BE IT:

RESOLVED, that the statements contained in this Resolution with respect to the reimbursement of the expenditures described in this resolution are intended to be statements of official intent as required by, and in conformance with, the provisions of Treasury Regulation Section 1.150-2(e); and



RESOLVED, that the expenditures in connection with the Project to be reimbursed pursuant to this Resolution have been incurred and paid not more than 60 days prior to the date hereof or will be incurred and paid after the date hereof in connection with the Project; and

RESOLVED, that MTA Bridges and Tunnels reasonably expects that the maximum principal amount of tax-exempt or tax-advantaged debt (including bonds, commercial paper and bond anticipation notes) to be issued by MTA Bridges and Tunnels subsequent to the date hereof to pay MTA Bridges and Tunnels Project expenditures in 2017 (whether directly or as a reimbursement) is \$300 million (plus associated financing costs); and

RESOLVED, that this Resolution shall take effect immediately.



December 14, 2016

Staff Summary

Subject
Authorization to Issue New Money Transportation Revenue Bond Anticipation Notes, Transportation Revenue Bonds, and Triborough Bridge and Tunnel Authority General Revenue and Subordinate Revenue Bonds
Department
Finance
Department Head Name
Robert E. Foran, Chief Financial Officer
Department Head Signature

Project Manager Name
Patrick J. McCoy, Director, Finance 

Date
December 14, 2016
Vendor Name
Contract Number
Contract Manager Name
Table of Contents Ref #

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance Comm.	12/12	X		
2	Board	12/14	X		

Internal Approvals			
Order	Approval	Order	Approval
1	Legal 	2	Chief of Staff 

PURPOSE:

The MTA Finance Department is seeking MTA and TBTA Board authorization and approval of the necessary documentation to issue new money bond anticipation notes (BANs) and bonds to finance up to \$2,300 million of capital projects set forth in approved transit and commuter capital programs, and to issue up to \$300 million of new money bonds to finance capital projects set forth in approved bridges and tunnels capital programs. The MTA Finance Department will report to the Board on the status of the proposed debt issuance schedule, the results of each note and bond issue and planned note and bond issues.

DISCUSSION:

MTA and TBTA Board approval is sought for the following resolutions, documents and activities in connection with the issuance of bonds and/or bond anticipation notes in an aggregate principal amount necessary to finance up to \$2.6 billion of capital projects of the transit and commuter systems and MTA Bridges & Tunnels set forth in approved capital programs:

- Separate Supplemental Resolutions authorizing Transportation Revenue Bonds (TRB Bonds) and Transportation Revenue BANs (TRB BANs), including providing for the following:
 - The issuance of TRB BANs and TRB Bonds under the General Resolution Authorizing Transportation Revenue Obligations (the TRB Resolution), in one or more series from time to time, in an amount sufficient to produce net proceeds of up to \$2,300 million necessary to finance transit or commuter capital programs, plus applicable issuance costs and any original issue discount,
 - Issuance of such TRB BANs or TRB Bonds in competitive or negotiated public sales, by direct placement or in connection with a revolving credit or other loan agreement, and
 - The issuance of TRB Bonds under the TRB Resolution in an amount sufficient to (i) retire the TRB BANs when due and (ii) to finance transit or commuter capital programs, in each case plus accrued interest and applicable issuance costs and any original issue discount.
- Multiple Series 2017 Supplemental Resolution authorizing Triborough Bridge and Tunnel Authority General Revenue Obligations, including providing for the issuance of the following:

- o An aggregate principal amount of up to \$300 million of Triborough Bridge and Tunnel Authority General Revenue Obligations (reduced by any bonds issued under the Triborough Bridge and Tunnel Authority Subordinate Resolution) in one or more series necessary to finance capital projects of TBTA as set forth in existing MTA Bridges & Tunnels capital programs, plus applicable issuance costs and any original issue discount, and
- o Parity Reimbursement Obligations and other Parity Debt in an amount sufficient to secure any Credit Facilities entered into in connection with the issuance of the General Revenue Obligations.
- Multiple Series 2001 Subordinate Revenue Bond Supplemental Resolution authorizing Triborough Bridge and Tunnel Authority Subordinate Revenue Obligations, including providing for the issuance of the following:
 - o An aggregate principal amount of up to \$300 million of Triborough Bridge and Tunnel Authority Subordinate Revenue Obligations (reduced by any bonds issued under the Triborough Bridge and Tunnel Authority General Revenue Bond Resolution) in one or more series necessary to finance capital projects of TBTA, as set forth in existing MTA Bridges & Tunnels capital programs plus applicable issuance costs and any original issue discount, and
 - o Parity Reimbursement Obligations and other Parity Debt in an amount sufficient to secure any Credit Facilities entered into in connection with the issuance of the Subordinate Revenue Obligations.

With respect to the above-referenced financial transactions, MTA and TBTA Board approval, as applicable, is sought:

(a) delegating authority to the Chairman and Chief Executive Officer, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance to award the obligations either pursuant to competitive bid or to members (or entities related to such firms) of the Board-approved MTA underwriting syndicate and to execute and/or deliver in each case, where appropriate:

- o Notices of Sale and bid forms,
- o Purchase Agreements with underwriters,
- o Direct Purchase Agreements,
- o Revolving Credit Agreements or other Loan Agreements,
- o Official Statements and other disclosure documents,
- o Continuing Disclosure Agreements and related filings,
- o Remarketing Agreements,
- o Dealer and Broker/Dealer Agreements,
- o Issuing and Paying Agent Agreements,
- o Credit Facilities and related Parity Reimbursement Obligations and Parity Debt,
- o Related Subordinated Contract Obligations, and
- o Investment Agreements.

Any such documents will be in substantially the form of any document previously entered into by MTA or TBTA for previous issues, with such changes as approved by any one or more of the foregoing officers.

(b) authorizing such officers to terminate, amend, supplement, replace or extend any such documents, including Credit Facilities (and related Parity Reimbursement Obligations and Parity Debt), as they shall deem advisable, and to take such other actions as may be necessary or desirable to effectuate the issuance of the new money bonds and other financial transactions set forth above, on behalf of MTA, TBTA or other MTA subsidiaries and affiliates.

ALTERNATIVES:

There are no viable funding alternatives to the bond funded portion of existing capital programs.

RECOMMENDATION:

The MTA and TBTA Boards approve the above-referenced resolutions and documents and all other actions described above, including the execution and delivery of such other documents, and the taking of all other actions, from time to time deemed necessary or desirable by such officers in connection therewith. The authorization to issue the bonds and take other related actions hereunder shall continue in effect without any further action by the MTA and TBTA Boards until the adoption by the MTA and TBTA Boards of subsequent bond supplemental resolutions relating to 2018 note and bond issues (except that bonds may still be issued to refinance 2017 BANs outstanding at any time) unless (a) the MTA and TBTA Boards shall have confirmed

Staff Summary

the effectiveness of this authorization for an additional period, or (b) the MTA and TBTA Boards shall have modified or repealed this authorization.

METROPOLITAN TRANSPORTATION AUTHORITY

**MULTIPLE SERIES 2017 BOND ANTICIPATION NOTES
AND RELATED SUBORDINATED INDEBTEDNESS
TRANSPORTATION REVENUE BOND SUPPLEMENTAL RESOLUTION**

Adopted December 14, 2016

**MULTIPLE SERIES 2017 BOND ANTICIPATION NOTES AND
RELATED SUBORDINATED INDEBTEDNESS
TRANSPORTATION REVENUE BOND SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Board of Metropolitan Transportation Authority (the “Issuer”), as follows:

**ARTICLE I
DEFINITIONS AND STATUTORY AUTHORITY**

SECTION 1.01. Supplemental Resolution. This resolution is supplemental to, and is adopted in accordance with Article II, Article A-II and Article A-VIII of, a resolution adopted by the Issuer on March 26, 2002, entitled “General Resolution Authorizing Transportation Revenue Obligations”, as heretofore supplemented (the “Resolution”).

SECTION 1.02. Definitions.

1. All terms which are defined in Section 101 of the Resolution shall have the same meanings, respectively, in this Multiple Series 2017 Bond Anticipation Notes and Related Subordinated Indebtedness Transportation Revenue Bond Supplemental Resolution (hereinafter referred to as the “Supplemental Resolution”) as such terms are given in said Section 101 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman and Chief Executive Officer, the Vice Chairman, the Chair of the Finance Committee, the Chief Financial Officer or the Director, Finance of the MTA, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean, when used with respect to the Issuer, the board of the Issuer acting as such pursuant to the provisions of the Issuer Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP or any other attorney or firm of attorneys of nationally recognized standing in the field of law relating to the issuance of obligations by state and municipal entities, selected by the Issuer.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

“Noteholder”, “Holder” or “Holder of Notes”, or any similar term, means any person who shall be the registered owner of any Outstanding Series 2017 Note or Notes.

“Notice of Sale” shall mean the form of Notice of Sale to be distributed with the Preliminary Official Statement, hereinafter defined, and published in the event of a competitive sale of the Series 2017 Notes.

“Series 2017 Bonds” shall mean the Transportation Revenue Bonds, Series 2017, authorized by Article II of the Resolution and pursuant to a resolution of the Issuer adopted as of the date that this resolution is adopted.

“Series 2017 Notes” shall mean the Transportation Revenue Bond Anticipation Notes, Series 2017, authorized to be issued, in accordance with Section A-203 of the Standard Resolution Provisions, pursuant to this Supplemental Resolution.

SECTION 1.03. Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

ARTICLE II AUTHORIZATION OF SERIES 2017 NOTES

SECTION 2.01. Principal Amount, Designation and Series. In accordance with the provisions of the Resolution, one or more Series of Transportation Revenue Bond Anticipation Notes constituting Obligation Anticipation Notes under the Resolution (which may be issued in one or more Series or subseries and from time to time, which for purposes of this Supplemental Resolution shall collectively be referred to herein as the “Series 2017 Notes”, subject to redesignation as hereinafter provided) and entitled to the benefit, protection and security of this Supplemental Resolution are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount and underwriters’ discount from the principal amount, the amount to be deposited in the Series 2017 Note Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of the amount so deposited therein determined in any Certificate of Determination as estimated to be necessary to pay capitalized interest or to pay any Costs of Issuance of the Series 2017 Notes), shall not exceed \$2,300 million at any one time Outstanding reduced by the amount of bonds issued under the Metropolitan Transportation Authority Multiple Series 2017 Transportation Revenue Bond Supplemental Resolution, adopted December 14, 2016 (but, for purposes of clarification, not including both the Series 2017 Notes and Series 2017 Bonds issued thereunder to refinance Series 2017 Notes). The Series 2017 Notes may be issued in the form of a loan agreement, line of credit, revolving credit agreement or similar facility (each, a “Loan Facility”). For all purposes of this Section such Transportation Revenue Bond Anticipation Notes shall be designated as, and shall be distinguished from the Transportation Revenue Bond Anticipation Notes of all other Series by the title, “Transportation Revenue Bond Anticipation Notes, Series 2017”, with such further or different designations as may be provided in any Certificate of Determination.

The authority to issue Obligation Anticipation Notes and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization to issue the Series 2017 Notes shall continue in effect until the adoption by the Issuer’s Board of a subsequent new money note issuance supplemental resolution relating to 2018 new money

financings, provided, however, the authorization to issue the Series 2017 Bonds to refinance the Series 2017 Notes authorized hereunder shall continue in effect until all of such Series 2017 Notes have been refinanced by Series 2017 Bonds.

SECTION 2.02. Use of Proceeds. The proceeds of the Series 2017 Notes shall be used only for the purposes set forth in one or more Certificates of Determination and may include (i) the payment of all or any part of the Capital Costs, including Costs of Issuance related to the Series 2017 Notes and (ii) the payment of the principal and interest of Outstanding Series 2017 Notes.

SECTION 2.03. Date, Maturity and Interest for Series 2017 Notes; Redemption. The Series 2017 Notes shall be dated the date or dates determined in any Certificate of Determination. The Series 2017 Notes shall mature on the date or dates and in the principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, determined in any Certificate of Determination. Except as otherwise provided in any Certificate of Determination, the Series 2017 Notes shall not be subject to redemption prior to maturity.

SECTION 2.04. Interest Payments. The Series 2017 Notes shall bear interest from the dates determined in any Certificate of Determination, payable on such date or dates as may be determined pursuant to any Certificate of Determination. Except as otherwise provided in any Certificate of Determination, interest on the Series 2017 Notes shall be computed on the basis of twelve 30-day months and a 360-day year.

SECTION 2.05. Denominations, Numbers and Letters. Unless otherwise provided in any Certificate of Determination, the Series 2017 Notes shall be issuable in fully registered form in the denomination of \$5,000 or any integral multiple thereof. The Series 2017 Notes shall be numbered and lettered as provided in any Certificate of Determination.

SECTION 2.06. Places of Payment and Paying Agents. Except as otherwise provided in any Certificate of Determination, the principal and Redemption Price of the Series 2017 Notes shall be payable to the registered owner of each Series 2017 Note when due upon presentation of such Series 2017 Note at the principal corporate trust office of the Trustee. Except as otherwise provided in any Certificate of Determination, interest on the registered Series 2017 Notes will be paid by check or draft mailed on the interest payment date by Paying Agent to the registered owner at his address as it appears on the registration records or, at the option of any Holder of at least one million dollars (\$1,000,000) in principal amount of the Series 2017 Notes, by wire transfer in immediately available funds on each interest payment date to such Holder thereof upon written notice from such Holder to the Trustee, at such address as the Trustee may from time to time notify such Holder, containing the wire transfer address (which shall be in the continental United States) to which such Holder wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

SECTION 2.07. Sources of Payment

1. The principal of and interest on the Series 2017 Notes shall be payable solely from (i) the proceeds of any other Series 2017 Notes, (ii) the proceeds of the Series 2017 Bonds, and (iii) the proceeds of notes or other evidences of indebtedness or any other amounts, in each case if and to the extent such amounts may lawfully be used to make such payments. The interest on the Series 2017 Notes is also payable from amounts available for transfer pursuant to Section 504(b) and Section 505.3 of the Resolution for the payment of Subordinated Indebtedness.

2. There are hereby pledged to the payment of principal and interest on the Series 2017 Notes the proceeds of the Series 2017 Bonds issued to refinance such Series 2017 Notes, and such pledge has priority over any other pledge thereof created by the Resolution, including Section 501. There is hereby pledged to the payment of interest on the Series 2017 Notes amounts available for transfer pursuant to Section 504(b) and Section 505.3 of the Resolution for the payment of Subordinated Indebtedness in accordance with and subject to the limitations contained in Section 506 of the Resolution.

SECTION 2.08. Delegation to an Authorized Officer.

1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Series 2017 Notes:

(a) to determine whether and when to issue any Series 2017 Notes, the amount of the Series 2017 Notes to be applied to pay Capital Costs or other uses as provided in Section 2.02 of this Supplemental Resolution and the amount of the proceeds of the Series 2017 Notes estimated to be necessary to pay the Costs of Issuance of the Series 2017 Notes;

(b) to determine the purposes or purposes for which the Series 2017 Notes are being issued, which shall be one or more of the purposes set forth in Section 2.02 of this Supplemental Resolution;

(c) to determine the principal amount of the Series 2017 Notes to be issued, which principal amount shall not exceed the amount described in Section 2.01 of this Supplemental Resolution, and whether such Series 2017 Notes shall be issued in one or more Series or subseries;

(d) to determine the maturity date and principal amount of each maturity of the Series 2017 Notes; provided that the Series 2017 Notes shall mature no later than five years after the date of issuance of such Series 2017 Notes;

(e) to determine the date or dates which the Series 2017 Notes shall be dated and the interest rate or rates of the Series 2017 Notes, provided that the true interest cost (as calculated by the officers of the Issuer executing any Certificate of Determination, which calculation shall be conclusive) on the Series 2017 Notes bearing a fixed rate of interest shall not exceed 4.00% per annum and for Series 2017 notes bearing interest at a variable interest rate shall not exceed a rate equal to SIFMA or one-month or three-month LIBOR or any short-term index generally accepted in the marketplace, in each case, plus

4.00% and any default rate or equivalent rate shall not exceed the sum of 4.00% plus either a specified prime rate or the federal funds rate;

(f) to determine the Redemption Price or Redemption Prices, if any, and the redemption terms, if any, for the Series 2017 Notes; provided, however, that if the Series 2017 Notes are to be redeemable at the election of the Issuer, the Redemption Price (except in the case of taxable Series 2017 Notes) shall not be greater than one hundred three percent (103%) of the principal amount of the Series 2017 Notes to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Series 2017 Notes the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make-whole redemption;

(g) to determine the advisability of conducting the sale of all or any portion of the Series 2017 Notes through competitive bidding or through a negotiated sale or a direct purchase transaction, and to determine the purchase price for the Series 2017 Notes to be paid by the purchasers pursuant to either a competitive bid process or by the purchasers referred to in the Purchase Agreement described in Section 2.09 of this Supplemental Resolution in the event the Series 2017 Notes are sold, in such officer's discretion, through a negotiated sale or a direct purchase transaction, which may include such original premium and original issue discount as shall be determined in any Certificate of Determination, provided, however, that in the case of a negotiated transaction, underwriters' discount reflected in such purchase price shall not exceed \$3.50 for each one thousand dollars (\$1,000) principal amount of the Series 2017 Notes;

(h) to determine the advisability, as compared to an unenhanced transaction, of obtaining municipal bond insurance or any other credit or liquidity facility, to determine and accept the terms and provisions and price thereof, to determine the items to be pledged to the Series 2017 Notes from those permitted by Section A-203 of the Resolution, and to determine such other matters as the officer executing any Certificate of Determination shall consider necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by bond insurers or the provider of any other credit or liquidity facility, if any, or required by the bond rating agencies in order to attain or maintain specific ratings on the Series 2017 Notes, or relating to the mechanism for the payment of insurance premium, credit or liquidity facility fees or direct purchase fees, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature necessary or appropriate to implement an insurance policy or any other credit or liquidity facility with respect to the Series 2017 Notes, and to make any changes in connection therewith. Such changes may include, but are not limited to, the making of any additional covenants with Holders or other parties deemed necessary or appropriate by the officer executing any Certificate of Determination;

(i) to take all actions required for the Series 2017 Notes to be eligible under the rules and regulations of The Depository Trust Company ("DTC") for investment and trading as uncertificated securities, to execute and deliver a standard form letter of representation with, or other form of document required by, DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in

any Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Notes issuable in fully registered form; and

(j) to determine whether to issue all or any part of the Series 2017 Notes as Tax-Exempt Obligations or Taxable Obligations;

(k) to make such changes in or from the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Series 2017 Notes;

(l) to make such changes in or from the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects; and

(m) to determine any other matters provided for herein, including the matters set forth in Sections 2.11 and 2.12 hereof.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Series 2017 Notes are delivered from time to time, or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee prior to the authentication and delivery of the respective Series or subseries of Series 2017 Notes by the Trustee or other documentation. Determinations set forth in any Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Series 2017 Notes, as appropriate for any purposes, including, if any Series 2017 Notes shall consist of multiple subseries, to change the principal amounts and number of the individual subseries or to combine all subseries into a single Series, if any Series 2017 Notes consist of a single Series, to divide such Series into two or more subseries and to determine the principal amount of such subseries, obtain a substitute or additional Credit Facility, or to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale.

SECTION 2.09. Sale of Series 2017 Notes. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Series 2017 Notes through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the Series 2017 Notes; (ii) to sell and award all or any portion of the Series 2017 Notes through a negotiated sale to the purchasers who are referred to in the note purchase agreement and who shall be selected from the then current list of approved underwriters; (iii) to sell and award all or any portion of the Series 2017 Notes through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement; or (iv) to issue all or any portion of the Series 2017 Notes in the form of a Loan Facility to any financial institution or institutions selected by the Authorized Officer. Each Authorized Officer is hereby authorized to sell and award the Series 2017 Notes to the purchasers referred to in the preceding sentence in the case of a note purchase agreement, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, or, with respect to a Loan Facility or a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the requirement that the Loan Facility issuer or direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Series 2017 Notes as may be approved by the officer executing the note purchase, Loan Facility, continuing covenant or similar agreement (each, a "Purchase Agreement"). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the officer executing the Purchase Agreement or Agreements, said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters.

If it is determined that any sale of Series 2017 Notes shall be conducted on a competitive bid basis, each Authorized Officer is hereby further authorized to conduct the sale and award of the Series 2017 Notes on the basis of a competitive bid, pursuant to the terms of a notice of sale, including bid form (the "Notice of Sale"), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such competitive sale of the Series 2017 Notes in a manner consistent with this Supplemental Resolution and to utilize the services of the Authority's financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized, to the extent required, to make public and to authorize the use and distribution by said purchasers of a Preliminary Official Statement (the "Preliminary Official Statement"), in connection with the public offering of the Series 2017 Notes, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations of the Issuer, with such changes, omissions, insertions and revisions

as such Authorized Officer shall deem advisable, said distribution being conclusive evidence of the approval of such changes, omissions, insertions and revisions. The Issuer authorizes any of said officers to deliver a certification to the effect that the Preliminary Official Statement, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission.

Each Authorized Officer is hereby authorized, to the extent required, to make public and to authorize distribution of a final Official Statement in substantially the form of the Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of the Series 2017 Notes, said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Notwithstanding the preceding two paragraphs, however, each Authorized Officer may make public and authorize the use and distribution of a final Official Statement in connection with the public offering of the Series 2017 Notes meeting the requirements of the preceding two paragraphs and may deem such Official Statement final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form of the Continuing Disclosure Agreement most recently executed and delivered by the Issuer in connection with the sale of Obligations, or such other form authorized by the Issuer in connection with other financings prior to the issuance of the Series 2017 Notes, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable (the "Continuing Disclosure Agreement"), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute and deliver any and all documents and instruments and to do and cause to be done any and all acts necessary or proper for carrying out the Notice of Sale, the Purchase Agreement, the Continuing Disclosure Agreement, the terms of any municipal bond insurance or any other credit or liquidity facility, and the issuance, sale and delivery of the Series 2017 Notes, and for implementing the terms of the Series 2017 Notes and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

SECTION 2.10. Forms of Series 2017 Notes and Authentication Certificate. The form of registered Series 2017 Notes, and the certificate of authentication, shall be of substantially the form and tenor provided in any Certificate of Determination.

SECTION 2.11. Appointment of Trustee, Paying Agent and other Agents.

There is hereby delegated to any Authorized Officer executing any Certificate of Determination the right and authority to appoint any trustee, paying agent, fiscal agent or other agent with respect to the Series 2017 Notes deemed advisable by such Authorized Officer and to determine the terms and provisions of any arrangements with any such parties.

SECTION 2.12. General Provisions.

As and to the extent provided in any Certificate of Determination, the provisions of Articles A-III, IV, A-IV, A-VII, A-IX and A-XI of the Resolution may apply equally to the Series 2017 Notes as though set forth in full herein but with each reference to Bonds being a reference to Series 2017 Notes, except as affected by the terms hereof and the procedures of the Securities Depository; provided that the Authorized Officer executing any Certificate of Determination may, in the alternative, set forth in any Certificate of Determination provisions relating to any such matters as deemed necessary or appropriate by such Authorized Officer.

ARTICLE III

DISPOSITION AND ALLOCATION OF SERIES 2017 NOTE PROCEEDS

SECTION 3.01. Disposition of Series 2017 Note Proceeds.

Except as otherwise provided in any Certificate of Determination, the proceeds of the sale of the Series 2017 Notes shall be deposited in the Series 2017 Note Proceeds Account which is hereby established in the Proceeds Fund and applied pursuant to the related Certificate of Determination to the payment of Capital Costs, including any Costs of Issuance and accrued interest, and the payment of principal and interest on Outstanding Series 2017 Notes.

ARTICLE IV

TAX COVENANT PROVISIONS AND DEFEASANCE

SECTION 4.01. Tax Covenants Relating to the Series 2017 Notes.

The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Series 2017 Notes issued as Tax-Exempt Obligations, the Issuer will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to comply with such written instructions as may be provided by Bond Counsel. In furtherance of the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any "Arbitrage and Use of Proceeds Certificate" or "Tax Certificate" to be executed by the Issuer in connection with the execution and delivery of any Series 2017 Notes issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer's failure to observe, or refusal to comply with, the above covenant (a) the Holders of the Series 2017 Notes, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Bondholders under Section 1002 of the Resolution (as though such provisions related to Series 2017 Notes rather than Bonds), other than the right (which is hereby abrogated solely as to the Issuer's failure to observe, or refusal to comply with, the above covenant) to declare the principal of all Notes then Outstanding, and the interest accrued thereon, to be due

and payable pursuant to Section 567 of the Act, and (b) neither the Holders of the Notes of any Series (other than the Series 2017 Notes or the Trustee acting on their behalf) nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to Noteholders under the Resolution based upon the Issuer's failure to observe, or refusal to comply with, the above covenant.

SECTION 4.02. Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in this Supplemental Resolution, all or less than all Outstanding Series 2017 Notes issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of this Supplemental Resolution, the Series 2017 Notes issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in this Supplemental Resolution unless (i) the Issuer has confirmed in writing that the Holders of the Series 2017 Notes issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the Series 2017 Notes issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

METROPOLITAN TRANSPORTATION AUTHORITY

**MULTIPLE SERIES 2017
TRANSPORTATION REVENUE BOND SUPPLEMENTAL RESOLUTION**

Adopted December 14, 2016

**MULTIPLE SERIES 2017
TRANSPORTATION REVENUE BOND
SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Board of Metropolitan Transportation Authority (the “Issuer”), as follows:

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01. Supplemental Resolution. This resolution is supplemental to, and is adopted in accordance with Article II, Article A-II and Article A-VIII of, a resolution adopted by the Issuer on March 26, 2002, entitled “General Resolution Authorizing Transportation Revenue Obligations”, as heretofore supplemented (the “Resolution”).

Section 1.02. Definitions.

1. All terms which are defined in Section 101 of the Resolution shall have the same meanings, respectively, in this Multiple Series 2017 Transportation Revenue Bond Supplemental Resolution (hereinafter referred to as the “Supplemental Resolution”) as such terms are given in said Section 101 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman and Chief Executive Officer, the Vice Chairman, the Chair of the Finance Committee, the Chief Financial Officer or the Director, Finance of the MTA, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean, when used with respect to the Issuer, the board of the Issuer acting as such pursuant to the provisions of the Issuer Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP or any other attorney or firm of attorneys of nationally recognized standing in the field of law relating to the issuance of obligations by state and municipal entities, selected by the Issuer.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

“Series 2017 Bonds” shall mean the Transportation Revenue Bonds, Series 2017, authorized by Article II of this Supplemental Resolution.

“Series 2017 Notes” shall mean the Transportation Revenue Bond Anticipation Notes, Series 2017, authorized to be issued in one or more Series or subseries in accordance with Section A-203 of the Standard Resolution Provisions and pursuant to a Supplemental Resolution of the Issuer adopted as of the date that this Supplemental Resolution is adopted.

Section 1.03. Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

ARTICLE II

AUTHORIZATION OF SERIES 2017 BONDS

Section 2.01. Principal Amount, Designation and Series. Pursuant to the provisions of the Resolution and in order to finance Capital Costs, a Series of General Revenue Bonds (which may be issued in one or more Series or subseries and from time to time, which for purposes of this Supplemental Resolution shall collectively be referred to herein as the “Series 2017 Bonds”, subject to redesignation as hereinafter provided) entitled to the benefit, protection and security of such provisions are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount and underwriters’ discount from the principal amount, the amount to be deposited in the Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of the amount so deposited therein determined in any Certificate of Determination as estimated to be necessary to pay capitalized interest or to pay any Costs of Issuance of the Series 2017 Bonds), shall not exceed the amount or amounts determined in a Certificate of Determination to be necessary to effectuate the purposes set forth in Section 2.02 hereof; provided, however, that the Series 2017 Bonds issued to finance Capital Costs shall not exceed \$2,300 million at any one time Outstanding reduced by the amount of bond anticipation notes (the “Series 2017 Notes”) issued under the Metropolitan Transportation Authority Multiple Series 2017 Bond Anticipation Notes and Related Subordinated Indebtedness Transportation Revenue Bond Supplemental Resolution, adopted December 14, 2016 (but, for purposes of clarification, not including both the Series 2017 Notes and Series 2017 Bonds issued thereunder to refinance Series 2017 Notes). For all purposes of this Section 2.01, net original issue premium as determined to be advisable by an Authorized Officer in connection with the marketing of the Series 2017 Bonds also shall be excluded.

Series 2017 Bonds shall be designated as, and shall be distinguished from the Obligations of all other Series by the title “Transportation Revenue Bonds, Series 2017” or such other title or titles set forth in one or more Certificates of Determination.

The authority to issue the Bonds and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization to issue the Series 2017 Bonds shall continue in effect until the adoption by the Issuer Board of a subsequent new money bond issuance supplemental resolution relating to 2018 new money financings, provided, however, the authorization to issue the Series 2017 Bonds to refinance the Series 2017 Notes shall continue in effect until all of such Series 2017 Notes have been refinanced by Series 2017 Bonds.

Section 2.02. Purposes. The purposes for which the Series 2017 Bonds are issued shall be set forth in one of more Certificates of Determination and may include (i) the payment of all or any part of the Capital Costs, and (ii) the payment of principal of and redemption premium, if any, and interest on Outstanding Series 2017 Notes.

Section 2.03. Date, Maturity and Interest for Series 2017 Bonds. The Series 2017 Bonds, except as otherwise provided in the Resolution, shall be dated the date or dates determined in the related Certificate of Determination. The Series 2017 Bonds shall mature on the date or dates and in each year or years and principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, determined in any Certificate of Determination.

Section 2.04. Interest Payments. The Series 2017 Bonds shall bear interest from their date or dates and be payable on such date or dates as may be determined pursuant to the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, interest on the Series 2017 Bonds shall be computed on the basis of twelve 30-day months and a 360-day year.

Section 2.05. Denominations, Numbers and Letters. Unless otherwise provided in the related Certificate of Determination, the Series 2017 Bonds shall be issuable in fully registered form without coupons in the denomination of \$5,000 or any integral multiple thereof. The Series 2017 Bonds shall be numbered and lettered as provided in any Certificate of Determination.

Section 2.06. Places of Payment and Paying Agents. Except as otherwise provided in any Certificate of Determination, principal and Redemption Price of the Series 2017 Bonds shall be payable to the registered owner of each Series 2017 Bond when due upon presentation of such Series 2017 Bond at the principal corporate trust office of the Trustee. Except as otherwise provided in the related Certificate of Determination, interest on the registered Series 2017 Bonds will be paid by check or draft mailed on the interest payment date by the Paying Agent, to the registered owner at his address as it appears on the registration books or, at the option of any Owner of at least one million dollars (\$1,000,000) in principal amount of the Series 2017 Bonds, by wire transfer in immediately available funds on each interest payment date to such Owner thereof upon written notice from such Owner to the Trustee, at such address as the Trustee may from time to time notify such Owner, containing the wire transfer address (which shall be in the continental United States) to which such Owner wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

Section 2.07. Sinking Fund Installments. The Series 2017 Bonds, if any, determined in the related Certificate of Determination shall be subject to redemption in part, by lot, or otherwise as determined in accordance with Section A-404 of the Resolution, on each date in the year or years determined in the related Certificate of Determination at the principal amount thereof plus accrued interest up to but not including the date of redemption thereof, from mandatory Sinking Fund Installments which are required to be made in amounts sufficient to redeem on each such date the principal amount of such Series 2017 Bonds.

Section 2.08. Redemption Prices and Terms. The Series 2017 Bonds may also be subject to redemption prior to maturity, at the option of the Issuer, upon notice as provided in

Article A-IV of the Resolution, at any time as a whole or in part (and by lot within a maturity, or otherwise as determined in accordance with Section A-404 of the Resolution, if less than all of a maturity is to be redeemed), from maturities designated by the Issuer on and after the date and in the years and at the Redemption Prices (expressed as a percentage of principal amount) determined in the related Certificate of Determination, plus accrued interest up to but not including the redemption date. Notwithstanding the foregoing, in the case of taxable Series 2017 Bonds, if set forth in the Certificate of Determination, the taxable Series 2017 Bonds may be made subject to pro rata redemption and/or a make-whole redemption premium.

Section 2.09. Delegation to an Authorized Officer. 1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Series 2017 Bonds:

(a) to determine whether and when to issue any Series 2017 Bonds constituting Capital Cost Obligations, the amount of the Series 2017 Bonds to be applied to finance Capital Costs or other uses as provided in Section 2.02 hereof, and the amount of the proceeds of the Series 2017 Bonds estimated to be necessary to pay the Costs of Issuance of the Series 2017 Bonds and capitalized interest, if any;

(b) to determine the purpose or purposes for which the Series 2017 Bonds are being issued, which shall be one or more of the purposes set forth in Section 2.02 of this Supplemental Resolution;

(c) to determine the principal amounts of the Series 2017 Bonds to be issued for the purposes set forth in Section 2.02 of this Supplemental Resolution and whether such principal amounts constitute a separate Series or a subseries of Series 2017 Bonds, which principal amounts (and the aggregate of all such Series and subseries) shall not exceed the principal amounts permitted by Section 2.01 of this Supplemental Resolution, and to determine Accreted Values and Appreciated Values, if applicable;

(d) to determine the maturity date and principal amount of each maturity of the Series 2017 Bonds and the amount and due date of each Sinking Fund Installment, if any;

(e) to determine the date or dates which the Series 2017 Bonds shall be dated and the interest rate or rates of the Series 2017 Bonds or the manner of determining such interest rate or rates; provided, however, that any Series 2017 Bonds issued as fixed rate Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 10% per annum, any Series 2017 Bonds issued as fixed rate Taxable Obligations shall be subject to a maximum interest rate of not greater than 12% per annum, any Variable Interest Rate Obligations issued as Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 15% per annum, any Variable Interest Rate Obligations issued as Taxable Obligations shall be subject to a maximum interest rate of not greater than 18% per annum and any Parity Reimbursement Obligations shall be subject to a maximum interest rate of not greater than 25% per annum, or, in each such case, such higher rate or rates as determined by the Issuer's Board;

(f) to determine the Redemption Price or Redemption Prices, if any, and the redemption terms, if any, for the Series 2017 Bonds; provided, however, that if the Series 2017 Bonds are to be redeemable at the election of the Issuer, the Redemption Price (except in the case of taxable Series 2017 Bonds) shall not be greater than one hundred three percent (103%) of the principal amount of the Series 2017 Bonds to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Series 2017 Bonds the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make-whole redemption;

(g) to determine whether the sale of the Series 2017 Bonds shall be conducted on either a negotiated or competitive bid basis and, as applicable, to determine the purchase price for the Series 2017 Bonds to be paid by the purchaser or purchasers referred to in one or more Purchase Agreements or a bank direct purchase agreement, the purchase price for the Series 2017 Bonds to be paid by the winning bidder, if such sale is conducted by competitive bid pursuant to a Notice of Sale (as hereinafter defined), in either case as such document is described in Section 2.10 of this Supplemental Resolution, which may include such original issue discount and original issue premium as shall be determined in the related Certificate of Determination; provided, however, that, in the case of Series 2017 Bonds sold on a negotiated basis, the underwriters' discount reflected in such purchase price shall not exceed \$10.00 for each one thousand dollars (\$1,000) principal amount of the Series 2017 Bonds;

(h) to take all actions required for the Series 2017 Bonds to be eligible under the rules and regulations of The Depository Trust Company ("DTC") for investment and trading as uncertificated securities, to execute and deliver a standard form of letter of representation with DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in the related Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Series 2017 Bonds issuable in fully registered form;

(i) to determine whether to issue all or any portion of the Series 2017 Bonds as Tax-Exempt Obligations, Taxable Obligations, Put Obligations, Variable Interest Rate Obligations or as any other form of Obligations permitted by the Resolution and any matters related thereto, including (i) the terms and provisions of any such Series 2017 Bonds, (ii) the selection of remarketing agents, tender agents, calculation agents, auction agents, dealers, bidding agents or any other agents or parties to ancillary arrangements and the terms of any such arrangements, and (iii) the methods for determining the accrual of Debt Service;

(j) to determine the advisability, as compared to an unenhanced transaction, of obtaining one or more Credit Facilities, to select a provider or providers thereof and to determine and accept the terms and provisions and price thereof, to determine such other matters related thereto as in the opinion of the officer executing the related Certificate of Determination shall be considered necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by Credit Facility providers, if any, or required by a Rating Agency in order to attain or maintain specific ratings on the Series 2017 Bonds, or relating to the

mechanisms for the repayment of amounts advanced thereunder or payment of fees, premiums, expenses or any other amounts, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature necessary or appropriate to obtain or implement a Credit Facility with respect to the Series 2017 Bonds, and to make any changes in connection therewith;

(k) to make such changes in or from the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Series 2017 Bonds;

(l) to make such changes in or from the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects; and

(m) to determine such other matters specified in or permitted by (i) Sections 202, 203, and A-201 of the Resolution or (ii) this Supplemental Resolution, including preparation of any documentation therefor.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Series 2017 Bonds are delivered from time to time, or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee prior to the authentication and delivery of the respective Series or subseries of Series 2017 Bonds by the Trustee or other documentation. Determinations set forth in the related Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Series 2017 Bonds, as appropriate for any purposes, including, in order to change interest rate modes or auction periods, obtain a substitute or additional Credit Facility, enter into a bank direct purchase agreement or similar instrument, or to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale.

Section 2.10. Sale of Series 2017 Bonds. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Series 2017 Bonds through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the Series 2017 Bonds; (ii) to sell and award all or any portion of the Series 2017 Bonds through a negotiated sale to the purchasers who are referred to in the bond purchase agreement and who shall be selected from the then current list of approved underwriters; or (iii) to sell and award all or any portion of the Series 2017 Bonds through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement. Each Authorized Officer is hereby authorized to sell and award the Series 2017 Bonds to the purchasers referred to in the preceding sentence in the case of a bond purchase agreement, in substantially the form most recently executed or

delivered by the Issuer in connection with the sale of Obligations, or, with respect to a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Series 2017 Bonds as may be approved by the officer executing the bond purchase, continuing covenant or similar agreement (each, a "Purchase Agreement"). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the officer executing the Purchase Agreement or Agreements, said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters.

If it is determined that any sale of Series 2017 Bonds shall be conducted on a competitive bid basis, each Authorized Officer is hereby further authorized to conduct the sale and award of the Series 2017 Bonds on the basis of a competitive bid, pursuant to the terms of a notice of sale, including bid form (the "Notice of Sale"), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such competitive sale of the Series 2017 Bonds in a manner consistent with this Supplemental Resolution and to utilize the services of the Authority's financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized to make public and to authorize the use and distribution by said purchasers or other appropriate parties of a preliminary official statement, offering circular, or other disclosure document (the "Preliminary Official Statement") in connection with each public offering or any direct or private placement of the Series 2017 Bonds, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, with such changes, omissions, insertions and revisions as such officer shall deem advisable. The Issuer authorizes any of said officers to deliver a certification to the effect that such Preliminary Official Statement or Official Statement, if deemed necessary or appropriate, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission as applicable.

Each Authorized Officer is hereby authorized to make public and to authorize distribution of a final Official Statement in substantially the form of each Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of such issue of the Series 2017 Bonds, such execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form appended to the Purchase Agreement or Notice of Sale, with such changes, omissions, insertions and revisions as such officer shall deem advisable (the “Continuing Disclosure Agreement”), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

The proceeds of each good faith check, if any, received by the Issuer from the purchasers of each issue of the Series 2017 Bonds under the terms of the related Purchase Agreement or Notice of Sale may be invested by the Issuer pending application of the proceeds of such good faith check for the purposes provided in Section 2.02 of this Supplemental Resolution at the time of the issuance and delivery of such Series 2017 Bonds.

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute, deliver, amend, replace or terminate any and all documents and instruments (including any remarketing agreements, dealer agreements, broker dealer agreements, tender agent agreements, or auction agency agreements, any investment agreements or arrangements, or any reimbursement agreements or documents or instruments relating to a Credit Facility deemed appropriate to a given form or mode of an Obligation) and to do and cause to be done any and all acts necessary or proper for carrying out each Purchase Agreement or Notice of Sale, the Continuing Disclosure Agreement, the terms of any Credit Facility or other such agreement or arrangement, and the issuance, sale and delivery of the Series 2017 Bonds and for implementing the terms of the Series 2017 Bonds and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

Section 2.11. Forms of Series 2017 Bonds and Trustee’s Authentication Certificate. Subject to the provisions of the Resolution, the form of registered Series 2017 Bonds, and the Trustee’s certificate of authentication, shall be substantially in the form set forth in Exhibit One to the Resolution including, if necessary, any changes to comply with the requirements of DTC or the provisions of this Supplemental Resolution or any Certificate of Determination.

Section 2.12. Appointment of Trustee and Paying Agent. Unless otherwise provided by any Certificate of Determination, The Bank of New York Mellon, as successor in interest to JPMorgan Chase Bank, N.A., shall be the Trustee under the Resolution and the Paying Agent for the Series 2017 Bonds.

ARTICLE III

DISPOSITION AND ALLOCATION OF SERIES 2017 BOND PROCEEDS

Section 3.01. Disposition and Allocation of Series 2017 Bond Proceeds. Any proceeds of the sale of the Series 2017 Bonds, other than accrued interest and capitalized interest, if any, shall be disposed of or applied, simultaneously with the issuance and delivery of the Series 2017 Bonds, in the following order, or shall otherwise be disposed of or applied pursuant to the related Certificate of Determination to:

1. the payment of Capital Costs or the payment of principal of and redemption premium, if any, and interest on the Series 2017 Notes; and
2. the balance of such proceeds, exclusive of accrued interest, shall be deposited in the Series 2017 Bond Proceeds Account which is hereby established in the Proceeds Fund and applied to the payment of Costs of Issuance or otherwise applied to the payment of Costs of Issuance.

Section 3.02. Unless otherwise provided in the related Certificate of Determination, the accrued interest and capitalized interest, if any, received on the sale of the Series 2017 Bonds shall be deposited in the Debt Service Fund.

ARTICLE IV

TAX COVENANT PROVISIONS AND DEFEASANCE

Section 4.01. Tax Covenants Relating to the Series 2017 Bonds. The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Series 2017 Bonds issued as Tax-Exempt Obligations, the Issuer will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to comply with such written instructions as may be provided by Bond Counsel. In furtherance of the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any "Arbitrage and Use of Proceeds Certificate" or "Tax Certificate" to be executed by the Issuer in connection with the execution and delivery of any Series 2017 Bonds issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer's failure to observe, or refusal to comply with, the above covenant (a) the Owners of the Series 2017 Bonds, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Owners or the Trustee under Section 702 of the Resolution, and (b) neither the Owners of the Obligations of any Series or holders of any Parity Debt (other than the Series 2017 Bonds or the Trustee acting on their behalf), nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to the Owners, the Parity Debt holders or the Trustee under the Resolution based upon the Issuer's failure to observe, or refusal to comply with, the above covenant.

Section 4.02. Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in the Resolution, all or less than all Outstanding Series 2017 Bonds issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of Article A-XI of the Resolution, the Series 2017 Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in Section A-1101 of the Resolution unless (i) the Issuer has confirmed in writing that the Owners of the Series 2017 Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an Opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the Series 2017 Bonds issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

**MULTIPLE SERIES 2017
GENERAL REVENUE BOND
SUPPLEMENTAL RESOLUTION**

Adopted December 14, 2016

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**MULTIPLE SERIES 2017
GENERAL REVENUE BOND
SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Triborough Bridge and Tunnel Authority (the “Issuer”), as follows:

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01 Supplemental Resolution. This resolution is supplemental to, and is adopted, in accordance with Article II and Article A-VIII of a resolution of the Issuer adopted on March 26, 2002, entitled “General Resolution Authorizing General Revenue Obligations” (the “Resolution”).

Section 1.02 Definitions.

1. All capitalized terms which are used but not otherwise defined in this Multiple Series 2017 General Revenue Bond Supplemental Resolution (the “Supplemental Resolution”) shall have the same meanings, respectively, as such terms are given by Section 102 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman and Chief Executive Officer, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean, when used with respect to the Issuer, the board of the Issuer acting as such pursuant to the provisions of the Issuer Act, and when used with respect to the MTA, the members of the MTA acting as such pursuant to the provisions of the MTA Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP or any other attorney or firm of attorneys of nationally recognized standing in the field of law relating to the issuance of obligations by state and municipal entities, selected by the Issuer.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

Section 1.03 Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

ARTICLE II

AUTHORIZATION OF SERIES 2017 BONDS

Section 2.01 Authorized Principal Amount, Designation and Series. Pursuant to the provisions of the Resolution and in order to finance Capital Costs, multiple Series of General Revenue Obligations (which may be issued at one time or from time to time in any number of Series or subseries, which for purposes of this Supplemental Resolution shall collectively be referred to herein as the “Series 2017 Bonds”, constituting Capital Cost Obligations, subject to redesignation as hereinafter provided) entitled to the benefit, protection and security of such provisions are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount and underwriters’ discount from the principal amount, the amount to be deposited in the Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of the amount so deposited therein determined in the related Certificate of Determination as estimated to be necessary to pay capitalized interest or to pay any Costs of Issuance of the Series 2017 Bonds) shall not exceed the amount or amounts determined in one or more Certificates of Determination to be necessary to effectuate the purposes set forth in Section 2.02 hereof; provided, however, that the Series 2017 Bonds issued to finance Capital Costs shall not exceed \$300 million reduced by the amount of bonds then Outstanding issued under the Triborough Bridge and Tunnel Authority Multiple Series 2001 Subordinate Revenue Bond Supplemental Resolution, adopted December 14, 2016 (excluding all amounts excluded above, such as net original issue discount, underwriters’ discounts, capitalized interest and Costs of Issuance). For all purposes of this Section 2.01, net original issue premium as determined to be advisable by an Authorized Officer in connection with the marketing of the Series 2017 Bonds, shall not be counted.

Series 2017 Bonds shall be designated as, and shall be distinguished from the Obligations of all other Series by the title, “General Revenue Bonds, Series 2017” or such other title or titles set forth in one or more Certificates of Determination.

The authority to issue Obligations and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization to issue the Series 2017 Bonds shall continue in effect until the adoption by the Issuer Board of a subsequent new money bond issuance supplemental resolution relating to 2018 new money financings.

Section 2.02 Purposes. The purposes for which the Series 2017 Bonds are issued shall be set forth in one or more Certificates of Determination and shall include the payment of all or any part of the Capital Costs, all to the extent and in the manner provided in this Supplemental Resolution.

Section 2.03 Dates, Maturities, Principal Amounts and Interest. The Series 2017 Bonds, except as otherwise provided in the Resolution, shall be dated the date or dates determined in the related Certificate of Determination. The Series 2017 Bonds shall mature on the date or dates and in the year or years and principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, specified in or determined in the manner provided in the related Certificate of Determination.

Section 2.04 Interest Payments. The Series 2017 Bonds shall bear interest from their date or dates and be payable on such date or dates as may be determined pursuant to the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, interest on the Series 2017 Bonds shall be computed on the basis of twelve (12) 30-day months and a 360-day year.

Section 2.05 Denominations, Numbers and Letters. Unless otherwise provided in the related Certificate of Determination, the Series 2017 Bonds shall be issued in fully registered form without coupons in the denomination of \$5,000 or any integral multiple thereof.

The Series 2017 Bonds shall be lettered and numbered as provided in the related Certificate of Determination.

Section 2.06 Places of Payment and Paying Agent. Except as otherwise provided in the related Certificate of Determination, principal and Redemption Price of the Series 2017 Bonds shall be payable to the registered owner of each Series 2017 Bond when due upon presentation of such Series 2017 Bond at the principal corporate trust office of the Trustee. Except as otherwise provided in the related Certificate of Determination, interest on the registered Series 2017 Bonds will be paid by check or draft mailed on the interest payment date by the Paying Agent, to the registered owner at his address as it appears on the registration books or, at the option of any Owner of at least one million dollars (\$1,000,000) in principal amount of the Series 2017 Bonds, by wire transfer in immediately available funds on each interest payment date to such Owner thereof upon written notice from such Owner to the Trustee, at such address as the Trustee may from time to time notify such Owner, containing the wire transfer address (which shall be in the continental United States) to which such Owner wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

Section 2.07 Sinking Fund Installments. The Series 2017 Bonds, if any, determined in the related Certificate of Determination shall be subject to redemption in part, by lot, or otherwise as determined in accordance with Section A-404 of the Resolution, on each date in the year or years determined in the related Certificate of Determination at the principal amount thereof plus accrued interest up to but not including the date of redemption thereof, from mandatory Sinking Fund Installments which are required to be made in amounts sufficient to redeem on each such date the principal amount of such Series 2017 Bonds.

Section 2.08 Redemption Prices and Terms. The Series 2017 Bonds may also be subject to redemption prior to maturity, at the option of the Issuer, upon notice as provided in Article A-IV of the Resolution, at any time as a whole or in part (and by lot within a maturity, or otherwise as determined in accordance with Section A-404 of the Resolution, if less than all of a maturity is to be redeemed), from maturities designated by the Issuer on and after the date and in the years and at the Redemption Prices (expressed as a percentage of principal amount) determined in the related Certificate of Determination, plus accrued interest up to but not including the redemption date. Notwithstanding the foregoing, in the case of taxable Series 2017 Bonds, if set forth in the Certificate of Determination, the taxable Series 2017 Bonds may be made subject to pro rata redemption and/or a make-whole redemption premium.

Section 2.09 Delegation to an Authorized Officer. 1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Series 2017 Bonds:

(a) to determine whether and when to issue any Series 2017 Bonds constituting Capital Cost Obligations, the amount of the Series 2017 Bonds to be applied to finance Capital Costs, and the amount of the proceeds of the Series 2017 Bonds, estimated to be necessary to pay the Costs of Issuance of the Series 2017 Bonds and capitalized interest, if any;

(b) to determine the purpose or purposes for which the Series 2017 Bonds are being issued, which shall be one or more of the purposes set forth in Section 2.02 of this Supplemental Resolution;

(c) to determine the principal amounts of the Series 2017 Bonds to be issued for the purposes set forth in Section 2.02 of this Supplemental Resolution and whether such principal amounts constitute a separate Series or a subseries of Series 2017 Bonds, which principal amounts (and the aggregate of all such Series and subseries) shall not exceed the principal amounts permitted by Section 2.01 of this Supplemental Resolution, and to determine Accreted Values and Appreciated Values, if applicable;

(d) to determine the maturity date and principal amount of each maturity of the Series 2017 Bonds and the amount and due date of each Sinking Fund Installment, if any;

(e) to determine the date or dates which the Series 2017 Bonds shall be dated and the interest rate or rates of the Series 2017 Bonds or the manner of determining such interest rate or rates; provided, however, that any Series 2017 Bonds issued as fixed rate Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 10% per annum, any Series 2017 Bonds issued as fixed rate Taxable Obligations shall be subject to a maximum interest rate of not greater than 12% per annum, any Variable Interest Rate Obligations issued as Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 15% per annum, any Variable Interest Rate Obligations issued as Taxable Obligations shall be subject to a maximum interest rate of not greater than 18% per annum and any Parity Reimbursement Obligations shall be subject to a maximum interest rate of not greater than 25% per annum, or, in each such case, such higher rate or rates as determined by the Issuer's Board;

(f) to determine the Redemption Price or Redemption Prices, if any and the redemption terms, if any, for the Series 2017 Bonds; provided, however, that if the Series 2017 Bonds are to be redeemable at the election of the Issuer, the Redemption Price (except in the case of taxable Series 2017 Bonds) shall not be greater than one hundred three percent (103%) of the principal amount of the Series 2017 Bonds to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Series 2017 Bonds the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make-whole redemption;

(g) to determine whether the sale of the Series 2017 Bonds shall be conducted on either a negotiated or competitive bid basis and, as applicable, to determine the purchase price for the Series 2017 Bonds to be paid by the purchaser or purchasers referred to in one or more

Purchase Agreements or a bank direct purchase agreement or the purchase price for the Series 2017 Bonds to be paid by the winning bidder, if such sale is conducted by competitive bid pursuant to a Notice of Sale (as hereinafter defined), in either case as such document is described in Section 2.10 of this Supplemental Resolution, which may include such original issue discount and original issue premium as shall be determined in the related Certificate of Determination; provided, however, that the underwriters' discount reflected in such purchase price shall not exceed \$10.00 for each one thousand dollars (\$1,000) principal amount of the Series 2017 Bonds;

(h) to take all actions required for the Series 2017 Bonds to be eligible under the rules and regulations of The Depository Trust Company ("DTC") for investment and trading as uncertificated securities, to execute and deliver a standard form of letter of representation with DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in the related Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Series 2017 Bonds issuable in fully registered form;

(i) to determine whether to issue all or any portion of the Series 2017 Bonds as Tax-Exempt Obligations, Taxable Obligations, Put Obligations, Variable Interest Rate Obligations or as any other form of Obligations permitted by the Resolution and any matters related thereto, including (i) the terms and provisions of any such Series 2017 Bonds, (ii) the selection of remarketing agents, tender agents, calculation agents, auction agents, dealers, bidding, agents or any other agents or parties to ancillary arrangements and the terms of any such arrangements, and (iii) the methods for determining the accrual of Debt Service;

(j) to determine the advisability, as compared to an unenhanced transaction, of obtaining one or more Credit Facilities, to select a provider or providers thereof and to determine and accept the terms and provisions and price thereof, to determine such other matters related thereto as in the opinion of the officer executing the related Certificate of Determination shall be considered necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by Credit Facility providers, if any, or required by a Rating Agency in order to attain or maintain specific ratings on the Series 2017 Bonds, or relating to the mechanisms for the repayment of amounts advanced thereunder or payment of fees, premiums, expenses or any other amounts, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature necessary or appropriate to obtain or implement a Credit Facility with respect to the Series 2017 Bonds, and to make any changes in connection therewith;

(k) to make such changes in or from the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Series 2017 Bonds;

(l) to make such changes in or from the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects; and

(m) to determine such other matters specified in or permitted by (i) Sections 202, 203, and A-201 of the Resolution or (ii) this Supplemental Resolution, including preparation of any documentation therefor.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Series 2017 Bonds are delivered from time to time, or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee prior to the authentication and delivery of the respective Series or subseries of Series 2017 Bonds by the Trustee or other documentation. Determinations set forth in the related Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Series 2017 Bonds, as appropriate for any purposes, including, in order to change interest rate modes or auction periods, obtain a substitute or additional Credit Facility, enter into a bank direct purchase agreement or similar instrument, or to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale.

Section 2.10 Sale of Series 2017 Bonds. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Series 2017 Bonds through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the Series 2017 Bonds; (ii) to sell and award all or any portion of the Series 2017 Bonds through a negotiated sale to the purchasers who are referred to in the bond purchase agreement and who shall be selected from the then current list of approved underwriters; or (iii) to sell and award all or any portion of the Series 2017 Bonds through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement. Each Authorized Officer is hereby authorized to sell and award the Series 2017 Bonds to the purchasers referred to in the preceding sentence in the case of a bond purchase agreement, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, or, with respect to a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Series 2017 Bonds as may be approved by the officer executing the bond purchase, continuing covenant or similar agreement (each, a "Purchase Agreement"). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the officer executing the Purchase Agreement or Agreements,

said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters.

If it is determined that any sale of Series 2017 Bonds shall be conducted on a competitive bid basis each Authorized Officer is hereby further authorized to conduct the sale and award of the Series 2017 Bonds on the basis of a competitive bid, pursuant to the terms of a notice of sale, including bid form (the "Notice of Sale"), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such competitive sale of the Series 2017 Bonds in a manner consistent with this Supplemental Resolution and to utilize the services of the Authority's financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized to make public and to authorize the use and distribution by said purchasers or other appropriate parties of a preliminary official statement, offering circular, or other disclosure document (the "Preliminary Official Statement") in connection with each public offering or any direct or private placement of the Series 2017 Bonds, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, with such changes, omissions, insertions and revisions as such officer shall deem advisable. The Issuer authorizes any of said officers to deliver a certification to the effect that such Preliminary Official Statement or Official Statement, if deemed necessary or appropriate, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission as applicable.

Each Authorized Officer is hereby authorized to make public and to authorize distribution of a final Official Statement in substantially the form of each Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of such issue of the Series 2017 Bonds, such execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form appended to the Purchase Agreement or Notice of Sale, with such changes, omissions, insertions and revisions as such officer shall deem advisable (the "Continuing Disclosure Agreement"), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

The proceeds of each good faith check, if any, received by the Issuer from the purchasers of each issue of the Series 2017 Bonds under the terms of the related Purchase Agreement or Notice of Sale may be invested by the Issuer pending application of the proceeds of such good faith check for the purposes provided in Section 2.02 of this Supplemental Resolution at the time of the issuance and delivery of such Series 2017 Bonds.

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute, deliver, amend, replace or terminate any and all documents and instruments (including any remarketing agreements, dealer agreements, broker-dealer agreements, tender agent agreements, or auction agency agreements, any investment agreements or arrangements, or any reimbursement agreements or documents or instruments relating to a Credit Facility deemed appropriate to a given form or mode of an Obligation) and to do and cause to be done any and all acts necessary or proper for carrying out each Purchase Agreement or Notice of Sale, each Continuing Disclosure Agreement, the terms of any Credit Facility or other such agreement or arrangement, and the issuance, sale and delivery of each issue of the Series 2017 Bonds and for implementing the terms of each issue of the Series 2017 Bonds and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

Section 2.11 Forms of Series 2017 Bonds and Trustee's Authentication Certificate. Subject to the provisions of the Resolution, the form of registered Series 2017 Bonds, and the Trustee's certificate of authentication, shall be substantially in the form set forth in Exhibit One to the Resolution including, if necessary, any changes to comply with the requirements of DTC or the provisions of this Supplemental Resolution or the related Certificate of Determination.

Section 2.12 Appointment of Trustee and Paying Agent. Unless otherwise provided in the related Certificate of Determination, U.S. Bank Trust National Association shall be the Trustee under the Resolution and the Paying Agent for the Series 2017 Bonds.

ARTICLE III

DISPOSITION OF SERIES 2017 BOND PROCEEDS

Section 3.01 Disposition of Series 2017 Bond Proceeds. Any proceeds of the sale of the Series 2017 Bonds, other than accrued interest and capitalized interest, if any, shall be deposited, simultaneously with the issuance and delivery of the Series 2017 Bonds, at one time or from time to time in one or more Series or subseries, in the Proceeds Account which is deemed to be established for each Series in the Proceeds Fund to be applied, or shall otherwise be applied pursuant to a Certificate of Determination to:

- (a) the payment of all or any part of the Capital Costs; and
- (b) the balance of such proceeds, exclusive of accrued interest, shall be deposited in the COI Account and applied to the payment of Costs of Issuance or otherwise applied to the payment of Costs of Issuance.

Unless otherwise provided in the related Certificate of Determination, accrued interest and capitalized interest, if any, received on the sale of the Series 2017 Bonds shall be deposited in the Debt Service Fund.

ARTICLE IV

TAX COVENANTS AND DEFEASANCE

Section 4.01 Tax Covenants Relating to the Series 2017 Bonds. The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Series 2017 Bonds issued as Tax-Exempt Obligations, the Issuer will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to comply with such written instructions as may be provided by Bond Counsel. In furtherance of the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any “Arbitrage and Use of Proceeds Certificate” or “Tax Certificate” to be executed by the Issuer in connection with the execution and delivery of any Series 2017 Bonds issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer’s failure to observe, or refusal to comply with the above covenant (a) the Owners of the Series 2017 Bonds, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Owners or the Trustee under Section 702 of the Resolution, other than the right (which is hereby abrogated solely as to the Issuer’s failure to observe, or refusal to comply with the above covenant) to declare the principal of all Obligations then Outstanding, and the interest accrued thereon, to be due and payable pursuant to Section 567 of the Issuer Act, and (b) neither the Owners of the Obligations of any Series or holders of any Parity Debt (other than the Series 2017 Bonds or the Trustee acting on their behalf), nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to the Owners, the Parity Debt holders or the Trustee under the Resolution based upon the Issuer’s failure to observe, or refusal to comply with, the above covenant.

The provisions of the foregoing covenants set forth in this Section shall not apply to any Series 2017 Bonds, including any subseries thereof, which the Issuer determines pursuant to the applicable Certificate of Determination to issue as Taxable Obligations.

Section 4.02 Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in the Resolution, all or less than all Outstanding Series 2017 Bonds issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of Article A-XI of the Resolution, the Series 2017 Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in Section A-1101 of the Resolution unless (i) the Issuer has confirmed in writing that the Owners of the Series 2017 Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an Opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the Series 2017 Bonds issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

**MULTIPLE SERIES 2001
SUBORDINATE REVENUE BOND
SUPPLEMENTAL RESOLUTION**

Adopted December 14, 2016

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**MULTIPLE SERIES 2001
SUBORDINATE REVENUE BOND
SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Triborough Bridge and Tunnel Authority (the “Issuer”), as follows:

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01 Supplemental Resolution. This resolution is supplemental to, and is adopted, in accordance with Article II and Article A-VIII of a resolution of the Issuer adopted on March 26, 2002, entitled “2001 Subordinate Revenue Resolution Authorizing Subordinate Revenue Obligations” (the “Resolution”).

Section 1.02 Definitions.

1. All capitalized terms which are used but not otherwise defined in this Multiple Series 2001 Subordinate Revenue Bond Supplemental Resolution (the “Supplemental Resolution”) shall have the same meanings, respectively, as such terms are given by Section 102 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman and Chief Executive Officer, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean, when used with respect to the Issuer, the board of the Issuer acting as such pursuant to the provisions of the Issuer Act, and when used with respect to the MTA, the members of the MTA acting as such pursuant to the provisions of the MTA Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP or any other attorney or firm of attorneys of nationally recognized standing in the field of law relating to the issuance of obligations by state and municipal entities, selected by the Issuer.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

Section 1.03 Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

ARTICLE II

AUTHORIZATION OF SERIES 2017 BONDS

Section 2.01 Authorized Principal Amount, Designation and Series. Pursuant to the provisions of the Resolution and in order to finance Capital Costs, multiple Series of Subordinate Revenue Obligations (which may be issued at one time or from time to time in any number of Series or subseries, which for purposes of this Supplemental Resolution shall collectively be referred to herein as the “Series 2017 Bonds”, constituting Capital Cost Subordinate Revenue Obligations, subject to redesignation as hereinafter provided) entitled to the benefit, protection and security of such provisions are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount and underwriters’ discount from the principal amount, the amount to be deposited in the Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of the amount so deposited therein determined in the related Certificate of Determination as estimated to be necessary to pay capitalized interest or to pay any Costs of Issuance of the Series 2017 Bonds) shall not exceed the amount or amounts determined in one or more Certificates of Determination to be necessary to effectuate the purposes set forth in Section 2.02 hereof; provided, however, that the Series 2017 Bonds issued to finance Capital Costs shall not exceed \$300 million, reduced by the amount of bonds then Outstanding issued under the Triborough Bridge and Tunnel Authority Multiple Series 2017 General Revenue Bond Supplemental Resolution, adopted December 14, 2016 (excluding all amounts excluded above, such as net original issue discount, underwriters’ discounts, capitalized interest and Costs of Issuance). For all purposes of this Section 2.01, net original issue premium as determined to be advisable by an Authorized Officer in connection with the marketing of the Series 2017 Bonds, shall not be counted.

Series 2017 Bonds shall be designated as, and shall be distinguished from the Obligations of all other Series by the title, “Subordinate Revenue Bonds, Series 2017” or such other title or titles set forth in one or more Certificates of Determination.

The authority to issue Obligations and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization to issue the Series 2017 Bonds shall continue in effect until the adoption by the Issuer Board of a subsequent new money bond issuance supplemental resolution relating to 2018 new money financings.

Section 2.02 Purposes. The purposes for which the Series 2017 Bonds are issued shall be set forth in one or more Certificates of Determination and shall include the payment of all or any part of the Capital Costs, all to the extent and in the manner provided in this Supplemental Resolution.

Section 2.03 Dates, Maturities, Principal Amounts and Interest. The Series 2017 Bonds, except as otherwise provided in the Resolution, shall be dated the date or dates determined in the related Certificate of Determination. The Series 2017 Bonds shall mature on the date or dates and in the year or years and principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, specified in or determined in the manner provided in the related Certificate of Determination.

Section 2.04 Interest Payments. The Series 2017 Bonds shall bear interest from their date or dates and be payable on such date or dates as may be determined pursuant to the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, interest on the Series 2017 Bonds shall be computed on the basis of twelve (12) 30-day months and a 360-day year.

Section 2.05 Denominations, Numbers and Letters. Unless otherwise provided in the related Certificate of Determination, the Series 2017 Bonds shall be issued in fully registered form without coupons in the denomination of \$5,000 or any integral multiple thereof.

The Series 2017 Bonds shall be lettered and numbered as provided in the related Certificate of Determination.

Section 2.06 Places of Payment and Paying Agent. Except as otherwise provided in the related Certificate of Determination, principal and Redemption Price of the Series 2017 Bonds shall be payable to the registered owner of each Series 2017 Bond when due upon presentation of such Series 2017 Bond at the principal corporate trust office of the Trustee. Except as otherwise provided in the related Certificate of Determination, interest on the registered Series 2017 Bonds will be paid by check or draft mailed on the interest payment date by the Paying Agent, to the registered owner at his address as it appears on the registration books or, at the option of any Owner of at least one million dollars (\$1,000,000) in principal amount of the Series 2017 Bonds, by wire transfer in immediately available funds on each interest payment date to such Owner thereof upon written notice from such Owner to the Trustee, at such address as the Trustee may from time to time notify such Owner, containing the wire transfer address (which shall be in the continental United States) to which such Owner wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

Section 2.07 Sinking Fund Installments. The Series 2017 Bonds, if any, determined in the related Certificate of Determination shall be subject to redemption in part, by lot, or otherwise as determined in accordance with Section A-404 of the Resolution, on each date in the year or years determined in the related Certificate of Determination at the principal amount thereof plus accrued interest up to but not including the date of redemption thereof, from mandatory Sinking Fund Installments which are required to be made in amounts sufficient to redeem on each such date the principal amount of such Series 2017 Bonds.

Section 2.08 Redemption Prices and Terms. The Series 2017 Bonds may also be subject to redemption prior to maturity, at the option of the Issuer, upon notice as provided in Article A-IV of the Resolution, at any time as a whole or in part (and by lot within a maturity, or otherwise as determined in accordance with Section A-404 of the Resolution, if less than all of a maturity is to be redeemed), from maturities designated by the Issuer on and after the date and in the years and at the Redemption Prices (expressed as a percentage of principal amount) determined in the related Certificate of Determination, plus accrued interest up to but not including the redemption date. Notwithstanding the foregoing, in the case of taxable Series 2017 Bonds, if set forth in the Certificate of Determination, the taxable Series 2017 Bonds may be made subject to pro rata redemption and/or a make-whole redemption premium.

Section 2.09 Delegation to an Authorized Officer. 1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Series 2017 Bonds:

(a) to determine whether and when to issue any Series 2017 Bonds constituting Capital Cost Subordinate Revenue Obligations, the amount of the Series 2017 Bonds to be applied to finance Capital Costs, and the amount of the proceeds of the Series 2017 Bonds, estimated to be necessary to pay the Costs of Issuance of the Series 2017 Bonds and capitalized interest, if any;

(b) to determine the purpose or purposes for which the Series 2017 Bonds are being issued, which shall be one or more of the purposes set forth in Section 2.02 of this Supplemental Resolution;

(c) to determine the principal amounts of the Series 2017 Bonds to be issued for the purposes set forth in Section 2.02 of this Supplemental Resolution and whether such principal amounts constitute a separate Series or a subseries of Series 2017 Bonds, which principal amounts (and the aggregate of all such Series and subseries) shall not exceed the principal amounts permitted by Section 2.01 of this Supplemental Resolution, and to determine Accreted Values and Appreciated Values, if applicable;

(d) to determine the maturity date and principal amount of each maturity of the Series 2017 Bonds and the amount and due date of each Sinking Fund Installment, if any;

(e) to determine the date or dates which the Series 2017 Bonds shall be dated and the interest rate or rates of the Series 2017 Bonds or the manner of determining such interest rate or rates; provided, however, that any Series 2017 Bonds issued as fixed rate Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 10% per annum, any Series 2017 Bonds issued as fixed rate Taxable Obligations shall be subject to a maximum interest rate of not greater than 12% per annum, any Variable Interest Rate Obligations issued as Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 15% per annum, any Variable Interest Rate Obligations issued as Taxable Obligations shall be subject to a maximum interest rate of not greater than 18% per annum and any Parity Reimbursement Obligations shall be subject to a maximum interest rate of not greater than 25% per annum, or, in each such case, such higher rate or rates as determined by the Issuer's Board;

(f) to determine the Redemption Price or Redemption Prices, if any, and the redemption terms, if any, for the Series 2017 Bonds; provided, however, that if the Series 2017 Bonds are to be redeemable at the election of the Issuer, the Redemption Price (except in the case of taxable Series 2017 Bonds) shall not be greater than one hundred three percent (103%) of the principal amount of the Series 2017 Bonds to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Series 2017 Bonds the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make-whole redemption;

(g) to determine whether the sale of the Series 2017 Bonds shall be conducted on either a negotiated or competitive bid basis and, as applicable, to determine the purchase price for the Series 2017 Bonds to be paid by the purchaser or purchasers referred to in one or more

Purchase Agreements or a bank direct purchase agreement or the purchase price for the Series 2017 Bonds to be paid by the winning bidder, if such sale is conducted by competitive bid pursuant to a Notice of Sale (as hereinafter defined), in either case as such document is described in Section 2.10 of this Supplemental Resolution, which may include such original issue discount and original issue premium as shall be determined in the related Certificate of Determination; provided, however, that the underwriters' discount reflected in such purchase price shall not exceed \$10.00 for each one thousand dollars (\$1,000) principal amount of the Series 2017 Bonds;

(h) to take all actions required for the Series 2017 Bonds to be eligible under the rules and regulations of The Depository Trust Company ("DTC") for investment and trading as uncertificated securities, to execute and deliver a standard form of letter of representation with DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in the related Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Series 2017 Bonds issuable in fully registered form;

(i) to determine whether to issue all or any portion of the Series 2017 Bonds as Tax-Exempt Obligations, Taxable Obligations, Put Obligations, Variable Interest Rate Obligations or as any other form of Obligations permitted by the Resolution and any matters related thereto, including (i) the terms and provisions of any such Series 2017 Bonds, (ii) the selection of remarketing agents, tender agents, calculation agents, auction agents, dealers, bidding, agents or any other agents or parties to ancillary arrangements and the terms of any such arrangements, and (iii) the methods for determining the accrual of Debt Service;

(j) to determine the advisability, as compared to an unenhanced transaction, of obtaining one or more Credit Facilities, to select a provider or providers thereof and to determine and accept the terms and provisions and price thereof, to determine such other matters related thereto as in the opinion of the officer executing the related Certificate of Determination shall be considered necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by Credit Facility providers, if any, or required by a Rating Agency in order to attain or maintain specific ratings on the Series 2017 Bonds, or relating to the mechanisms for the repayment of amounts advanced thereunder or payment of fees, premiums, expenses or any other amounts, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature necessary or appropriate to obtain or implement a Credit Facility with respect to the Series 2017 Bonds, and to make any changes in connection therewith;

(k) to make such changes in or from the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Series 2017 Bonds; and

(l) to make such changes in or from the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects; and

(m) to determine such other matters specified in or permitted by (i) Sections 202, 203, and A-201 of the Resolution or (ii) this Supplemental Resolution, including preparation of any documentation therefor.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Series 2017 Bonds are delivered from time to time, or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee prior to the authentication and delivery of the respective Series or subseries of Series 2017 Bonds by the Trustee or other documentation. Determinations set forth in the related Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Series 2017 Bonds, as appropriate for any purposes, including, in order to change interest rate modes or auction periods, obtain a substitute or additional Credit Facility, enter into a bank direct purchase agreement or similar instrument, or to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale.

Section 2.10 Sale of Series 2017 Bonds. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Series 2017 Bonds through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the Series 2017 Bonds; (ii) to sell and award all or any portion of the Series 2017 Bonds through a negotiated sale to the purchasers who are referred to in the bond purchase agreement and who shall be selected from the then current list of approved underwriters; or (iii) to sell and award all or any portion of the Series 2017 Bonds through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement. Each Authorized Officer is hereby authorized to sell and award the Series 2017 Bonds to the purchasers referred to in the preceding sentence in the case of a bond purchase agreement, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, or, with respect to a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Series 2017 Bonds as may be approved by the officer executing the bond purchase, continuing covenant or similar agreement (each, a "Purchase Agreement"). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the officer executing the Purchase Agreement or Agreements, said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters.

If it is determined that any sale of Series 2017 Bonds shall be conducted on a competitive bid basis each Authorized Officer is hereby further authorized to conduct the sale and award of the Series 2017 Bonds on the basis of a competitive bid, pursuant to the terms of a notice of sale,

including bid form (the “Notice of Sale”), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such competitive sale of the Series 2017 Bonds in a manner consistent with this Supplemental Resolution and to utilize the services of the Authority’s financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized to make public and to authorize the use and distribution by said purchasers or other appropriate parties of a preliminary official statement, offering circular, or other disclosure document (the “Preliminary Official Statement”) in connection with each public offering or any direct or private placement of the Series 2017 Bonds, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, with such changes, omissions, insertions and revisions as such officer shall deem advisable. The Issuer authorizes any of said officers to deliver a certification to the effect that such Preliminary Official Statement or Official Statement, if deemed necessary or appropriate, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission as applicable.

Each Authorized Officer is hereby authorized to make public and to authorize distribution of a final Official Statement in substantially the form of each Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of such issue of the Series 2017 Bonds, such execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form appended to the Purchase Agreement or Notice of Sale, with such changes, omissions, insertions and revisions as such officer shall deem advisable (the “Continuing Disclosure Agreement”), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

The proceeds of each good faith check, if any, received by the Issuer from the purchasers of each issue of the Series 2017 Bonds under the terms of the related Purchase Agreement or Notice of Sale may be invested by the Issuer pending application of the proceeds of such good faith check for the purposes provided in Section 2.02 of this Supplemental Resolution at the time of the issuance and delivery of such Series 2017 Bonds.

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute, deliver, amend, replace or terminate any and all documents and instruments (including any remarketing agreements, dealer agreements, broker-dealer agreements, tender agent agreements, or auction agency agreements, any investment agreements or arrangements, or any reimbursement agreements or documents or instruments relating to a Credit Facility deemed appropriate to a given form or mode of an Obligation) and to do and

cause to be done any and all acts necessary or proper for carrying out each Purchase Agreement or Notice of Sale, each Continuing Disclosure Agreement, the terms of any Credit Facility or other such agreement or arrangement, and the issuance, sale and delivery of each issue of the Series 2017 Bonds and for implementing the terms of each issue of the Series 2017 Bonds and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

Section 2.11 Forms of Series 2017 Bonds and Trustee's Authentication Certificate. Subject to the provisions of the Resolution, the form of registered Series 2017 Bonds, and the Trustee's certificate of authentication, shall be substantially in the form set forth in Exhibit One to the Resolution including, if necessary, any changes to comply with the requirements of DTC or the provisions of this Supplemental Resolution or the related Certificate of Determination.

Section 2.12 Appointment of Trustee and Paying Agent. Unless otherwise provided in the related Certificate of Determination, The Bank of New York Mellon, as successor in interest to JPMorgan Chase Bank, N.A., shall be the Trustee under the Resolution and the Paying Agent for the Series 2017 Bonds.

ARTICLE III

DISPOSITION OF SERIES 2017 BOND PROCEEDS

Section 3.01 Disposition of Series 2017 Bond Proceeds. Any proceeds of the sale of the Series 2017 Bonds, other than accrued interest and capitalized interest, if any, shall be deposited, simultaneously with the issuance and delivery of the Series 2017 Bonds, at one time or from time to time in one or more Series or subseries, in the Proceeds Account which is deemed to be established for each Series in the Proceeds Fund to be applied, or shall otherwise be applied pursuant to a Certificate of Determination to:

- (a) the payment of all or any part of the Capital Costs; and
- (b) the balance of such proceeds, exclusive of accrued interest, shall be deposited in the COI Account and applied to the payment of Costs of Issuance or otherwise applied to the payment of Costs of Issuance.

Unless otherwise provided in the related Certificate of Determination, accrued interest and capitalized interest, if any, received on the sale of the Series 2017 Bonds shall be deposited in the Debt Service Fund.

ARTICLE IV

TAX COVENANTS AND DEFEASANCE

Section 4.01 Tax Covenants Relating to the Series 2017 Bonds. The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Series 2017 Bonds issued as Tax-Exempt Obligations, the Issuer

will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to comply with such written instructions as may be provided by Bond Counsel. In furtherance of the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any "Arbitrage and Use of Proceeds Certificate" or "Tax Certificate" to be executed by the Issuer in connection with the execution and delivery of any Series 2017 Bonds issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer's failure to observe, or refusal to comply with the above covenant (a) the Owners of the Series 2017 Bonds, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Owners or the Trustee under Section 702 of the Resolution, other than the right (which is hereby abrogated solely as to the Issuer's failure to observe, or refusal to comply with the above covenant) to declare the principal of all Obligations then Outstanding, and the interest accrued thereon, to be due and payable pursuant to Section 567 of the Issuer Act, and (b) neither the Owners of the Obligations of any Series or holders of any Parity Debt (other than the Series 2017 Bonds or the Trustee acting on their behalf), nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to the Owners, the Parity Debt holders or the Trustee under the Resolution based upon the Issuer's failure to observe, or refusal to comply with, the above covenant.

The provisions of the foregoing covenants set forth in this Section shall not apply to any Series 2017 Bonds, including any subseries thereof, which the Issuer determines pursuant to the applicable Certificate of Determination to issue as Taxable Obligations.

Section 4.02 Additional Covenants.



1. The Issuer covenants and agrees that it will not issue any Senior Obligations under the Senior Resolution (other than pursuant to Section 205 thereof) unless in addition to satisfying the requirements of the Senior Resolution, an Authorized Officer delivers to the trustee under the Senior Resolution a certificate demonstrating that for any period of 12 consecutive calendar months out of the 18 complete calendar months next preceding the date of authentication and delivery such issue of Senior Obligations, Net Revenues are at least equal to 1.10 times the Combined Maximum Annual Calculated Debt Service for all Subordinate Revenue Obligations, Parity Debt, Senior Obligations and Senior Parity Debt.



2. The Issuer covenants and agrees that in addition to complying with the provisions of Section 604 of the Resolution, the Issuer shall at all times 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 the Issuer 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 (a) an amount equal to the sum of amounts necessary in such calendar year (i) to pay all Operating Expenses of the Issuer, plus (ii) to pay the sum of Calculated Debt Service as defined in the Resolution and Calculated Debt Service as defined in the Senior Resolution, plus (iii) to maintain any reserve established by the Issuer pursuant to the

Senior Resolution, in such amount as may be determined from time to time by an Authorized Officer in his or her judgment, or (b) an amount such that Revenues less Operating Expenses shall equal at least 1.10 times the sum of Calculated Debt Service as defined in the Senior Resolution and Calculated Debt Service as defined in the Resolution for such calendar year.

Section 4.03 Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in the Resolution, all or less than all Outstanding Series 2017 Bonds issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of Article A-XI of the Resolution, the Series 2017 Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in Section A-1101 of the Resolution unless (i) the Issuer has confirmed in writing that the Owners of the Series 2017 Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an Opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the Series 2017 Bonds issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

Staff Summary

Subject Authorization to Issue Transportation Revenue Refunding Bonds, Dedicated Tax Fund Refunding Bonds, Triborough Bridge and Tunnel Authority General Revenue Refunding Bonds and Subordinate Revenue Refunding Bonds	Date December 14, 2016
Department Finance	Vendor Name N/A
Department Head Name Robert E. Foran, Chief Financial Officer	Contract Number
Department Head Signature 	Contract Manager Name
Project Manager Name Patrick McCoy, Director of Finance 	Table of Contents Ref #

Board Action						Internal Approvals			
Order	To	Date	Approval	Info	Other	Order	Approval	Order	Approval
1	Finance Comm.	12/12	X			1	Legal 	2	Chief of Staff 
2	Board	12/14	X						

PURPOSE:

The MTA Finance Department is seeking MTA and TBTA Board authorization and approval of the necessary documentation to issue refunding bonds, from time to time, subject, if applicable, to the refunding policy attached hereto adopted by the Board in May, 2010, as amended from time to time, and provided that the MTA Chief Financial Officer or the MTA Director, Finance makes a determination that the refunding of such bonds or other obligations will be beneficial to the obligors thereof and/or their affiliates and subsidiaries. The MTA Finance Department is also seeking authority to allow for a portion of the Transportation Revenue Refunding Bonds and Dedicated Tax Fund Refunding Revenue Bonds to be issued as variable rate securities to refund bonds that already meet the refunding policy requirements based on a fixed rate refunding. MTA's portfolio of outstanding indebtedness is \$37.1 billion (exclusive of State Service Contract Bonds, which debt service is paid by the State).

DISCUSSION:

MTA and TBTA Board approval is sought for the following resolutions, documents and activities in connection with the issuance of refunding bonds:

- MTA Multiple Series Transportation Revenue Refunding Bond Supplemental Resolution (2017) authorizing Metropolitan Transportation Authority Transportation Revenue Refunding Obligations, including providing for the issuance of the following:
 - Parity Reimbursement Obligations and Parity Debt in an amount sufficient to secure any Credit Facilities entered into in connection with the issuance of the Transportation Revenue Refunding Obligations.
- MTA Multiple Series Dedicated Tax Fund Refunding Bond Supplemental Resolution (2017) authorizing Metropolitan Transportation Authority Dedicated Tax Fund Refunding Obligations, including providing for the issuance of the following:

- Parity Reimbursement Obligations and Parity Debt in an amount sufficient to secure any Credit Facilities entered into in connection with the issuance of the Dedicated Tax Fund Revenue Refunding Obligations.
- TBTA Multiple Series General Revenue Refunding Bond Supplemental Resolution (2017) authorizing Triborough Bridge and Tunnel Authority General Revenue Refunding Obligations, including providing for the issuance of the following:
 - Parity Reimbursement Obligations and other Parity Debt in an amount sufficient to secure any Credit Facilities entered into in connection with the issuance of the General Revenue Refunding Obligations.
- TBTA Multiple Series 2001 Subordinate Revenue Refunding Bond Supplemental Resolution (2017) authorizing Triborough Bridge and Tunnel Authority Subordinate Revenue Refunding Obligations, including providing for the issuance of the following:
 - Parity Reimbursement Obligations and other Parity Debt in an amount sufficient to secure any Credit Facilities entered into in connection with the issuance of the Subordinate Revenue Refunding Obligations.

With respect to the above-referenced financial transactions, MTA and TBTA Board approval, as applicable, is sought:

(a) delegating authority to the Chairman and Chief Executive Officer, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance to award the obligations either pursuant to competitive bid or to members (or entities related to such firms) of the Board-approved MTA underwriting syndicate and to execute and/or deliver in each case, where appropriate:

- Notices of Sale and bid forms,
- Purchase Agreements with underwriters,
- Direct Purchase Agreements,
- Official Statements and other disclosure documents,
- Continuing Disclosure Agreements and related filings,
- Remarketing Agreements,
- Dealer and Broker/Dealer Agreements,
- Issuing and Paying Agent Agreements,
- Credit Facilities and related Parity Reimbursement Obligations and Parity Debt,
- Related Subordinated Contract Obligations,
- Verification Reports,
- Escrow Agreements, and
- Investment Agreements.

Any such documents will be in substantially the form of any document previously entered into by MTA or TBTA for previous issues, with such changes as approved by any one or more of the foregoing officers.

(b) authorizing such officers to terminate, amend, supplement, replace or extend any such documents, including existing Credit Facilities (and related Parity Reimbursement Obligations and Parity Debt), as they shall deem advisable, and to take such other actions as may be necessary or desirable to effectuate the issuance of the refunding bonds and other financial transactions set forth above, on behalf of MTA, TBTA or other MTA subsidiaries and affiliates.

ALTERNATIVES:

The Board could determine that staff seek specific approval for each refunding contemplated in advance of undertaking such refunding. This alternative is not advised as the timing of the Board cycle could result in missed market opportunities.

RECOMMENDATION:

The MTA and TBTA Boards approve the above-referenced resolutions and documents and all other actions described above, including the execution and delivery of such other documents, and the taking of all other actions, from time to time deemed necessary or desirable by such officers in connection therewith. The authorization to issue the refunding bonds and take other related actions hereunder shall continue in effect without any further action by the MTA or TBTA Boards, until the adoption by the MTA and TBTA Boards, of subsequent refunding bond supplemental resolutions relating to 2018 refundings unless (a) the MTA and TBTA Boards shall have confirmed the effectiveness of this authorization for an additional period, or (b) the MTA and TBTA Boards shall have modified or repealed this authorization.

Adopted May 26, 2010

BOND AND OTHER DEBT OBLIGATIONS REFUNDING POLICY

WHEREAS, The Metropolitan Transportation Authority has a large portfolio of outstanding bonds and other debt obligations; and

WHEREAS, The Metropolitan Transportation Authority desires to achieve the lowest possible interest cost for such bonds; and

WHEREAS, The Metropolitan Transportation Authority desires, from time to time, to benefit from favorable capital market conditions to undertake refundings of the outstanding bonds and other obligations; and

WHEREAS, The Metropolitan Transportation Authority has determined that in order to provide guidance in the issuance of refunding bonds, a refunding policy ("Refunding Policy") is desirable.

WHEREAS, such refunding bonds must be authorized by the Board in accordance with a supplemental resolution for each of the MTA and TBTA credits, such supplemental resolutions are attached hereto;

BE IT RESOLVED by the Metropolitan Transportation Authority that, except as otherwise provided by separate action of the Authority relating to a particular refunding, the Refunding Policy as set forth below shall be adopted and shall apply to all refundings of bonds or other debt obligations described therein hereafter.

<p style="text-align: center;">Metropolitan Transportation Authority and Triborough Bridge and Tunnel Authority Bond and Other Debt Obligations Refunding Policy</p>

This bond and other debt obligations refunding policy establishes conditions precedent to any issuance of fixed rate bonds for the purposes of refunding fixed rate bonds previously issued by the MTA or any of the Related Entities.

- For a standard fixed rate refunding, each individual bond maturity is expected to have net present value (NPV) savings (expressed as a percentage of the par amount of refunded bonds) of at least the following amounts at the time of mailing the Preliminary Official Statement and at the time of the initial pricing of the refunding bonds (nothing herein precludes the addition of individual bond maturities that meet the savings criteria, or the deletion of bond maturities that do not meet the savings criteria on the day of pricing):

		Years to Call		
Years From Call To Maturity		0 to 2	3 to 7	8 plus
	0 to 5	0.5%	1.0%	2.0%
	6 to 10	1.0%	2.5%	4.0%
	11 to 15	3.0%	4.0%	5.0%
	16 plus	4.0%	5.05%	5.5%

- In addition to achieving the above maturity-by-maturity NPV savings, aggregate NPV savings must be at least 3.0 percent of the par amount of refunded bonds.
- The arbitrage yield must be utilized in calculating NPV savings.
- Actual escrow investments must be used in calculation of refunding savings at the time of pricing.

Additional Criteria and Instructions

- The evaluation of refunding opportunities with respect to the State Bond Issuance Charge (BIC) shall be factored in as a cost of issuance with respect to total NPV savings requirement calculations. The individual bond-by-bond maturity evaluations shall also include BIC as a factor.
- If it is possible to meet the arbitrage yield in a refunding escrow with SLGS, they should be used. In the event SLGS could provide a yield higher than the arbitrage yield, as many rolling 0 percent SLGS as possible should be used to blend down the arbitrage yield. If the arbitrage yield cannot be met with SLGS or the SLGS window is not open, treasury securities and other open market securities can be considered, consistent with the investment restrictions in the bond resolution.

METROPOLITAN TRANSPORTATION AUTHORITY

**MULTIPLE SERIES
TRANSPORTATION REVENUE REFUNDING BOND
SUPPLEMENTAL RESOLUTION**

Adopted December 14, 2016

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**MULTIPLE SERIES
TRANSPORTATION REVENUE REFUNDING BOND
SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Metropolitan Transportation Authority (the “Issuer”), as follows:

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01. Supplemental Resolution. This resolution is supplemental to, and is adopted in accordance with Article II and Article A-VIII of, a resolution of the Issuer adopted on March 26, 2002, entitled “General Resolution Authorizing Transportation Revenue Obligations” (the “Resolution”).

Section 1.02. Definitions.

1. All capitalized terms which are used but not otherwise defined in this Multiple Series Transportation Revenue Refunding Bond Supplemental Resolution (the “Supplemental Resolution”) shall have the same meanings, respectively, as such terms are given by Section 102 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman and Chief Executive Officer, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean the members of the Issuer acting as such pursuant to the provisions of the Issuer Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP or any other attorney or firm of attorneys of nationally recognized standing in the field of law relating to the issuance of obligations by state and municipal entities, selected by the Issuer.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

“Cross-Credit Obligations” shall mean indebtedness or other obligations issued or incurred by the Issuer or any other Related Entity as described in clause (iii) of the definition of “Capital Costs”, but excluding Obligations.

“Refunding Bonds” shall mean the Transportation Revenue Bonds authorized by Article II of this Supplemental Resolution in one or more Series or subseries.

Section 1.03. Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

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ARTICLE II

AUTHORIZATION OF REFUNDING BONDS

Section 2.01. Authorized Principal Amount, Designation and Series.

1. Pursuant to the provisions of the Resolution and in order to issue (a) Refunding Obligations, and (b) Obligations for the purpose of refunding Cross-Credit Obligations, multiple Series of Transportation Revenue Obligations (which may be issued at one time or from time to time in any number of Series or subseries, which for purposes of this Supplemental Resolution shall collectively be referred to herein as the “Refunding Bonds”, subject to redesignation as hereinafter provided) entitled to the benefit, protection and security of such provisions are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount or premium and underwriters’ discount from the principal amount, the amount to be deposited in the Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of the amount so deposited therein determined in any Certificate of Determination as estimated to be necessary to pay any Costs of Issuance of the Refunding Bonds payable from such Proceeds Account or otherwise applied to pay such Costs of Issuance), shall not exceed the amount or amounts determined in one or more Certificates of Determination to be necessary to effectuate the purposes set forth in Section 2.02 hereof; provided, however, that any Refunding Bonds issued pursuant to this Supplemental Resolution shall be issued in compliance with any Board policies relating to the issuance of refunding bonds as may be in effect from time to time.

2. Nothing in this Supplemental Resolution is intended to preclude the issuance of Refunding Bonds as refunding obligations in accordance with Section 203 of the Resolution.

Refunding Bonds shall be designated as, and shall be distinguished from the Obligations of all other Series by the title, “Transportation Revenue Bonds, Series [insert calendar year of issuance]” or such other title or titles set forth in the related Certificate of Determination.

The authority to issue Obligations and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization to issue the Refunding Bonds and take other related actions hereunder shall continue in effect without any further action by the Issuer until the adoption by the MTA Board of a subsequent refunding bond supplemental resolution relating to 2018 refundings.

Section 2.02. Purposes. The purposes for which the Refunding Bonds are issued shall be set forth in one or more Certificates of Determination and may include the refunding, restructuring or payment, including by purchasing, exchanging or tendering therefor, of all or any portion of any Outstanding Obligations or Parity Debt or Cross-Credit Obligations deemed advisable by an Authorized Officer in accordance with Section 203 or 204 of the Resolution, as applicable.

Section 2.03. Dates, Maturities, Principal Amounts and Interest. The Refunding Bonds, except as otherwise provided in the Resolution, shall be dated the date or dates determined in the related Certificate of Determination. The Refunding Bonds shall mature on the date or dates and in the year or years and principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, specified in or determined in the manner provided in the related Certificate of Determination.

Section 2.04. Interest Payments. The Refunding Bonds shall bear interest from their date or dates and be payable on such date or dates as may be determined pursuant to the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, interest on the Refunding Bonds shall be computed on the basis of twelve 30-day months and a 360-day year.

Section 2.05. Denominations, Numbers and Letters. Unless otherwise provided in the related Certificate of Determination, the Refunding Bonds shall be issued in fully registered form without coupons in the denomination of \$5,000 or any integral multiple thereof.

The Refunding Bonds shall be lettered and numbered as provided in the related Certificate of Determination.

Section 2.06. Places of Payment and Paying Agent. Except as otherwise provided in the related Certificate of Determination, principal and Redemption Price of the Refunding Bonds shall be payable to the registered owner of each Refunding Bond when due upon presentation of such Refunding Bond at the principal corporate trust office of the Trustee. Except as otherwise provided in the related Certificate of Determination, interest on the registered Refunding Bonds will be paid by check or draft mailed on the interest payment date by the Paying Agent, to the registered owner at his address as it appears on the registration books or, at the option of any Owner of at least one million dollars (\$1,000,000) in principal amount of the Refunding Bonds, by wire transfer in immediately available funds on each interest payment date to such Owner thereof upon written notice from such Owner to the Trustee, at such address as the Trustee may from time to time notify such Owner, containing the wire transfer address (which shall be in the continental United States) to which such Owner wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

Section 2.07. Sinking Fund Installments. The Refunding Bonds, if any, determined in the related Certificate of Determination shall be subject to redemption (a) in part, by lot, (b) pro rata (in the case of taxable Refunding Bonds), or (c) otherwise as determined in accordance with Section A-404 of the Resolution, as set forth in the Certificate of Determination, on each date in the year or years determined in the Certificate of Determination at the principal amount thereof plus accrued interest up to but not including the date of redemption thereof, from mandatory Sinking Fund Installments which are required to be made in amounts sufficient to redeem on each such date the principal amount of such Refunding Bonds.

Section 2.08. Redemption Prices and Terms. The Refunding Bonds may also be subject to redemption prior to maturity, at the option of the Issuer, upon notice as provided in Article A-IV of the Resolution, at any time as a whole or in part (and by lot within a maturity, or

otherwise as determined in accordance with Section A-404 of the Resolution, if less than all of a maturity is to be redeemed), from maturities designated by the Issuer on and after the date and in the years and at the Redemption Prices (expressed as a percentage of principal amount) determined in the related Certificate of Determination, plus accrued interest up to but not including the redemption date. Notwithstanding the foregoing, in the case of taxable Refunding Bonds, if set forth in the Certificate of Determination, the taxable Refunding Bonds may be made subject to pro rata redemption and/or a make-whole redemption premium.

Section 2.09. Delegation to an Authorized Officer. 1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Refunding Bonds:

(a) to determine whether and when to issue any Refunding Bonds constituting Refunding Obligations or Obligations issued to refund Cross-Credit Obligations, and to determine the amount of the proceeds of the Refunding Bonds to be applied to refunding purposes as well as the specific Obligations or Parity Debt or Cross-Credit Obligations, or portions of either to be refunded and the date or dates, if any, on which such refunded obligations shall be redeemed, and the amount of the proceeds of the Refunding Bonds estimated to be necessary to pay the Costs of Issuance of the Refunding Bonds;

(b) to determine the purpose or purposes for which the Refunding Bonds are being issued, which shall be one or more of the purposes set forth in Section 2.02 of this Supplemental Resolution;

(c) to determine the principal amounts of the Refunding Bonds to be issued for the purposes set forth in Section 2.02 of this Supplemental Resolution and whether such principal amounts constitute a separate Series or a subseries of Refunding Bonds, and to determine Accreted Values and Appreciated Values, if applicable;

(d) to determine the maturity date and principal amount of each maturity of the Refunding Bonds and the amount and due date of each Sinking Fund Installment, if any;

(e) to determine the date or dates which the Refunding Bonds shall be dated and the interest rate or rates of the Refunding Bonds or the manner of determining such interest rate or rates; provided, however, that any Obligations issued as fixed rate Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 10% per annum, any Obligations issued as fixed rate Taxable Obligations shall be subject to a maximum interest rate of not greater than 12% per annum, any Variable Interest Rate Obligations issued as Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 15% per annum, any Variable Interest Rate Obligations issued as Taxable Obligations shall be subject to a maximum interest rate of not greater than 18% per annum and any Parity Reimbursement Obligations shall be subject to a maximum interest rate of not greater than 25% per annum, or, in each such case, such higher rate or rates as determined by the Issuer's Board;

(f) to determine the Redemption Price or Redemption Prices, if any, and the redemption terms, if any, for the Refunding Bonds; provided, however, that if the Refunding Bonds are to be redeemable at the election of the Issuer, the Redemption Price (except in the case

of taxable Refunding Bonds) shall not be greater than one hundred three percent (103%) of the principal amount of the Refunding Bonds to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Refunding Bonds the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make-whole redemption;

(g) to determine whether the sale of the Refunding Bonds shall be conducted on either a negotiated or competitive bid basis and, as applicable, to determine the purchase price for the Refunding Bonds to be paid by the purchaser or purchasers referred to in one or more Purchase Agreements or a bank direct purchase agreement, or the purchase price for the Refunding Bonds to be paid by the winning bidder, if such sale is conducted by competitive bid pursuant to a Notice of Sale, in either case as such document is described in Section 2.10 of this Supplemental Resolution, which may include such original issue discount and original issue premium as shall be determined in the related Certificate of Determination; provided, however, that the underwriters' discount reflected in such purchase price shall not exceed \$10.00 for each one thousand dollars (\$1,000) principal amount of the Refunding Bonds;

(h) to take all actions required for the Refunding Bonds to be eligible under the rules and regulations of The Depository Trust Company ("DTC") for investment and trading as uncertificated securities, to execute and deliver a standard form of letter of representation with DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in the related Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Refunding Bonds issuable in fully registered form;

(i) to determine whether to issue all or any portion of the Refunding Bonds as Tax-Exempt Obligations, Taxable Obligations, Put Obligations, Variable Interest Rate Obligations or as any other form of Obligations permitted by the Resolution and any matters related thereto, including (i) the terms and provisions of any such Obligations, (ii) the selection of remarketing agents, tender agents, auction agents, dealers, calculation agents, bidding agents or any other agents or parties to ancillary arrangements and the terms of any such arrangements, and (iii) the methods for determining the accrual of Debt Service;

(j) to determine the advisability, as compared to an unenhanced transaction, of obtaining one or more Credit Facilities, to select a provider or providers thereof and to determine and accept the terms and provisions and price thereof, to determine such other matters related thereto as in the opinion of the officer executing the related Certificate of Determination shall be considered necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by Credit Facility providers, if any, or required by a Rating Agency in order to attain or maintain specific ratings on the Refunding Bonds, or relating to the mechanisms for the repayment of amounts advanced thereunder or payment of fees, premiums, expenses or any other amounts, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature necessary or appropriate to obtain or implement a Credit Facility with respect to the Refunding Bonds, and to make any changes in connection therewith;

(k) to make such changes in or from the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Refunding Bonds;

(l) to make such changes in or from the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects;

(m) to determine whether to (i) enter into an escrow agreement or other arrangement in connection with the issuance of Refunding Bonds, including the selection of escrow agents, verification agents and the manner of determining specified matters relating to the defeasance of the refunded obligations and (ii) purchase SLGs or open market securities and the form and substance thereof and any related investment agreement, and to determine the application of any amounts released in connection with any such refunding;

(n) to determine that fixed rate Refunding Bonds comply with all Board policies relating to the issuance of refunding obligations in effect at the time of such determination;

(o) to determine that Refunding Bonds issued as Variable Interest Rate Obligations comply with all Board policies relating to Refunding Bonds relating to the issuance of refunding obligations in effect at the time of such determination as if such bonds were issued as fixed rate Refunding Bonds; and

(p) to determine such other matters specified in or permitted by (i) Sections 202, 203, 204 and A-201 of the Resolution or (ii) this Supplemental Resolution, and to determine matters relating to the payment or defeasance of Obligation Anticipation Notes, including preparation of any documentation therefor.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Refunding Bonds are delivered from time to time, or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee prior to the authentication and delivery of the respective Series or subseries of Refunding Bonds by the Trustee or other documentation. Determinations set forth in any Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Refunding Bonds, as appropriate for any purposes, including, in order to change interest rate modes or auction periods, if any Refunding Bonds shall consist of multiple subseries, to change the principal amounts and number of the individual subseries or to combine all subseries into a single Series, if any Refunding Bonds consist of a single Series, to divide such Series into two or more subseries and to determine the principal amount of such subseries, obtain a substitute or additional Credit Facility, enter into a bank direct purchase

agreement or similar instrument, or to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale.

Section 2.10. Sale of Refunding Bonds. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Refunding Bonds through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the Refunding Bonds; (ii) to sell and award all or any portion of the Refunding Bonds through a negotiated sale to the purchasers who are referred to in the bond purchase agreement and who shall be selected from the then current list of approved underwriters; or (iii) to sell and award all or any portion of the Refunding Bonds through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement. Each Authorized Officer is hereby authorized to sell and award the Refunding Bonds to the purchasers referred to in the preceding sentence in the case of a bond purchase agreement, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, or, with respect to a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Refunding Bonds as may be approved by the officer executing the bond purchase, continuing covenant or similar agreement (each, a "Purchase Agreement"). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the officer executing the Purchase Agreement or Agreements, said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters..

If it is determined that any sale of Bonds shall be conducted on a competitive bid basis, each Authorized Officer is hereby further authorized to conduct the sale and award of the Refunding Bonds on the basis of a competitive bid, pursuant to the terms of a notice of sale, including bid form (the "Notice of Sale"), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such competitive sale of the Refunding Bonds in a manner consistent with this Supplemental Resolution and to utilize the services of the Authority's financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized to make public and to authorize the use and distribution by said purchasers or other appropriate parties of a preliminary official statement, offering circular, or other disclosure document (the "Preliminary Official Statement") in connection with each public offering or any private placement of the Refunding Bonds, in substantially the form most recently executed or delivered by the Issuer in connection with the

sale of Obligations, with such changes, omissions, insertions and revisions as such officer shall deem advisable. The Issuer authorizes any of said officers to deliver a certification to the effect that such Preliminary Official Statement or Official Statement, if deemed necessary or appropriate, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission as applicable.

Each Authorized Officer is hereby authorized to make public and to authorize distribution of a final Official Statement in substantially the form of each Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of such issue of the Refunding Bonds, such execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form appended to the Purchase Agreement or Notice of Sale, with such changes, omissions, insertions and revisions as such officer shall deem advisable (the "Continuing Disclosure Agreement"), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

The proceeds of each good faith check, if any, received by the Issuer from the purchasers of each issue of Refunding Bonds under the terms of the related Purchase Agreement or Notice of Sale may be invested by the Issuer pending application of the proceeds of such good faith check for the purposes provided in Section 2.02 of this Supplemental Resolution at the time of the issuance and delivery of such Refunding Bonds.

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute, deliver, amend, replace or terminate any and all documents and instruments (including any remarketing agreements, dealer agreements, broker-dealer agreements, tender agent agreements, or auction agency agreements, any escrow agreements, any investment agreements or arrangements, or any reimbursement agreements or documents or instruments relating to a Credit Facility deemed appropriate to a given form or mode of an Obligation) and to do and cause to be done any and all acts necessary or proper for carrying out each Purchase Agreement or Notice of Sale, each Continuing Disclosure Agreement, the terms of any Credit Facility or other such agreement or arrangement, and the issuance, sale and delivery of each issue of the Refunding Bonds and for implementing the terms of each issue of the Refunding Bonds and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

Section 2.11. Forms of Refunding Bonds and Trustee's Authentication Certificate. Subject to the provisions of the Resolution, the form of registered Refunding Bonds, and the

Trustee's certificate of authentication, shall be substantially in the form set forth in Exhibit One to the Resolution including, if necessary, any changes to comply with the requirements of DTC or the provisions of this Supplemental Resolution or any Certificate of Determination.

Section 2.12. Appointment of Trustee and Paying Agent. Unless otherwise provided by Certificate of Determination, The Bank of New York Mellon, as successor in interest to JPMorgan Chase Bank, N.A. shall be the Trustee under the Resolution and the Paying Agent for the Refunding Bonds.

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ARTICLE III

DISPOSITION OF REFUNDING BOND PROCEEDS

Section 3.01. Disposition of Refunding Bond Proceeds. Any proceeds of the sale of the Refunding Bonds, other than accrued interest, if any, shall be deposited, simultaneously with the issuance and delivery of the Refunding Bonds, at one time or from time to time in one or more Series or subseries, in the Proceeds Account which is deemed to be established for each Series in the Proceeds Fund to be applied, or shall otherwise be applied pursuant to a Certificate of Determination to:

(a) the refunding of any Obligations, Parity Debt or Cross-Credit Obligations, or portions of any of them, in accordance with Section 2.02 hereof; and

(b) the balance of such proceeds, exclusive of accrued interest, shall be deposited in the Costs of Issuance Account and applied to the payment of Costs of Issuance or otherwise applied to the payment of Costs of Issuance.

Unless otherwise provided in a Certificate of Determination, the accrued interest, if any, and any capitalized interest received on the sale of the Refunding Bonds shall be deposited in the Debt Service Fund.

ARTICLE IV

TAX COVENANTS AND DEFEASANCE

Section 4.01. Tax Covenants Relating to the Refunding Bonds. The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Refunding Bonds issued as Tax-Exempt Obligations, the Issuer will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to comply with such written instructions as may be provided by Bond Counsel. In furtherance of the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any "Arbitrage and Use of Proceeds Certificate" or "Tax Certificate" to be executed by the Issuer in connection with the execution and delivery of any Refunding Bonds issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer's failure to observe, or refusal to comply with, the above covenant (a) the Owners of the Refunding Bonds, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Owners or the Trustee under Section 702 of the Resolution, and (b) neither the Owners of the Obligations of any Series or holders of any Parity Debt (other than the Refunding Bonds or the Trustee acting on their behalf), nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to the Owners, the Parity Debt holders or the Trustee under the Resolution based upon the Issuer's failure to observe, or refusal to comply with, the above covenant.

The provisions of the foregoing covenants set forth in this Section shall not apply to any Refunding Bonds, including any subseries thereof, which the Issuer determines pursuant to the applicable Certificate of Determination to issue as Taxable Obligations.

Section 4.02. Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in the Resolution, all or less than all Outstanding Refunding Bonds issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of Article A-XI of the Resolution, the Refunding Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in Section A-1101 of the Resolution unless (i) the Issuer has confirmed in writing that the Owners of the Refunding Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an Opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the Refunding Bonds issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

METROPOLITAN TRANSPORTATION AUTHORITY

**MULTIPLE SERIES
DEDICATED TAX FUND REFUNDING BOND
SUPPLEMENTAL RESOLUTION**

Adopted December 14, 2016

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**MULTIPLE SERIES
DEDICATED TAX FUND REFUNDING BOND
SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Metropolitan Transportation Authority (the “Issuer”), as follows:

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01. Supplemental Resolution. This resolution is supplemental to, and is adopted in accordance with Article II and Article A-VIII of, a resolution of the Issuer adopted on March 26, 2002, entitled “Dedicated Tax Fund Obligation Resolution” (the “Resolution”).

Section 1.02. Definitions.

1. All capitalized terms which are used but not otherwise defined in this Multiple Series Dedicated Tax Fund Refunding Bond Supplemental Resolution (the “Supplemental Resolution”) shall have the same meanings, respectively, as such terms are given by Section 102 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman and Chief Executive Officer, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean the members of the Issuer acting as such pursuant to the provisions of the Issuer Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP or any other attorney or firm of attorneys of nationally recognized standing in the field of law relating to the issuance of obligations by state and municipal entities, selected by the Issuer.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

“Cross-Credit Obligations” shall mean indebtedness or other obligations issued or incurred by the Issuer or any other Related Entity as described in clause (iii) of the definition of “Capital Costs”, but excluding Obligations.

“Refunding Bonds” shall mean the Dedicated Tax Fund Bonds authorized by Article II of this Supplemental Resolution in one or more Series or subseries.

Section 1.03. Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

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ARTICLE II

AUTHORIZATION OF REFUNDING BONDS

Section 2.01. Authorized Principal Amount, Designation and Series.

1. Pursuant to the provisions of the Resolution and in order to issue (a) Refunding Obligations, and (b) Obligations for the purpose of refunding Cross-Credit Obligations, multiple Series of Dedicated Tax Fund Obligations (which may be issued at one time or from time to time in any number of Series or subseries, which for purposes of this Supplemental Resolution shall collectively be referred to herein as the “Refunding Bonds”, subject to redesignation as hereinafter provided) entitled to the benefit, protection and security of such provisions are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount or premium and underwriters’ discount from the principal amount, the amount to be deposited in the Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of the amount so deposited therein determined in any Certificate of Determination as estimated to be necessary to pay any Costs of Issuance of the Refunding Bonds payable from such Proceeds Account or otherwise applied to pay such Costs of Issuance), shall not exceed the amount or amounts determined in one or more Certificates of Determination to be necessary to effectuate the purposes set forth in Section 2.02 hereof; provided, however, that any Refunding Bonds issued pursuant to this Supplemental Resolution shall be issued in compliance with any Board policies relating to the issuance of refunding bonds as may be in effect from time to time.

2. Nothing in this Supplemental Resolution is intended to preclude the issuance of Refunding Bonds as refunding obligations in accordance with Section 203 of the Resolution.

Refunding Bonds shall be designated as, and shall be distinguished from the Obligations of all other Series by the title, “Dedicated Tax Fund Bonds, Series [insert calendar year of issuance]” or such other title or titles set forth in the related Certificate of Determination.

The authority to issue Obligations and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization to issue the Refunding Bonds and take other related actions hereunder shall continue in effect without any further action by the Issuer until the adoption by the MTA Board of a subsequent refunding bond supplemental resolution relating to 2018 refundings.

Section 2.02. Purposes. The purposes for which the Refunding Bonds are issued shall be set forth in one or more Certificates of Determination and may include the refunding, restructuring or payment, including by purchasing, exchanging or tendering therefor, of all or any portion of any Outstanding Obligations or Parity Debt or Cross-Credit Obligations deemed advisable by an Authorized Officer in accordance with Section 203 or 204 of the Resolution, as applicable.

Section 2.03. Dates, Maturities, Principal Amounts and Interest. The Refunding Bonds, except as otherwise provided in the Resolution, shall be dated the date or dates determined in the related Certificate of Determination. The Refunding Bonds shall mature on the date or dates and in the year or years and principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, specified in or determined in the manner provided in the related Certificate of Determination.

Section 2.04. Interest Payments. The Refunding Bonds shall bear interest from their date or dates and be payable on such date or dates as may be determined pursuant to the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, interest on the Refunding Bonds shall be computed on the basis of twelve 30-day months and a 360-day year.

Section 2.05. Denominations, Numbers and Letters. Unless otherwise provided in the related Certificate of Determination, the Refunding Bonds shall be issued in fully registered form without coupons in the denomination of \$5,000 or any integral multiple thereof.

The Refunding Bonds shall be lettered and numbered as provided in the related Certificate of Determination.

Section 2.06. Places of Payment and Paying Agent. Except as otherwise provided in the related Certificate of Determination, principal and Redemption Price of the Refunding Bonds shall be payable to the registered owner of each Refunding Bond when due upon presentation of such Refunding Bond at the principal corporate trust office of the Trustee. Except as otherwise provided in the related Certificate of Determination, interest on the registered Refunding Bonds will be paid by check or draft mailed on the interest payment date by the Paying Agent, to the registered owner at his address as it appears on the registration books or, at the option of any Owner of at least one million dollars (\$1,000,000) in principal amount of the Refunding Bonds, by wire transfer in immediately available funds on each interest payment date to such Owner thereof upon written notice from such Owner to the Trustee, at such address as the Trustee may from time to time notify such Owner, containing the wire transfer address (which shall be in the continental United States) to which such Owner wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

Section 2.07. Sinking Fund Installments. The Refunding Bonds, if any, determined in the related Certificate of Determination shall be subject to redemption (a) in part, by lot, (b) pro rata (in the case of taxable Refunding Bonds), or (c) otherwise as determined in accordance with Section A-404 of the Resolution, as set forth in the Certificate of Determination, on each date in the year or years determined in the Certificate of Determination at the principal amount thereof plus accrued interest up to but not including the date of redemption thereof, from mandatory Sinking Fund Installments which are required to be made in amounts sufficient to redeem on each such date the principal amount of such Refunding Bonds.

Section 2.08. Redemption Prices and Terms. The Refunding Bonds may also be subject to redemption prior to maturity, at the option of the Issuer, upon notice as provided in Article A-IV of the Resolution, at any time as a whole or in part (and by lot within a maturity, or

otherwise as determined in accordance with Section A-404 of the Resolution, if less than all of a maturity is to be redeemed), from maturities designated by the Issuer on and after the date and in the years and at the Redemption Prices (expressed as a percentage of principal amount) determined in the related Certificate of Determination, plus accrued interest up to but not including the redemption date. Notwithstanding the foregoing, in the case of taxable Refunding Bonds, if set forth in the Certificate of Determination, the taxable Refunding Bonds may be made subject to pro rata redemption and/or a make-whole redemption premium.

Section 2.09. Delegation to an Authorized Officer. 1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Refunding Bonds:

(a) to determine whether and when to issue any Refunding Bonds constituting Refunding Obligations or Obligations issued to refund Cross-Credit Obligations, and to determine the amount of the proceeds of the Refunding Bonds to be applied to refunding purposes as well as the specific Obligations or Parity Debt or Cross-Credit Obligations, or portions of either to be refunded and the date or dates, if any, on which such refunded obligations shall be redeemed, and the amount of the proceeds of the Refunding Bonds estimated to be necessary to pay the Costs of Issuance of the Refunding Bonds;

(b) to determine the purpose or purposes for which the Refunding Bonds are being issued, which shall be one or more of the purposes set forth in Section 2.02 of this Supplemental Resolution;

(c) to determine the principal amounts of the Refunding Bonds to be issued for the purposes set forth in Section 2.02 of this Supplemental Resolution and whether such principal amounts constitute a separate Series or a subseries of Refunding Bonds, and to determine Accreted Values and Appreciated Values, if applicable;

(d) to determine the maturity date and principal amount of each maturity of the Refunding Bonds and the amount and due date of each Sinking Fund Installment, if any;

(e) to determine the date or dates which the Refunding Bonds shall be dated and the interest rate or rates of the Refunding Bonds or the manner of determining such interest rate or rates; provided, however, that any Obligations issued as fixed rate Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 10% per annum, any Obligations issued as fixed rate Taxable Obligations shall be subject to a maximum interest rate of not greater than 12% per annum, any Variable Interest Rate Obligations issued as Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 15% per annum, any Variable Interest Rate Obligations issued as Taxable Obligations shall be subject to a maximum interest rate of not greater than 18% per annum and any Parity Reimbursement Obligations shall be subject to a maximum interest rate of not greater than 25% per annum, or, in each such case, such higher rate or rates as determined by the Issuer's Board;

(f) to determine the Redemption Price or Redemption Prices, if any, and the redemption terms, if any, for the Refunding Bonds; provided, however, that if the Refunding Bonds are to be redeemable at the election of the Issuer, the Redemption Price (except in the case

of taxable Refunding Bonds) shall not be greater than one hundred three percent (103%) of the principal amount of the Refunding Bonds to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Refunding Bonds the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make whole redemption;

(g) to determine whether the sale of the Refunding Bonds shall be conducted on either a negotiated or competitive bid basis and, as applicable, to determine the purchase price for the Refunding Bonds to be paid by the purchaser or purchasers referred to in one or more Purchase Agreements or a bank direct purchase agreement, or the purchase price for the Refunding Bonds to be paid by the winning bidder, if such sale is conducted by competitive bid pursuant to a Notice of Sale, in either case as such document is described in Section 2.10 of this Supplemental Resolution, which may include such original issue discount and original issue premium as shall be determined in the related Certificate of Determination; provided, however, that the underwriters' discount reflected in such purchase price shall not exceed \$10.00 for each one thousand dollars (\$1,000) principal amount of the Refunding Bonds;

(h) to take all actions required for the Refunding Bonds to be eligible under the rules and regulations of The Depository Trust Company ("DTC") for investment and trading as uncertificated securities, to execute and deliver a standard form of letter of representation with DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in the related Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Refunding Bonds issuable in fully registered form;

(i) to determine whether to issue all or any portion of the Refunding Bonds as Tax-Exempt Obligations, Taxable Obligations, Put Obligations, Variable Interest Rate Obligations or as any other form of Obligations permitted by the Resolution and any matters related thereto, including (i) the terms and provisions of any such Obligations, (ii) the selection of remarketing agents, tender agents, auction agents, dealers, calculation agents, bidding agents or any other agents or parties to ancillary arrangements and the terms of any such arrangements, and (iii) the methods for determining the accrual of Debt Service;

(j) to determine the advisability, as compared to an unenhanced transaction, of obtaining one or more Credit Facilities, to select a provider or providers thereof and to determine and accept the terms and provisions and price thereof, to determine such other matters related thereto as in the opinion of the officer executing the related Certificate of Determination shall be considered necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by Credit Facility providers, if any, or required by a Rating Agency in order to attain or maintain specific ratings on the Refunding Bonds, or relating to the mechanisms for the repayment of amounts advanced thereunder or payment of fees, premiums, expenses or any other amounts, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature necessary or appropriate to obtain or implement a Credit Facility with respect to the Refunding Bonds, and to make any changes in connection therewith;

(k) to make such changes in or from the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Refunding Bonds;

(l) to make such changes in or from the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects;

(m) to determine whether to (i) enter into an escrow agreement or other arrangement in connection with the issuance of Refunding Bonds, including the selection of escrow agents, verification agents and the manner of determining specified matters relating to the defeasance of the refunded obligations and (ii) purchase SLGs or open market securities and the form and substance thereof and any related investment agreement, and to determine the application of any amounts released in connection with any such refunding;

(n) to determine that fixed rate Refunding Bonds comply with all Board policies relating to the issuance of refunding obligations in effect at the time of such determination;

(o) to determine that Refunding Bonds issued as Variable Interest Rate Obligations comply with all Board policies relating to Refunding Bonds relating to the issuance of refunding obligations in effect at the time of such determination as if such bonds were issued as fixed rate Refunding Bonds; and

(p) to determine such other matters specified in or permitted by (i) Sections 202, 203, 204 and A-201 of the Resolution or (ii) this Supplemental Resolution, and to determine matters relating to the payment or defeasance of Obligation Anticipation Notes, including preparation of any documentation therefor.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Refunding Bonds are delivered from time to time, or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee prior to the authentication and delivery of the respective Series or subseries of Refunding Bonds by the Trustee or other documentation. Determinations set forth in any Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Refunding Bonds, as appropriate for any purposes, including, in order to change interest rate modes or auction periods, if any Refunding Bonds shall consist of multiple subseries, to change the principal amounts and number of the individual subseries or to combine all subseries into a single Series, if any Refunding Bonds consist of a single Series, to divide such Series into two or more subseries and to determine the principal amount of such subseries, obtain a substitute or additional Credit Facility, enter into a bank direct purchase

agreement or similar instrument or to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale.

Section 2.10. Sale of Refunding Bonds. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Refunding Bonds through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the Refunding Bonds; (ii) to sell and award all or any portion of the Refunding Bonds through a negotiated sale to the purchasers who are referred to in the bond purchase agreement and who shall be selected from the then current list of approved underwriters; or (iii) to sell and award all or any portion of the Refunding Bonds through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement. Each Authorized Officer is hereby authorized to sell and award the Refunding Bonds to the purchasers referred to in the preceding sentence in the case of a bond purchase agreement, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, or, with respect to a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Refunding Bonds as may be approved by the officer executing the bond purchase, continuing covenant or similar agreement (each, a "Purchase Agreement"). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the officer executing the Purchase Agreement or Agreements, said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters.

If it is determined that any sale of Bonds shall be conducted on a competitive bid basis, each Authorized Officer is hereby further authorized to conduct the sale and award of the Refunding Bonds on the basis of a competitive bid, pursuant to the terms of a notice of sale, including bid form (the "Notice of Sale"), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such competitive sale of the Refunding Bonds in a manner consistent with this Supplemental Resolution and to utilize the services of the Authority's financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized to make public and to authorize the use and distribution by said purchasers or other appropriate parties of a preliminary official statement, offering circular, or other disclosure document (the "Preliminary Official Statement") in connection with each public offering or any private placement of the Refunding Bonds, in substantially the form most recently executed or delivered by the Issuer in connection with the

sale of Obligations, with such changes, omissions, insertions and revisions as such officer shall deem advisable. The Issuer authorizes any of said officers to deliver a certification to the effect that such Preliminary Official Statement or Official Statement, if deemed necessary or appropriate, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission as applicable.

Each Authorized Officer is hereby authorized to make public and to authorize distribution of a final Official Statement in substantially the form of each Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of such issue of the Refunding Bonds, such execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form appended to the Purchase Agreement or Notice of Sale, with such changes, omissions, insertions and revisions as such officer shall deem advisable (the "Continuing Disclosure Agreement"), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

The proceeds of each good faith check, if any, received by the Issuer from the purchasers of each issue of Refunding Bonds under the terms of the related Purchase Agreement or Notice of Sale may be invested by the Issuer pending application of the proceeds of such good faith check for the purposes provided in Section 2.02 of this Supplemental Resolution at the time of the issuance and delivery of such Refunding Bonds.

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute, deliver, amend, replace or terminate any and all documents and instruments (including any remarketing agreements, dealer agreements, broker-dealer agreements, tender agent agreements, or auction agency agreements, any escrow agreements, any investment agreements or arrangements, or any reimbursement agreements or documents or instruments relating to a Credit Facility deemed appropriate to a given form or mode of an Obligation) and to do and cause to be done any and all acts necessary or proper for carrying out each Purchase Agreement or Notice of Sale, each Continuing Disclosure Agreement, the terms of any Credit Facility or other such agreement or arrangement, and the issuance, sale and delivery of each issue of the Refunding Bonds and for implementing the terms of each issue of the Refunding Bonds and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

Section 2.11. Forms of Refunding Bonds and Trustee's Authentication Certificate. Subject to the provisions of the Resolution, the form of registered Refunding Bonds, and the

Trustee's certificate of authentication, shall be substantially in the form set forth in Exhibit One to the Resolution including, if necessary, any changes to comply with the requirements of DTC or the provisions of this Supplemental Resolution or any Certificate of Determination.

Section 2.12. Appointment of Trustee and Paying Agent. Unless otherwise provided by Certificate of Determination, The Bank of New York Mellon shall be the Trustee under the Resolution and the Paying Agent for the Refunding Bonds.

ARTICLE III

DISPOSITION OF REFUNDING BOND PROCEEDS

Section 3.01. Disposition of Refunding Bond Proceeds. Any proceeds of the sale of the Refunding Bonds, other than accrued interest, if any, shall be deposited, simultaneously with the issuance and delivery of the Refunding Bonds, at one time or from time to time in one or more Series or subseries, in the Proceeds Account which is deemed to be established for each Series in the Proceeds Fund to be applied, or shall otherwise be applied pursuant to a Certificate of Determination to:

(a) the refunding of any Obligations, Parity Debt or Cross-Credit Obligations, or portions of any of them, in accordance with Section 2.02 hereof; and

(b) the balance of such proceeds, exclusive of accrued interest, shall be deposited in the COI Account and applied to the payment of Costs of Issuance or otherwise applied to the payment of Costs of Issuance.

Unless otherwise provided in a Certificate of Determination, the accrued interest, if any, and any capitalized interest, received on the sale of the Refunding Bonds shall be deposited in the Debt Service Fund.

ARTICLE IV

TAX COVENANTS AND DEFEASANCE

Section 4.01. Tax Covenants Relating to the Refunding Bonds. The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Refunding Bonds issued as Tax-Exempt Obligations, the Issuer will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to comply with such written instructions as may be provided by Bond Counsel. In furtherance of the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any "Arbitrage and Use of Proceeds Certificate" or "Tax Certificate" to be executed by the Issuer in connection with the execution and delivery of any Refunding Bonds issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer's failure to observe, or refusal to comply with, the above covenant (a) the Owners of the Refunding Bonds, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Owners or the Trustee under Section 702 of the Resolution, and (b) neither the Owners of the Obligations of any Series or holders of any Parity Debt (other than the Refunding Bonds or the Trustee acting on their behalf), nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to the Owners, the Parity Debt holders or the Trustee under the Resolution based upon the Issuer's failure to observe, or refusal to comply with, the above covenant.

The provisions of the foregoing covenants set forth in this Section shall not apply to any Refunding Bonds, including any subseries thereof, which the Issuer determines pursuant to the applicable Certificate of Determination to issue as Taxable Obligations.

Section 4.02. Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in the Resolution, all or less than all Outstanding Refunding Bonds issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of Article A-XI of the Resolution, the Refunding Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in Section A-1101 of the Resolution unless (i) the Issuer has confirmed in writing that the Owners of the Refunding Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an Opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the Refunding Bonds issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

**MULTIPLE SERIES
GENERAL REVENUE REFUNDING BOND
SUPPLEMENTAL RESOLUTION**

Adopted December 14, 2016

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**MULTIPLE SERIES
GENERAL REVENUE REFUNDING BOND
SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Triborough Bridge and Tunnel Authority (the “Issuer”), as follows:

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01. Supplemental Resolution. This resolution is supplemental to, and is adopted in accordance with Article II and Article A-VIII of, a resolution of the Issuer adopted on March 26, 2002, entitled “General Resolution Authorizing General Revenue Obligations” (the “Resolution”).

Section 1.02. Definitions.

1. All capitalized terms which are used but not otherwise defined in this Multiple Series General Revenue Refunding Bond Supplemental Resolution (the “Supplemental Resolution”) shall have the same meanings, respectively, as such terms are given by Section 102 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman and Chief Executive Officer, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean, when used with respect to the Issuer, the board of the Issuer acting as such pursuant to the provisions of the Issuer Act, and when used with respect to the MTA, the members of the MTA acting as such pursuant to the provisions of the MTA Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP or any other attorney or firm of attorneys of nationally recognized standing in the field of law relating to the issuance of obligations by state and municipal entities, selected by the Issuer.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

“Cross-Credit Obligations” shall mean indebtedness or other obligations issued or incurred by the Issuer or any other Related Entity as described in clause (iii) of the definition of “Capital Costs”, but excluding Obligations.

“Refunding Bonds” shall mean the General Revenue Bonds authorized by Article II of this Supplemental Resolution in one or more Series or subseries.

Section 1.03. Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

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ARTICLE II

AUTHORIZATION OF REFUNDING BONDS

Section 2.01. Authorized Principal Amount, Designation and Series.

1. Pursuant to the provisions of the Resolution and in order to issue (a) Refunding Obligations, and (b) Obligations for the purpose of refunding Cross-Credit Obligations, multiple Series of General Revenue Obligations (which may be issued at one time or from time to time in any number of Series or subseries, which for purposes of this Supplemental Resolution shall collectively be referred to herein as the “Refunding Bonds”, subject to redesignation as hereinafter provided) entitled to the benefit, protection and security of such provisions are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount or premium and underwriters’ discount from the principal amount, the amount to be deposited in the Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of the amount so deposited therein determined in any Certificate of Determination as estimated to be necessary to pay any Costs of Issuance of the Refunding Bonds payable from such Proceeds Account or otherwise applied to pay such Costs of Issuance), shall not exceed the amount or amounts determined in one or more Certificates of Determination to be necessary to effectuate the purposes set forth in Section 2.02 hereof; provided, however, that any Refunding Bonds issued pursuant to this Supplemental Resolution shall be issued in compliance with any Board policies relating to the issuance of refunding bonds as may be in effect from time to time.

2. Nothing in this Supplemental Resolution is intended to preclude the issuance of Refunding Bonds as refunding obligations in accordance with Section 203 of the Resolution.

Refunding Bonds shall be designated as, and shall be distinguished from the Obligations of all other Series by the title, “General Revenue Bonds, Series [insert calendar year of issuance]” or such other title or titles set forth in the related Certificate of Determination.

The authority to issue Obligations and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization to issue the Refunding Bonds and take other related actions hereunder shall continue in effect without any further action by the Issuer until the adoption by the Issuer Board of a subsequent refunding bond supplemental resolution relating to 2018 refundings.

Section 2.02. Purposes. The purposes for which the Refunding Bonds are issued shall be set forth in one or more Certificates of Determination and may include the refunding, restructuring or payment, including by purchasing, exchanging or tendering therefor, of all or any portion of any Outstanding Obligations or Parity Debt or Cross-Credit Obligations deemed advisable by an Authorized Officer in accordance with Section 203 or 204 of the Resolution, as applicable.

Section 2.03. Dates, Maturities, Principal Amounts and Interest. The Refunding Bonds, except as otherwise provided in the Resolution, shall be dated the date or dates determined in the related Certificate of Determination. The Refunding Bonds shall mature on the date or dates and in the year or years and principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, specified in or determined in the manner provided in the related Certificate of Determination.

Section 2.04. Interest Payments. The Refunding Bonds shall bear interest from their date or dates and be payable on such date or dates as may be determined pursuant to the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, interest on the Refunding Bonds shall be computed on the basis of twelve 30-day months and a 360-day year.

Section 2.05. Denominations, Numbers and Letters. Unless otherwise provided in the related Certificate of Determination, the Refunding Bonds shall be issued in fully registered form without coupons in the denomination of \$5,000 or any integral multiple thereof.

The Refunding Bonds shall be lettered and numbered as provided in the related Certificate of Determination.

Section 2.06. Places of Payment and Paying Agent. Except as otherwise provided in the related Certificate of Determination, principal and Redemption Price of the Refunding Bonds shall be payable to the registered owner of each Refunding Bond when due upon presentation of such Refunding Bond at the principal corporate trust office of the Trustee. Except as otherwise provided in the related Certificate of Determination, interest on the registered Refunding Bonds will be paid by check or draft mailed on the interest payment date by the Paying Agent, to the registered owner at his address as it appears on the registration books or, at the option of any Owner of at least one million dollars (\$1,000,000) in principal amount of the Refunding Bonds, by wire transfer in immediately available funds on each interest payment date to such Owner thereof upon written notice from such Owner to the Trustee, at such address as the Trustee may from time to time notify such Owner, containing the wire transfer address (which shall be in the continental United States) to which such Owner wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

Section 2.07. Sinking Fund Installments. The Refunding Bonds, if any, determined in the related Certificate of Determination shall be subject to redemption (a) in part, by lot, (b) pro rata (in the case of taxable Refunding Bonds), or (c) otherwise as determined in accordance with Section A-404 of the Resolution, as set forth in the Certificate of Determination, on each date in the year or years determined in the Certificate of Determination at the principal amount thereof plus accrued interest up to but not including the date of redemption thereof, from mandatory Sinking Fund Installments which are required to be made in amounts sufficient to redeem on each such date the principal amount of such Refunding Bonds.

Section 2.08. Redemption Prices and Terms. The Refunding Bonds may also be subject to redemption prior to maturity, at the option of the Issuer, upon notice as provided in Article A-IV of the Resolution, at any time as a whole or in part (and by lot within a maturity, or

otherwise as determined in accordance with Section A-404 of the Resolution, if less than all of a maturity is to be redeemed), from maturities designated by the Issuer on and after the date and in the years and at the Redemption Prices (expressed as a percentage of principal amount) determined in the related Certificate of Determination, plus accrued interest up to but not including the redemption date. Notwithstanding the foregoing, in the case of taxable Refunding Bonds, if set forth in the Certificate of Determination, the taxable Refunding Bonds may be made subject to pro rata redemption and/or a make-whole redemption premium.

Section 2.09. Delegation to an Authorized Officer. 1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Refunding Bonds:

(a) to determine whether and when to issue any Refunding Bonds constituting Refunding Obligations or Obligations issued to refund Cross-Credit Obligations, and to determine the amount of the proceeds of the Refunding Bonds to be applied to refunding purposes as well as the specific Obligations or Parity Debt or Cross-Credit Obligations, or portions of either to be refunded and the date or dates, if any, on which such refunded obligations shall be redeemed, and the amount of the proceeds of the Refunding Bonds estimated to be necessary to pay the Costs of Issuance of the Refunding Bonds;

(b) to determine the purpose or purposes for which the Refunding Bonds are being issued, which shall be one or more of the purposes set forth in Section 2.02 of this Supplemental Resolution;

(c) to determine the principal amounts of the Refunding Bonds to be issued for the purposes set forth in Section 2.02 of this Supplemental Resolution and whether such principal amounts constitute a separate Series or a subseries of Refunding Bonds, and to determine Accreted Values and Appreciated Values, if applicable;

(d) to determine the maturity date and principal amount of each maturity of the Refunding Bonds and the amount and due date of each Sinking Fund Installment, if any;

(e) to determine the date or dates which the Refunding Bonds shall be dated and the interest rate or rates of the Refunding Bonds or the manner of determining such interest rate or rates; provided, however, that any Obligations issued as fixed rate Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 10% per annum, any Obligations issued as fixed rate Taxable Obligations shall be subject to a maximum interest rate of not greater than 12% per annum, any Variable Interest Rate Obligations issued as Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 15% per annum, any Variable Interest Rate Obligations issued as Taxable Obligations shall be subject to a maximum interest rate of not greater than 18% per annum and any Parity Reimbursement Obligations shall be subject to a maximum interest rate of not greater than 25% per annum, or, in each such case, such higher rate or rates as determined by the Issuer's Board;

(f) to determine the Redemption Price or Redemption Prices, if any, and the redemption terms, if any, for the Refunding Bonds; provided, however, that if the Refunding Bonds are to be redeemable at the election of the Issuer, the Redemption Price (except in the case

of taxable Refunding Bonds) shall not be greater than one hundred three percent (103%) of the principal amount of the Refunding Bonds to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Refunding Bonds the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make whole redemption;

(g) to determine whether the sale of the Refunding Bonds shall be conducted on either a negotiated or competitive bid basis and, as applicable, to determine the purchase price for the Refunding Bonds to be paid by the purchaser or purchasers referred to in one or more Purchase Agreements or a bank direct purchase agreement, or the purchase price for the Refunding Bonds to be paid by the winning bidder, if such sale is conducted by competitive bid pursuant to a Notice of Sale, in either case as such document is described in Section 2.10 of this Supplemental Resolution, which may include such original issue discount and original issue premium as shall be determined in the related Certificate of Determination; provided, however, that the underwriters' discount reflected in such purchase price shall not exceed \$10.00 for each one thousand dollars (\$1,000) principal amount of the Refunding Bonds;

(h) to take all actions required for the Refunding Bonds to be eligible under the rules and regulations of The Depository Trust Company ("DTC") for investment and trading as uncertificated securities, to execute and deliver a standard form of letter of representation with DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in the related Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Refunding Bonds issuable in fully registered form;

(i) to determine whether to issue all or any portion of the Refunding Bonds as Tax-Exempt Obligations, Taxable Obligations, Put Obligations, Variable Interest Rate Obligations or as any other form of Obligations permitted by the Resolution and any matters related thereto, including (i) the terms and provisions of any such Obligations, (ii) the selection of remarketing agents, tender agents, auction agents, dealers, calculation agents, bidding agents or any other agents or parties to ancillary arrangements and the terms of any such arrangements, and (iii) the methods for determining the accrual of Debt Service;

(j) to determine the advisability, as compared to an unenhanced transaction, of obtaining one or more Credit Facilities, to select a provider or providers thereof and to determine and accept the terms and provisions and price thereof, to determine such other matters related thereto as in the opinion of the officer executing the related Certificate of Determination shall be considered necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by Credit Facility providers, if any, or required by a Rating Agency in order to attain or maintain specific ratings on the Refunding Bonds, or relating to the mechanisms for the repayment of amounts advanced thereunder or payment of fees, premiums, expenses or any other amounts, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature necessary or appropriate to obtain or implement a Credit Facility with respect to the Refunding Bonds, and to make any changes in connection therewith;

(k) to make such changes in or from the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Refunding Bonds;

(l) to make such changes in or from the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects;

(m) to determine whether to (i) enter into an escrow agreement or other arrangement in connection with the issuance of Refunding Bonds, including the selection of escrow agents, verification agents and the manner of determining specified matters relating to the defeasance of the refunded obligations and (ii) purchase SLGs or open market securities and the form and substance thereof and any related investment agreement, and to determine the application of any amounts released in connection with any such refunding;

(n) to determine that such Refunding Bonds comply with all Board policies relating to the issuance of refunding obligations in effect at the time of such determination; and

(o) to determine such other matters specified in or permitted by (i) Sections 202, 203, 204 and A-201 of the Resolution or (ii) this Supplemental Resolution, and to determine matters relating to the payment or defeasance of Obligation Anticipation Notes, including preparation of any documentation therefor.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Refunding Bonds are delivered from time to time, or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee prior to the authentication and delivery of the respective Series or subseries of Refunding Bonds by the Trustee or other documentation. Determinations set forth in any Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Refunding Bonds, as appropriate for any purposes, including, in order to change interest rate modes or auction periods, if any Refunding Bonds shall consist of multiple subseries, to change the principal amounts and number of the individual subseries or to combine all subseries into a single Series, if any Refunding Bonds consist of a single Series, to divide such Series into two or more subseries and to determine the principal amount of such subseries, obtain a substitute or additional Credit Facility, enter into a bank direct purchase agreement or similar instrument or to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale.

Section 2.10. Sale of Refunding Bonds. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Refunding Bonds through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the

Refunding Bonds; (ii) to sell and award all or any portion of the Refunding Bonds through a negotiated sale to the purchasers who are referred to in the bond purchase agreement and who shall be selected from the then current list of approved underwriters; or (iii) to sell and award all or any portion of the Refunding Bonds through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement. Each Authorized Officer is hereby authorized to sell and award the Refunding Bonds to the purchasers referred to in the preceding sentence in the case of a bond purchase agreement, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, or, with respect to a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Refunding Bonds as may be approved by the officer executing the bond purchase, continuing covenant or similar agreement (each, a "Purchase Agreement"). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the officer executing the Purchase Agreement or Agreements, said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters.

If it is determined that any sale of Bonds shall be conducted on a competitive bid basis, each Authorized Officer is hereby further authorized to conduct the sale and award of the Refunding Bonds on the basis of a competitive bid, pursuant to the terms of a notice of sale, including bid form (the "Notice of Sale"), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such competitive sale of the Refunding Bonds in a manner consistent with this Supplemental Resolution and to utilize the services of the Authority's financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized to make public and to authorize the use and distribution by said purchasers or other appropriate parties of a preliminary official statement, offering circular, or other disclosure document (the "Preliminary Official Statement") in connection with each public offering or any private placement of the Refunding Bonds, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, with such changes, omissions, insertions and revisions as such officer shall deem advisable. The Issuer authorizes any of said officers to deliver a certification to the effect that such Preliminary Official Statement or Official Statement, if deemed necessary or appropriate, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission as applicable.

Each Authorized Officer is hereby authorized to make public and to authorize distribution of a final Official Statement in substantially the form of each Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of such issue of the Refunding Bonds, such execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form appended to the Purchase Agreement or Notice of Sale, with such changes, omissions, insertions and revisions as such officer shall deem advisable (the "Continuing Disclosure Agreement"), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

The proceeds of each good faith check, if any, received by the Issuer from the purchasers of each issue of Refunding Bonds under the terms of the related Purchase Agreement or Notice of Sale may be invested by the Issuer pending application of the proceeds of such good faith check for the purposes provided in Section 2.02 of this Supplemental Resolution at the time of the issuance and delivery of such Refunding Bonds.

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute, deliver, amend, replace or terminate any and all documents and instruments (including any remarketing agreements, dealer agreements, broker-dealer agreements, tender agent agreements, or auction agency agreements, any escrow agreements, any investment agreements or arrangements, or any reimbursement agreements or documents or instruments relating to a Credit Facility deemed appropriate to a given form or mode of an Obligation) and to do and cause to be done any and all acts necessary or proper for carrying out each Purchase Agreement or Notice of Sale, each Continuing Disclosure Agreement, the terms of any Credit Facility or other such agreement or arrangement, and the issuance, sale and delivery of each issue of the Refunding Bonds and for implementing the terms of each issue of the Refunding Bonds and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

Section 2.11. Forms of Refunding Bonds and Trustee's Authentication Certificate. Subject to the provisions of the Resolution, the form of registered Refunding Bonds, and the Trustee's certificate of authentication, shall be substantially in the form set forth in Exhibit One to the Resolution including, if necessary, any changes to comply with the requirements of DTC or the provisions of this Supplemental Resolution or any Certificate of Determination.

Section 2.12. Appointment of Trustee and Paying Agent. Unless otherwise provided by Certificate of Determination, U.S. Bank Trust National Association shall be the Trustee under the Resolution and the Paying Agent for the Refunding Bonds.

ARTICLE III

DISPOSITION OF REFUNDING BOND PROCEEDS

Section 3.01. Disposition of Refunding Bond Proceeds. Any proceeds of the sale of the Refunding Bonds, other than accrued interest, if any, shall be deposited, simultaneously with the issuance and delivery of the Refunding Bonds, at one time or from time to time in one or more Series or subseries, in the Proceeds Account which is deemed to be established for each Series in the Proceeds Fund to be applied, or shall otherwise be applied pursuant to a Certificate of Determination to:

(a) the refunding of any Obligations, Parity Debt or Cross-Credit Obligations, or portions of any of them, in accordance with Section 2.02 hereof; and

(b) the balance of such proceeds, exclusive of accrued interest, shall be deposited in the COI Account and applied to the payment of Costs of Issuance or otherwise applied to the payment of Costs of Issuance.

Unless otherwise provided in a Certificate of Determination, the accrued interest, if any, and any capitalized interest, received on the sale of the Refunding Bonds shall be deposited in the Debt Service Fund.

ARTICLE IV

TAX COVENANTS AND DEFEASANCE

Section 4.01. Tax Covenants Relating to the Refunding Bonds. The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Refunding Bonds issued as Tax-Exempt Obligations, the Issuer will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to comply with such written instructions as may be provided by Bond Counsel. In furtherance of the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any "Arbitrage and Use of Proceeds Certificate" or "Tax Certificate" to be executed by the Issuer in connection with the execution and delivery of any Refunding Bonds issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer's failure to observe, or refusal to comply with, the above covenant (a) the Owners of the Refunding Bonds, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Owners or the Trustee under Section 702 of the Resolution, other than the right (which is hereby abrogated solely as to the Issuer's failure to observe, or refusal to comply with the above covenant) to declare the principal of all Obligations then Outstanding, and the interest accrued thereon, to be due and payable pursuant to Section 567 of the Issuer Act, and (b) neither the Owners of the Obligations of any Series or holders of any Parity Debt (other than the Refunding Bonds or the Trustee acting on their behalf), nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to the Owners, the Parity Debt holders or the Trustee under the Resolution based upon the Issuer's failure to observe, or refusal to comply with, the above covenant.

The provisions of the foregoing covenants set forth in this Section shall not apply to any Refunding Bonds, including any subseries thereof, which the Issuer determines pursuant to the applicable Certificate of Determination to issue as Taxable Obligations.

Section 4.02. Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in the Resolution, all or less than all Outstanding Refunding Bonds issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of Article A-XI of the Resolution, the Refunding Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in Section A-1101 of the Resolution unless (i) the Issuer has confirmed in writing that the Owners of the Refunding Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an Opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the Refunding Bonds issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

**MULTIPLE SERIES
2001 SUBORDINATE REVENUE REFUNDING BOND
SUPPLEMENTAL RESOLUTION**

Adopted December 14, 2016

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**MULTIPLE SERIES
2001 SUBORDINATE REVENUE REFUNDING BOND
SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Triborough Bridge and Tunnel Authority (the “Issuer”), as follows:

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01. Supplemental Resolution. This resolution is supplemental to, and is adopted in accordance with Article II and Article A-VIII of, a resolution of the Issuer adopted on March 26, 2002, entitled “2001 Subordinate Resolution Authorizing General Revenue Obligations” (the “Resolution”).

Section 1.02. Definitions.

1. All capitalized terms which are used but not otherwise defined in this Multiple Series 2001 Subordinate Revenue Refunding Bond Supplemental Resolution (the “Supplemental Resolution”) shall have the same meanings, respectively, as such terms are given by Section 102 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman and Chief Executive Officer, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean, when used with respect to the Issuer, the board of the Issuer acting as such pursuant to the provisions of the Issuer Act, and when used with respect to the MTA, the members of the MTA acting as such pursuant to the provisions of the MTA Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP or any other attorney or firm of attorneys of nationally recognized standing in the field of law relating to the issuance of obligations by state and municipal entities, selected by the Issuer.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

“Cross-Credit Obligations” shall mean indebtedness or other obligations issued or incurred by the Issuer or any other Related Entity as described in clause (iii) of the definition of “Capital Costs”, but excluding Obligations.

“Refunding Bonds” shall mean the 2001 Subordinate Revenue Bonds authorized by Article II of this Supplemental Resolution in one or more Series or subseries.

Section 1.03. Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

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ARTICLE II

AUTHORIZATION OF REFUNDING BONDS

Section 2.01. Authorized Principal Amount, Designation and Series.

1. Pursuant to the provisions of the Resolution and in order to issue (a) Refunding Subordinate Obligations, and (b) Obligations for the purpose of refunding Cross-Credit Obligations, multiple Series of Subordinate Revenue Obligations (which may be issued at one time or from time to time in any number of Series or subseries, which for purposes of this Supplemental Resolution shall collectively be referred to herein as the “Refunding Bonds”, subject to redesignation as hereinafter provided) entitled to the benefit, protection and security of such provisions are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount or premium and underwriters’ discount from the principal amount, the amount to be deposited in the Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of the amount so deposited therein determined in any Certificate of Determination as estimated to be necessary to pay any Costs of Issuance of the Refunding Bonds payable from such Proceeds Account or otherwise applied to pay such Costs of Issuance), shall not exceed the amount or amounts determined in one or more Certificates of Determination to be necessary to effectuate the purposes set forth in Section 2.02 hereof; provided, however, that any Refunding Bonds issued pursuant to this Supplemental Resolution shall be issued in compliance with any Board policies relating to the issuance of refunding bonds as may be in effect from time to time.

2. Nothing in this Supplemental Resolution is intended to preclude the issuance of Refunding Bonds as refunding obligations in accordance with Section 203 of the Resolution.

Refunding Bonds shall be designated as, and shall be distinguished from the Obligations of all other Series by the title, “Subordinate Revenue Bonds, Series [insert calendar year of issuance]” or such other title or titles set forth in the related Certificate of Determination.

The authority to issue Obligations and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization to issue the Refunding Bonds and take other related actions hereunder shall continue in effect without any further action by the Issuer until the adoption by the Issuer Board of a subsequent refunding bond supplemental resolution relating to 2018 refundings.

Section 2.02. Purposes. The purposes for which the Refunding Bonds are issued shall be set forth in one or more Certificates of Determination and may include the refunding, restructuring or payment, including by purchasing, exchanging or tendering therefor, of all or any portion of any Outstanding Obligations or Parity Debt or Cross-Credit Obligations deemed advisable by an Authorized Officer in accordance with Section 203 or 204 of the Resolution, as applicable.

Section 2.03. Dates, Maturities, Principal Amounts and Interest. The Refunding Bonds, except as otherwise provided in the Resolution, shall be dated the date or dates determined in the related Certificate of Determination. The Refunding Bonds shall mature on the date or dates and in the year or years and principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, specified in or determined in the manner provided in the related Certificate of Determination.

Section 2.04. Interest Payments. The Refunding Bonds shall bear interest from their date or dates and be payable on such date or dates as may be determined pursuant to the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, interest on the Refunding Bonds shall be computed on the basis of twelve 30-day months and a 360-day year.

Section 2.05. Denominations, Numbers and Letters. Unless otherwise provided in the related Certificate of Determination, the Refunding Bonds shall be issued in fully registered form without coupons in the denomination of \$5,000 or any integral multiple thereof.

The Refunding Bonds shall be lettered and numbered as provided in the related Certificate of Determination.

Section 2.06. Places of Payment and Paying Agent. Except as otherwise provided in the related Certificate of Determination, principal and Redemption Price of the Refunding Bonds shall be payable to the registered owner of each Refunding Bond when due upon presentation of such Refunding Bond at the principal corporate trust office of the Trustee. Except as otherwise provided in the related Certificate of Determination, interest on the registered Refunding Bonds will be paid by check or draft mailed on the interest payment date by the Paying Agent, to the registered owner at his address as it appears on the registration books or, at the option of any Owner of at least one million dollars (\$1,000,000) in principal amount of the Refunding Bonds, by wire transfer in immediately available funds on each interest payment date to such Owner thereof upon written notice from such Owner to the Trustee, at such address as the Trustee may from time to time notify such Owner, containing the wire transfer address (which shall be in the continental United States) to which such Owner wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

Section 2.07. Sinking Fund Installments. The Refunding Bonds, if any, determined in the related Certificate of Determination shall be subject to redemption (a) in part, by lot, (b) pro rata (in the case of taxable Refunding Bonds), or (c) otherwise as determined in accordance with Section A-404 of the Resolution, as set forth in the Certificate of Determination, on each date in the year or years determined in the Certificate of Determination at the principal amount thereof plus accrued interest up to but not including the date of redemption thereof, from mandatory Sinking Fund Installments which are required to be made in amounts sufficient to redeem on each such date the principal amount of such Refunding Bonds.

Section 2.08. Redemption Prices and Terms. The Refunding Bonds may also be subject to redemption prior to maturity, at the option of the Issuer, upon notice as provided in Article A-IV of the Resolution, at any time as a whole or in part (and by lot within a maturity, or

otherwise as determined in accordance with Section A-404 of the Resolution, if less than all of a maturity is to be redeemed), from maturities designated by the Issuer on and after the date and in the years and at the Redemption Prices (expressed as a percentage of principal amount) determined in the related Certificate of Determination, plus accrued interest up to but not including the redemption date. Notwithstanding the foregoing, in the case of taxable Refunding Bonds, if set forth in the Certificate of Determination, the taxable Refunding Bonds may be made subject to pro rata redemption and/or a make-whole redemption premium.

Section 2.09. Delegation to an Authorized Officer. 1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Refunding Bonds:

(a) to determine whether and when to issue any Refunding Bonds constituting Refunding Subordinate Obligations or Obligations issued to refund Cross-Credit Obligations, and to determine the amount of the proceeds of the Refunding Bonds to be applied to refunding purposes as well as the specific Obligations or Parity Debt or Cross-Credit Obligations, or portions of either to be refunded and the date or dates, if any, on which such refunded obligations shall be redeemed, and the amount of the proceeds of the Refunding Bonds estimated to be necessary to pay the Costs of Issuance of the Refunding Bonds;

(b) to determine the purpose or purposes for which the Refunding Bonds are being issued, which shall be one or more of the purposes set forth in Section 2.02 of this Supplemental Resolution;

(c) to determine the principal amounts of the Refunding Bonds to be issued for the purposes set forth in Section 2.02 of this Supplemental Resolution and whether such principal amounts constitute a separate Series or a subseries of Refunding Bonds, and to determine Accreted Values and Appreciated Values, if applicable;

(d) to determine the maturity date and principal amount of each maturity of the Refunding Bonds and the amount and due date of each Sinking Fund Installment, if any;

(e) to determine the date or dates which the Refunding Bonds shall be dated and the interest rate or rates of the Refunding Bonds or the manner of determining such interest rate or rates; provided, however, that any Obligations issued as fixed rate Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 10% per annum, any Obligations issued as fixed rate Taxable Obligations shall be subject to a maximum interest rate of not greater than 12% per annum, any Variable Interest Rate Obligations issued as Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 15% per annum, any Variable Interest Rate Obligations issued as Taxable Obligations shall be subject to a maximum interest rate of not greater than 18% per annum and any Parity Reimbursement Obligations shall be subject to a maximum interest rate of not greater than 25% per annum, or, in each such case, such higher rate or rates as determined by the Issuer's Board;

(f) to determine the Redemption Price or Redemption Prices, if any, and the redemption terms, if any, for the Refunding Bonds; provided, however, that if the Refunding Bonds are to be redeemable at the election of the Issuer, the Redemption Price (except in the case

of taxable Refunding Bonds) shall not be greater than one hundred three percent (103%) of the principal amount of the Refunding Bonds to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Refunding Bonds the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make whole redemption;

(g) to determine whether the sale of the Refunding Bonds shall be conducted on either a negotiated or competitive bid basis and, as applicable, to determine the purchase price for the Refunding Bonds to be paid by the purchaser or purchasers referred to in one or more Purchase Agreements or a bank direct purchase agreement, or the purchase price for the Refunding Bonds to be paid by the winning bidder, if such sale is conducted by competitive bid pursuant to a Notice of Sale, in either case as such document is described in Section 2.10 of this Supplemental Resolution, which may include such original issue discount and original issue premium as shall be determined in the related Certificate of Determination; provided, however, that the underwriters' discount reflected in such purchase price shall not exceed \$10.00 for each one thousand dollars (\$1,000) principal amount of the Refunding Bonds;

(h) to take all actions required for the Refunding Bonds to be eligible under the rules and regulations of The Depository Trust Company ("DTC") for investment and trading as uncertificated securities, to execute and deliver a standard form of letter of representation with DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in the related Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Refunding Bonds issuable in fully registered form;

(i) to determine whether to issue all or any portion of the Refunding Bonds as Tax-Exempt Obligations, Taxable Obligations, Put Obligations, Variable Interest Rate Obligations or as any other form of Obligations permitted by the Resolution and any matters related thereto, including (i) the terms and provisions of any such Obligations, (ii) the selection of remarketing agents, tender agents, auction agents, dealers, calculation agents, bidding agents or any other agents or parties to ancillary arrangements and the terms of any such arrangements, and (iii) the methods for determining the accrual of Debt Service;

(j) to determine the advisability, as compared to an unenhanced transaction, of obtaining one or more Credit Facilities, to select a provider or providers thereof and to determine and accept the terms and provisions and price thereof, to determine such other matters related thereto as in the opinion of the officer executing the related Certificate of Determination shall be considered necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by Credit Facility providers, if any, or required by a Rating Agency in order to attain or maintain specific ratings on the Refunding Bonds, or relating to the mechanisms for the repayment of amounts advanced thereunder or payment of fees, premiums, expenses or any other amounts, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature necessary or appropriate to obtain or implement a Credit Facility with respect to the Refunding Bonds, and to make any changes in connection therewith;

(k) to make such changes in or from the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Refunding Bonds;

(l) to make such changes in or from the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects;

(m) to determine whether to (i) enter into an escrow agreement or other arrangement in connection with the issuance of Refunding Bonds, including the selection of escrow agents, verification agents and the manner of determining specified matters relating to the defeasance of the refunded obligations and (ii) purchase SLGs or open market securities and the form and substance thereof and any related investment agreement, and to determine the application of any amounts released in connection with any such refunding;

(n) to determine that such Refunding Bonds comply with all Board policies relating to the issuance of refunding obligations in effect at the time of such determination; and

(o) to determine such other matters specified in or permitted by (i) Sections 202, 203, 204 and A-201 of the Resolution or (ii) this Supplemental Resolution, and to determine matters relating to the payment or defeasance of Obligation Anticipation Notes, including preparation of any documentation therefor.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Refunding Bonds are delivered from time to time, or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee prior to the authentication and delivery of the respective Series or subseries of Refunding Bonds by the Trustee or other documentation. Determinations set forth in any Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Refunding Bonds, as appropriate for any purposes, including, in order to change interest rate modes or auction periods, if any Refunding Bonds shall consist of multiple subseries, to change the principal amounts and number of the individual subseries or to combine all subseries into a single Series, if any Refunding Bonds consist of a single Series, to divide such Series into two or more subseries and to determine the principal amount of such subseries, obtain a substitute or additional Credit Facility, enter into a bank direct purchase agreement or similar instrument or to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale.

Section 2.10. Sale of Refunding Bonds. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Refunding Bonds through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the

Refunding Bonds; (ii) to sell and award all or any portion of the Refunding Bonds through a negotiated sale to the purchasers who are referred to in the bond purchase agreement and who shall be selected from the then current list of approved underwriters; or (iii) to sell and award all or any portion of the Refunding Bonds through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement. Each Authorized Officer is hereby authorized to sell and award the Refunding Bonds to the purchasers referred to in the preceding sentence in the case of a bond purchase agreement, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, or, with respect to a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Refunding Bonds as may be approved by the officer executing the bond purchase, continuing covenant or similar agreement (each, a "Purchase Agreement"). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the officer executing the Purchase Agreement or Agreements, said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters.

If it is determined that any sale of Bonds shall be conducted on a competitive bid basis, each Authorized Officer is hereby further authorized to conduct the sale and award of the Refunding Bonds on the basis of a competitive bid, pursuant to the terms of a notice of sale, including bid form (the "Notice of Sale"), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such competitive sale of the Refunding Bonds in a manner consistent with this Supplemental Resolution and to utilize the services of the Authority's financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized to make public and to authorize the use and distribution by said purchasers or other appropriate parties of a preliminary official statement, offering circular, or other disclosure document (the "Preliminary Official Statement") in connection with each public offering or any private placement of the Refunding Bonds, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, with such changes, omissions, insertions and revisions as such officer shall deem advisable. The Issuer authorizes any of said officers to deliver a certification to the effect that such Preliminary Official Statement or Official Statement, if deemed necessary or appropriate, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission as applicable.

Each Authorized Officer is hereby authorized to make public and to authorize distribution of a final Official Statement in substantially the form of each Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of such issue of the Refunding Bonds, such execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form appended to the Purchase Agreement or Notice of Sale, with such changes, omissions, insertions and revisions as such officer shall deem advisable (the "Continuing Disclosure Agreement"), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

The proceeds of each good faith check, if any, received by the Issuer from the purchasers of each issue of Refunding Bonds under the terms of the related Purchase Agreement or Notice of Sale may be invested by the Issuer pending application of the proceeds of such good faith check for the purposes provided in Section 2.02 of this Supplemental Resolution at the time of the issuance and delivery of such Refunding Bonds.

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute, deliver, amend, replace or terminate any and all documents and instruments (including any remarketing agreements, dealer agreements, broker-dealer agreements, tender agent agreements, or auction agency agreements, any escrow agreements, any investment agreements or arrangements, or any reimbursement agreements or documents or instruments relating to a Credit Facility deemed appropriate to a given form or mode of an Obligation) and to do and cause to be done any and all acts necessary or proper for carrying out each Purchase Agreement or Notice of Sale, each Continuing Disclosure Agreement, the terms of any Credit Facility or other such agreement or arrangement, and the issuance, sale and delivery of each issue of the Refunding Bonds and for implementing the terms of each issue of the Refunding Bonds and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

Section 2.11. Forms of Refunding Bonds and Trustee's Authentication Certificate. Subject to the provisions of the Resolution, the form of registered Refunding Bonds, and the Trustee's certificate of authentication, shall be substantially in the form set forth in Exhibit One to the Resolution including, if necessary, any changes to comply with the requirements of DTC or the provisions of this Supplemental Resolution or any Certificate of Determination.

Section 2.12. Appointment of Trustee and Paying Agent. Unless otherwise provided by Certificate of Determination, The Bank of New York Mellon shall be the Trustee under the Resolution and the Paying Agent for the Refunding Bonds.

ARTICLE III

DISPOSITION OF REFUNDING BOND PROCEEDS

Section 3.01. Disposition of Refunding Bond Proceeds. Any proceeds of the sale of the Refunding Bonds, other than accrued interest, if any, shall be deposited, simultaneously with the issuance and delivery of the Refunding Bonds, at one time or from time to time in one or more Series or subseries, in the Proceeds Account which is deemed to be established for each Series in the Proceeds Fund to be applied, or shall otherwise be applied pursuant to a Certificate of Determination to:

(a) the refunding of any Obligations, Parity Debt or Cross-Credit Obligations, or portions of any of them, in accordance with Section 2.02 hereof; and

(b) the balance of such proceeds, exclusive of accrued interest, shall be deposited in the COI Account and applied to the payment of Costs of Issuance or otherwise applied to the payment of Costs of Issuance.

Unless otherwise provided in a Certificate of Determination, the accrued interest, if any, and any capitalized interest, received on the sale of the Refunding Bonds shall be deposited in the Debt Service Fund.

ARTICLE IV

TAX COVENANTS, ADDITIONAL COVENANTS AND DEFEASANCE

Section 4.01. Tax Covenants Relating to the Refunding Bonds. The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Refunding Bonds issued as Tax-Exempt Obligations, the Issuer will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to comply with such written instructions as may be provided by Bond Counsel. In furtherance of the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any "Arbitrage and Use of Proceeds Certificate" or "Tax Certificate" to be executed by the Issuer in connection with the execution and delivery of any Refunding Bonds issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer's failure to observe, or refusal to comply with, the above covenant (a) the Owners of the Refunding Bonds, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Owners or the Trustee under Section 702 of the Resolution, other than the right (which is hereby abrogated solely as to the Issuer's failure to observe, or refusal to comply with the above covenant) to declare the principal of all Obligations then Outstanding, and the interest accrued thereon, to be due and payable pursuant to Section 567 of the Issuer Act, and (b) neither the Owners of the Obligations of any Series or holders of any Parity Debt (other than the Refunding Bonds or the Trustee acting on their behalf), nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to the Owners, the Parity Debt holders or the Trustee under the Resolution based upon the Issuer's failure to observe, or refusal to comply with, the above covenant.

The provisions of the foregoing covenants set forth in this Section shall not apply to any Refunding Bonds, including any subseries thereof, which the Issuer determines pursuant to the applicable Certificate of Determination to issue as Taxable Obligations.

Section 4.02. Additional Covenants.

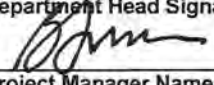

1. The Issuer covenants and agrees that it will not issue any Senior Obligations under the Senior Resolution (other than pursuant to Section 205 thereof) unless in addition to satisfying the requirements of the Senior Resolution, an Authorized Officer delivers to the trustee under the Senior Resolution a certificate demonstrating that for any period of 12 consecutive calendar months out of the 18 complete calendar months next preceding the date of authentication and delivery such issue of Senior Obligations, Net Revenues are at least equal to 1.10 times the Combined Maximum Annual Calculated Debt Service for all Subordinate Revenue Obligations, Parity Debt, Senior Obligations and Senior Parity Debt.

2. The Issuer covenants and agrees that in addition to complying with the provisions of Section 604 of the Resolution, the Issuer shall at all times 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 the Issuer 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 (a) an amount equal to the sum of amounts necessary in such calendar year (i) to pay all Operating Expenses of the Issuer, plus (ii) to pay the sum of Calculated Debt Service as defined in the Resolution and Calculated Debt Service as defined in the Senior Resolution, plus (iii) to maintain any reserve established by the Issuer pursuant to the Senior Resolution, in such amount as may be determined from time to time by an Authorized Officer in his or her judgment, or (b) an amount such that Revenues less Operating Expenses shall equal at least 1.10 times the sum of Calculated Debt Service as defined in the Senior Resolution and Calculated Debt Service as defined in the Resolution for such calendar year.



Section 4.03. Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in the Resolution, all or less than all Outstanding Refunding Bonds issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of Article A-XI of the Resolution, the Refunding Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in Section A-1101 of the Resolution unless (i) the Issuer has confirmed in writing that the Owners of the Refunding Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an Opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the Refunding Bonds issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

Staff Summary

Subject Approval of Municipal, Special, and Swap Advisors Contract Authorization
Department Finance
Department Head Name Robert E. Foran, Chief Financial Officer
Department Head Signature 
Project Manager Name Patrick McCoy, Director of Finance 

Date December 14, 2016
Vendor Names Public Resources Advisory Group, Mohanty Gargiulo LLC, Acacia Financial, and Piper Jaffray
Contract Number
Contract Manager Name
Table of Contents Ref #

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance Comm.	12/12	X		
2	Board	12/14	X		

Internal Approvals			
Order	Approval	Order	Approval
1	Legal 		
2	Chief of Staff 		

PURPOSE:

To obtain MTA and TBTA Board approval of contracts with each of the following firms to provide financial advisory services to MTA:

1. The advisory team of Public Resources Advisory Group together with Backstrom McCarley Berry & Co., LLC, a State certified MBE, and Rockfleet Financial Services, Inc. a State certified WBE for general financial advisory services, (collectively, "the PRAG Team") in connection with the issuance of MTA and TBTA bonds and other obligations. The PRAG Team will act as Municipal Advisor to MTA, and will serve as MTA's Independent Registered Municipal Advisor (IRMA),
2. Mohanty Gargiulo for swap advisory services and to serve as MTA's Qualified Independent Representative (QIR) with respect to all derivative matters. Mohanty Gargiulo is a State certified Women Business Enterprise (WBE), as well as a Minority Business Enterprise (MBE),
3. Acacia Financial (Acacia), a State certified WBE, for special advisory services as described in more detail below,
4. Piper Jaffray (Piper) for special advisory services as described in more detail below.

DISCUSSION:

The Municipal Advisor is responsible for providing expert market advice on the timing, structure, and execution of capital market activity by MTA and TBTA. The PRAG Team will act as MTA's IRMA and will provide MTA with advice on its capital markets activities as a fiduciary service provider. PRAG specializes in advising governmental entities and public benefit corporations on capital market activities and is a registered municipal advisor with the Municipal Securities Rulemaking Board. The PRAG Team includes Backstrom McCarley Berry & Co., LLC and Rockfleet Financial Services, which are registered broker-dealers. These firms will provide critical market data and pricing information to enable MTA to achieve optimal pricing on bonds, notes and other debt obligations.

The Swap Advisor is responsible for providing expert advice on the timing, structure, terms and conditions and on-going monitoring of the MTA's (including TBTA) outstanding portfolio of interest rate derivatives and fuel hedges. Mohanty Gargiulo specializes in advising governmental municipalities and public benefit corporations on structuring and managing derivatives exposure and providing financial advisory services. Mohanty Gargiulo is registered QIR and maintains necessary regulatory filings to serve in this role. Mohanty Gargiulo is a fiduciary service provider.

Acacia has been selected to serve as MTA's Special Advisor and will focus on providing professional advisory services in MTA's ongoing relationships with rating agencies and investors on an as needed basis.

Piper has been selected to serve as MTA's Special Advisor and will focus on providing professional advisory services in MTA's pursuit of federal loan programs and public private partnerships, or P3 on an as needed basis.

Staff Summary

The incumbent Municipal Advisor is Public Financial Management which has served in this role since January of 2013. The incumbent Swap Advisor is Mohanty Gargiullo which has served as Swap Advisor since January of 2013.

MTA has not previously retained special advisors.

BACKGROUND:

The Finance Department issued a formal Request for Proposals from qualified firms to serve as Municipal Advisor, Swap Advisor and/or Special Advisor to the MTA and TBTA on August 23, 2016.

A total of 14 proposals were received by the submission deadline of October 10, 2016.

After initial screening and review by the selection committee, ten firms were invited to participate in oral interviews for further evaluation. These interviews provided the selection committee the opportunity to ask questions about the written submissions, and to meet the key advisory team members that would be assigned to the MTA account. MTA also asked each of the ten firms interviewed to address four specific questions for uniformity.

The selection committee was unanimous in its recommendation of the PRAG Team as general municipal advisor. PRAG has a large and diverse practice as an advisor to large issuers, including transportation and transit agencies nationally, and has previous experience working with its two MWBE partners on this engagement: Backstrom McCarley Berry & Co., LLC and Rockfleet Financial Services.

Based on the written proposal and oral interview, the selection committee unanimously recommended Mohanty Gargiulo for swap advisor services. Mohanty Gargiulo specializes in advising governmental municipalities and public benefit corporations on structuring and managing derivatives exposure as well as providing general municipal advisory services. In addition, Mohanty Gargiulo is a State certified WBE, and MBE.

The recommendations are based upon the quality of the written proposals, the oral interviews, the experience and expertise of the key members of the respective advisory teams, and the fee proposals.

COST:

MTA held pricing negotiations with all of the recommended providers. The PRAG Team agreed to an annual fee of \$714,000, which is a 2% increase over the incumbent advisor. MTA agreed to a 2% increase for each year of the term of the agreement. Mohanty Gargiulo agreed to an annual fee of \$185,000 for the next three year engagement, which incorporates an inflationary cost adjustment of approximately 2% over the prior contract period. The special advisors will bill the MTA on a direct basis with hourly fee structures ranging from \$50/hour to \$400/hour when engaged.

ALTERNATIVES:

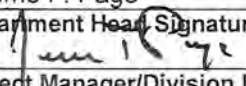
There is no alternative for the MTA to not use a Municipal Advisor or Swap Advisor.

RECOMMENDATION:

After considering each firm's qualifications and price proposal, the selection committee recommends the appointment of the PRAG Team as general financial advisor relating to the issuance of bonds and other obligations, and Mohanty Gargiulo LLC to serve as an advisor on derivative transactions for a period of three years each. The Board is also recommended to approve Acacia and Piper as special advisors. Recommendation is also made to include up to two annual renewals for each of the contracts.

Staff Summary

Page 1 of 2

Subject Law Firm Panel Addition
Department MTA Office of General Counsel
Department Head Name Jerome F. Page
Department Head Signature 
Project Manager/Division Head Jerome F. Page

Date December 14, 2016
Vendor Name Harris Beach PLLC
Contract Number
Contract Manager Name
Table of Contents Ref #

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance Comm.	12/12/16			
2	Board	12/14/16			

Internal Approvals			
Order	Approval	Order	Approval
4	Chief of Staff 	2	DDCR 
3	Chief Financial Officer 	1	Legal 

Purpose:

To obtain Board approval to add the law firm Harris Beach PLLC (the "Firm") to the panel of Board-approved outside counsel. The approval of this firm is sought in connection with its representation of Metropolitan Transportation Authority ("MTA") and its agencies with respect to the procurement of an electricity supply contract to commence following the expiration of the current long-term agreement with the New York Power Authority ("NYPA") on December 31, 2017, and other energy related matters.

Discussion:


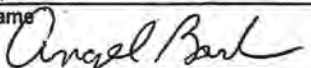
MTA's agreement with NYPA for electricity supply expires on December 31, 2017. MTA is currently in negotiations with NYPA on the terms of a successor supply contract and is also exploring other alternatives for some or all of the electricity supply currently being supplied by NYPA. In 2015, MTA paid approximately \$385 million for electricity supply and delivery under the current contract with NYPA. Given the importance and complexity of a successor electricity supply contract, the retention of outside counsel is necessary and appropriate to represent and protect the interests of MTA and the agencies. A number of the firms on the existing panel were considered for this assignment, but because of conflicts of interest and the specialized nature of the required skills and experience, no firms on the panel with the necessary background, skills and capacity were available. Although there is an active RFP for a new general law panel in twelve practice areas, including energy, the RFP evaluation and rate negotiation process is not complete.

Staff recommends that the Board authorize MTA's entry into a retainer with the Firm, which has extensive prior experience with respect to electricity supply contracts in New York and transactions with NYPA. The Firm has agreed to provide a 20% discount off standard billing rates for all work on these matters. The discounted hourly rates for the firm range from \$150 for an associate to \$400 for a senior partner. These rates are competitive with rates for similarly qualified firms in this practice area.

Recommendation:

It is recommended that the Board approve the appointment of the Firm to the approved outside counsel panel for matters other than personal injury, and authorize the MTA's execution of a retainer with the Firm as set forth above. As in the past, it is requested that the Board's approval of the Firm also entail the approved use of a successor firm, in the event that the Firm should subsequently merge into another firm, or a partner or principal lawyer in charge of an MTA matter at the Firm should move to a different firm.

Staff Summary

Subject Request for Authorization to Award Various Procurements
Department Executive
Department Head Name Bob Foran
Department Head Signature 
Division Head Name Angel Barbosa 

Date December 8, 2016
Vendor Name Various
Contract Number Various
Contract Manager Name Various
Table of Contents Ref #

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance	12/12/2016	X		
2	Board	12/14/2016	X		

Internal Approvals			
Order	Approval	Order	Approval
1	Procurement 	3	CFO 
2	Legal 		

PURPOSE:

To obtain approval of the Board to award various contracts/contract modifications and purchase orders, as reviewed by the MTA Finance Committee.

DISCUSSION:

MTAHQ proposes to award Non-competitive procurements in the following categories:

of Actions **\$ Amount**

None None

MTAHQ proposes to award Competitive procurements in the following categories:

Schedules Requiring Majority Vote

Schedule F: Personal Services Contracts	3	\$	4,977,500.00
Schedule G: Miscellaneous Service Contracts	1	\$	244,489.00
Schedule H: Modification to Personal/Miscellaneous Service Contracts	1	\$	975,387.49
SUBTOTAL	5	\$	6,197,376.49

MTAHQ presents the following procurement actions for Ratification:

None None

TOTAL **5** **\$ 6,197,376.49**

BUDGET IMPACT: The purchases/contracts will result in obligating MTAHQ operating and capital funds in the amount listed. Funds are available in the current MTAHQ operating/capital budgets for this purpose.

RECOMMENDATION: That the purchases/contracts be approved as proposed. (Items are included in the resolution of approval at the beginning of the Procurement Section.)

BOARD RESOLUTION

METROPOLITAN TRANSPORTATION AUTHORITY

WHEREAS, in accordance with Section 1265-a and Section 1209 of the Public Authorities Law and the All Agency Procurement Guidelines, the Board authorizes the award of certain non-competitive purchase and public work contracts, and the solicitation and award of request for proposals in regard to purchase and public work contracts; and

WHEREAS, in accordance with the All Agency Procurement Guidelines, the Board authorizes the award of certain non-competitive miscellaneous procurement contracts, and certain change orders to procurement, public work, and miscellaneous procurement contracts; and

WHEREAS, in accordance with Section 2879 of the Public Authorities Law and the All Agency Guidelines for Procurement of Services, the Board authorizes the award of certain service contracts and certain change orders to service contracts.

NOW, the Board resolves as follows:

1. As to each purchase and public work contract set forth in the annexed Schedule A, the Board declares competitive bidding to be impractical or inappropriate for the reasons specified therein and authorizes the execution of each such contract.

2. As to each request for proposals (for purchase and public work contracts) set forth in Schedule B for which authorization to solicit proposals is requested, for the reasons specified therein the Board declares competitive bidding to be impractical or inappropriate, declares it is in the public interest to solicit competitive request for proposals and authorizes the solicitation of such proposals.

3. As to each request for proposals (for purchase and public work contracts) set forth in Schedule C for which a recommendation is made to award the contract, the Board authorizes the execution of said contract.

4. The Board ratifies each action taken set forth in Schedule D for which ratification is requested.

5. The Board authorizes the execution of each of the following for which Board authorization is required: i) the miscellaneous procurement contracts set forth in Schedule E; ii) the personal service contracts set forth in Schedule F; iii) the miscellaneous service contracts set forth in Schedule G; iv) the modifications to personal/miscellaneous service contracts set forth in Schedule H; v) the contract modifications to purchase and public work contracts set forth in Schedule I; and vi) the modifications to miscellaneous procurement contracts set forth in Schedule J.

6. The Board ratifies each action taken set forth in Schedule K for which ratification is requested.

7. The Board authorizes the budget adjustments to estimated quantity contracts set forth in Schedule L.

LIST OF PROCUREMENTS FOR BOARD APPROVAL, DECEMBER 2016
COMPETITIVE PROCUREMENTS

METROPOLITAN TRANSPORTATION AUTHORITY

Procurements Requiring Majority Vote:

F. Personal Service Contracts

(Staff Summaries required for items greater than: \$100K Sole Source; \$250K Other Non-Competitive; \$1M Competitive)

- | | | |
|-----------|--|-------------------------------|
| 1. | Newmark Grubb Knight Frank
Real Estate Brokerage Services
Contract No. 16148-0100 | \$0
(Not-to-exceed) |
| | <p>Competitively negotiated – 5 Proposals – 60 months
MTA Real Estate on behalf of Long Island Railroad through a competitive RFP process, requires the services of a Real Estate Broker to identify sites for LIRR’s warehouse/industrial requirement. Newmark Grubb Knight Frank, has been identified to provide these services to represent and advise on a potential relocation and consolidation of multiple LIRR Warehouse/Industrial facilities within Nassau and Suffolk counties preferably into one location. Newmark has agreed to rebate 30% of all commissions up to \$250k, 40% of commissions from \$250 to \$500k, 50% from \$500k to \$1M and 55% of commissions over \$1M earned to the MTA. A broker is required, because MTA Real Estate does not have the in-house resources to conduct a comprehensive space search.</p> | |
| 2. | Newmark Grubb Knight Frank
Real Estate Brokerage Services
Contract No. 16324-0100 | \$0
(Not-to-exceed) |
| | <p>Competitively negotiated – 3 Proposals – 60 months
MTA Real Estate on behalf of Metro-North Railroad through a competitive RFP process, requires the services of a Real Estate Broker to identify sites for MNRR’s warehouse/industrial requirement. Newmark Grubb Knight Frank, has been identified to provide these services to represent and advise MNRR on a potential relocation and consolidation of multiple MNRR Warehouse/Industrial facilities within Westchester County preferably into one location where Newmark has agreed to rebate 30% of all commissions up to \$250k, 40% of commissions from \$250 to \$500k, 50% from \$500k to \$1M and 55% of commissions over \$1M earned to the MTA. A broker is required because MTA Real Estate does not have the in-house resources to conduct a comprehensive space search.</p> | |

METROPOLITAN TRANSPORTATION AUTHORITY
COMPETITIVE PROCUREMENTS

3. **LAZ Parking NY/NJ LLC** **\$4,977,500** Staff Summary Attached
Parking Management Services for
The Battery Parking Garage
Contract No. 16207-0100
(Not-to-exceed)

Competitively negotiated – 4 Proposals – 60 months

To recommend that the Board approve the award of a competitively-negotiated personal services contract to LAZ Parking NY / NJ LLC (“LAZ”), the incumbent, to provide parking management services for the Battery Parking Garage for an initial five-year period, and two 2-year option periods, to be exercised at MTA’s sole discretion, from January 1, 2017 thru December 31, 2024, in an amount not to exceed \$4,977,500 which includes a contingency of \$452,500. Funding for the option years will be based on Board-approved operating budgets for those years. The MTA requires the services of a parking operations firm to manage the BPG. The firm will handle all day-to-day operations and functions, including the collection of parking fees; developing strategies to increase parking revenue; developing a staffing plan, hiring and managing on-site personnel; paying all operating expenses; and entering into agreements on MTA’s behalf with service contractors to maintain and repair the garage as needed, etc. As a result of negotiations, LAZ’s Total Management Fee of \$138K per year was reduced to \$125k per year, a total savings of \$65k or 9 %. Labor costs have increased from approximately \$560,000 per year to approximately \$749,000, primarily due to the collective bargaining agreement. MTA has conducted a responsibility review and other due diligence on LAZ Parking NY / NJ LLC (“LAZ”), and has deemed the firm responsible for award.

G. Miscellaneous Service Contracts

(Staff Summaries required for all items greater than: \$100K Sole Source; \$250K Other Non-Competitive; \$1M RFP;
No Staff Summary required if Sealed Bid Procurement)

4. **IHS Global, Inc.** **\$244,489**
Economic Forecasting Services
Contract Nos. 15474-0100
(Not-to-exceed)

Competitively Negotiated – 1 proposal – 60 months

Contractor to provide MTA with a regularly updated (short and long term) data series (historic and forecast) of national and regional economic and demographic variables for use in, among other purposes, budgeting and planning. Such historic and forecast data series include: US Macroeconomic, New York State and MTA Region, housing and real estate and energy-products. MTA does not have the ability or the expertise to generate these forecasts in-house. Pricing for these reports are the same prices offered to NYS agencies. The first year’s cost of \$48,898 proposed for the new contract is 4% greater than the annual price paid for the past six years under the current contract, with annual 2% increases for the remaining four years in the proposed new contract, and is deemed fair and reasonable.

METROPOLITAN TRANSPORTATION AUTHORITY
COMPETITIVE PROCUREMENTS

H. Modifications to Personal Service Contracts and Miscellaneous Service Contracts Awarded as Contracts for Services

(Approvals/Staff Summaries required for substantial change orders and change orders that cause original contract to equal or exceed monetary or durational threshold required for Board approval.)

- | | | |
|----|--|--|
| 5. | Bowery Residents' Committee, Inc.
Homeless Outreach Services
Contract No. 09152-0100, S/A #10 | \$975,387.49
(Not-to-exceed) |
|----|--|--|

Base plus previous change orders = \$10,857,209.78

To request that the Board approve an amendment to a previously Board-approved competitively negotiated, personal services contract with Bowery Residents' Committee, Inc. This amendment includes a six-month time extension and an additional \$975,387.49 for the continuation of administering the MTA's Homeless Outreach Services Program (MTA/*Connections Outreach*), until a new competitive contract is issued and approved by the Board. The MTA/*Connections Outreach* Program addresses the needs of service-resistant, chronically homeless clients who require more intensive case management to facilitate their movement off MTA Commuter Rail property, especially at stations such as Grand Central Terminal, MNR stations in Manhattan and the Bronx, LIRR concourse at Penn Station and LIRR stations in Queens and Kings Counties. All rates as negotiated terms and condition under the base contract will remain the same and are deemed fair and reasonable.

Staff Summary

Schedule F: Personal Service Contracts

Item Number: Dept & Dept Head Name: Executive, Robert Foran						SUMMARY INFORMATION	
Division & Division Head Name: MTA Real Estate, Jeffrey Rosen						Vendor Name: LAZ Parking NY / NJ LLC	
						Contract Number: 16207-0100	
						Description: Parking Management Services for the Battery Parking Garage	
						Total Amount: \$4,977,500	
						Contract Term (Including Options, if any) January 1, 2017 thru December 31, 2026	
						Option(s) Included in Total Amount? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
						Renewal? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
						Procurement Type: <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	
						Solicitation Type: <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:	
						Funding Source: <input type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input checked="" type="checkbox"/> Other: BPG Revenues	

Board Reviews					
Order	To	Date	Approval	Info	Other
1	Finance	12/12/2016	X		
2	Board	12/14/2016	X		

Internal Approvals			
Order	Approval	Order	Approval
1	Procurement <i>QR</i>	4	DDCR <i>PH</i>
2	Real Estate <i>JS</i>	5	Legal <i>SS</i>
3	CFO		

Narrative

I. PURPOSE/RECOMMENDATION

To recommend that the Board approve the award of a competitively-negotiated personal services contract to LAZ Parking NY / NJ LLC ("LAZ"), the incumbent, to provide parking management services for the Battery Parking Garage for an initial five-year period, and two 2-year option periods, to be exercised at MTA's sole discretion, from January 1, 2017 thru December 31, 2024, in an amount not to exceed \$4,977,500 which includes a contingency of \$452,500. Funding for the option years will be based on Board-approved operating budgets for those years.

II. DISCUSSION

The Battery Parking Garage ("BPG") is a 2,100 space self-park parking garage in lower Manhattan, adjacent to the entrance and exit plaza of the Brooklyn Battery Tunnel. It is comprised of two separate, but fully integrated, physical structures referred to as the "Original Garage" and the "Addition", which total roughly 790,000 square feet in size. MTA B&T receives all revenue for this garage. Gross revenues in 2016 are estimated at \$11,560,700.

The MTA requires the services of a parking operations firm to manage the BPG. The firm will handle all day-to-day operations and functions, including the collection of parking fees; developing strategies to increase parking revenue; developing a staffing plan, hiring and managing on-site personnel; paying all operating expenses; and entering into agreements on MTA's behalf with service contractors to maintain and repair the garage as needed, etc.

In order to secure a new contract for management services, a Request for Proposals ("RFP") was publicly advertised and letters advising potential proposers of the RFP's availability were mailed to eighteen major parking management firms and four D/M/WBE firms. In response to the RFP four proposals were received. Proposals were submitted by ProPark America, iPark, a joint proposal from CB Richard Ellis and OnePark, and LAZ.

The Selection Committee, consisting of representatives from MTA Real Estate and B&T's Planning and Budget and Engineering Divisions evaluated the four proposals and determined that LAZ's proposal best satisfied the technical requirements of the RFP. Of the other three proposals, all lacked the required experience thresholds in terms of managing a facility similar in size and generating similar revenues, etc.

Under their current agreement, LAZ has increased gross revenue and lowered operating expenses while delivering exceptional services, even under extreme circumstances such as during hurricanes Irene and Sandy. LAZ is a full-service, parking management firm and is a wholly-owned subsidiary of LAZ Karp Associates, LLC ("LAZ Parking"), one of the largest national parking companies in the United States, operating over 2,500 parking facilities in 26 states and 321 cities, managing in excess of 878,000 parking spaces, 8,600 employees and \$930 million in parking revenues. MTA has conducted a responsibility review and other due diligence with regard to LAZ Parking and has deemed them to be responsible for award.

As a result of negotiations, LAZ's Total Management Fee of \$138K per year was reduced to \$125k per year, a total savings of \$65k or 9 %. Labor costs have increased from approximately \$560,000 per year to approximately \$749,000, primarily due to the collective bargaining agreement. MTA has conducted a responsibility review and other due diligence on LAZ Parking NY / NJ LLC ("LAZ"), and has deemed the firm responsible for award.

III. D/M/WBE INFORMATION

The MTA Department of Diversity and Civil Rights has established a 15% MBE and 15%WBE on this contract. LAZ Parking NY/NJ LLC. has not completed any MTA contracts with goals; therefore, no assessment of the firm's MWDBE performance can be determined at this time.

IV. IMPACT ON FUNDING

The total cost of the contract will be paid directly from BPG revenues.

V. ALTERNATIVES

Do not Approve Award of the Contract. This alternative is not feasible. MTA and B&T do not possess the internal resources to provide the required parking management services.

DECEMBER 2016
MTA REAL ESTATE
LIST OF REAL ESTATE ACTION ITEMS FOR BOARD APPROVAL

MTA METRO-NORTH RAILROAD


Lease with Spread NYC LLC dba tartinery for a fast casual food operation at Dining Concourse Retail Space Pavilion A at Grand Central Terminal, Manhattan

MTA LONG ISLAND RAIL ROAD

Lease with Global Administrative Services, LLC for a taxi dispatch office and 6 taxi parking spaces, Little Neck

Lease with Global Administrative Services, LLC for a taxi dispatch office and 5 taxi parking spaces, Lynbrook

Staff Summary

Subject LEASE AGREEMENT
Department REAL ESTATE
Department Head Name JEFFREY B. ROSEN
Department Head Signature 
Project Manager Name NANCY MARSHALL

Date DECEMBER 12, 2016
Vendor Name
Contract Number
Contract Manager Name
Table of Contents Ref. #

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance Committee	12/12/16	X		
2	Board	12/14/16	X		

Internal Approvals			
Order	Approval	Order	Approval
		1	Legal 
3	Chief of Staff 		
2	Chief Financial Officer 		

AGENCY: MTA Metro-North Railroad ("Metro-North")

LESSEE: Spread NYC LLC dba tartinery

LOCATION: GCT Dining Concourse Pavilion A

ACTIVITY: A fast casual food operation selling tenant-prepared menu items featuring signature tartines, salads, cheese boards/small plates, soups, sweets, juices, beer and wine.

ACTION REQUESTED: Approval of terms

TERM: 10 years

SPACE: Approximately 1,223 square feet, plus approximately 250 square feet for storage

COMPENSATION: Annual Base Rent plus 10% of gross sales over Breakpoint, as follows:

Year	Annual Base Rent	PSF	Breakpoint
1	\$430,000.00	\$351.59	\$3,500,000.00
2	\$442,900.00	\$362.14	\$3,605,000.00
3	\$456,187.00	\$373.01	\$3,713,150.00
4	\$469,872.61	\$384.20	\$3,824,544.50
5	\$483,968.79	\$395.72	\$3,939,280.84
6	\$498,487.85	\$407.59	\$4,057,459.26
7	\$513,442.49	\$419.82	\$4,179,183.04
8	\$528,845.76	\$432.42	\$4,304,558.53
9	\$544,711.13	\$445.39	\$4,433,695.28
10	\$561,052.47	\$458.75	\$4,566,706.14

STORAGE RENT: \$87.00 per sq. ft. per year, increasing annually by 3%

MARKETING: \$11.30 per sq. ft. per year, increasing annually by 3%

TRASH: \$19.54 per sq. ft. per year, increasing annually by 3%

COMMON AREA MAINTENANCE: Estimated at \$110.58 per square foot, increasing annually by 3%. CAM charge will be imposed on the approximately 390 sf of employee work zone only.

Staff Summary

FINANCE COMMITTEE MEETING SPREAD NYC LLC dba tartinery (Cont'd)

SECURITY:	3 months minimum rent plus a guaranty from Ajax Holding (limited to 6 months' rent after vacating of premises)
INSURANCE:	Standard
CONSTRUCTION PERIOD:	120 days
TENANT IMPROVEMENT ALLOWANCE	As described below.

COMMENTS:

The subject space encompasses one of the two large free-standing food pavilions that currently exist in the Dining Concourse at Grand Central Terminal. In anticipation of the scheduled expirations of the leases relating to such kiosks, MTA Real Estate and Metro-North engaged Beyer, Blinder Belle, the architects that were responsible for the renovation of the Terminal back in the 1990s, to prepare designs to better light and otherwise refresh the portions of the Dining Concourse encompassing such pavilions, while addressing a variety of operational issues including reduced seating capacity in the Dining Concourse caused by the installation of the East Side Access escalators. The increased leasable square footage created by these design changes will provide for more customer seating, larger food preparation areas and more extensive merchandising/display zones, while public circulation patterns will be optimized.

A rendering of the new configuration of one of the two pavilions is included on page 3 of this staff summary.

With such designs in hand, MTA Real Estate issued two requests for proposals ("RFPs") – one for Pavilion A and the other for Pavilion B. Because such RFPs required the selected prospective tenants to perform extensive prescribed base building improvements, the RFPs stipulated that Landlord would provide each such tenant with a tenant improvement allowance equal to the lesser of \$500,000 or fifty percent (50%) of the total hard costs of construction such tenant incurs in preparing for its occupancy.

The result of the ensuing competition for Pavilion B is reported in a separate chart item in this month's Board materials. In response to the RFP for Pavilion A, ten proposals were received. Such proposals were submitted by tartinery, Salsa Express, Irving Farm, Dishes at Home, Obica, Yong Kang Street, Dr. Smood, Vintry, Melba's and Eli Zabar.

Per the Guidelines for Selection of Tenants for Grand Central Terminal approved by the MTA Board in November 2009, as amended in March 2014 and March 2016, such proposals were independently evaluated by Newmark Grubb Knight Frank and Jones Lang LaSalle, and subsequently evaluated by the Director of GCT Development. When evaluating the proposals, two evaluation criteria were taken into account. Selection Criterion A, which accounts for 70% of the score, is designed to reflect the direct economic value of a proposal. Selection Criterion B, which accounts for 30% of the score, is the evaluator's determination of a proposal's indirect economic benefit to the MTA. The Director of GCT Development's evaluation assigned tartinery the highest Total Selection Criteria Score, but because Salsa Express and Irving Farm offered higher guaranteed minimum rent a selection committee was convened.

The three-person selection committee reviewed and scored the eight proposals, and unanimously assigned tartinery both the highest Selection Criterion B Score and the highest Total Selection Criteria Score. Their averaged scoring is reflected in the annexed chart. The rent to be paid by Spread NYC LLC is higher than the estimated fair market rental value of the subject space as it had been determined by MTA's independent appraiser, Jerome Haims Realty, Inc.

Nicolas Dutko and Alicia Rountree opened the first tartinery in Nolita in 2010, a second at the Plaza Hotel's food hall in 2012 and a third in 2014 at Hudson Eats in Brookfield Place. As at its other locations, tartinery will offer healthy, seasonal fresh food combining the simplicity of high-quality ripe ingredients with the craftsmanship of French tartines. Customers will be able to order to-go at the counter or for consumption in the private seating area, a hybrid style of operation with which Nicolas and his brother Serguei have had significant experience and success.

Based on the foregoing, MTA Real Estate requests authorization to enter into a lease agreement with Spread NYC LLC on the above-described terms and conditions.



Staff Summary

FINANCE COMMITTEE MEETING SPREAD NYC LLC dba tartinery (Cont'd)



Metropolitan Transportation Authority

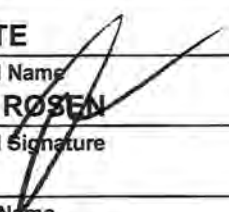
Page 4 of 4

Grand Central Terminal Retail Leasing Evaluation Sheet
Evaluator: Selection Committee

Spaces: Dining Concourse Pavilion A (currently Irving Farm)
Date: July 13, 2016

	A	B	C	D	E	F	G	H	I	J
PROPOSER	Unadjusted Guaranteed Rent Amount	Guaranteed Rent Adjustment Factor*	Adjusted Guaranteed Rent Amount (A x B)	Unadjusted Percentage Rent Amount	Percentage Rent Adjustment Factor**	Adjusted Percentage Rent Amount (D x E)	Adjusted Total Rent Amount (C + F)	Selection Criterion A Score *** (0-70)	Selection Criterion B Score (0-30)	Total Selection Criterion Score (H + I)
Salsa Express	\$3,864,069	1.0	\$3,864,069	\$584,686	-	-	\$3,864,069	70	11	81.0
Irving Farm	\$3,593,723	1.0	\$3,593,723	\$3,062	.16	\$510.00	\$3,594,233	65.1	21.3	86.4
Tartinery	\$3,577,086	1.0	\$3,577,086	\$705,768	.18	\$128,137	\$3,705,223	67.1	27.7	94.8
Dishes at Home/ Mini Mint	\$3,327,522	1.0	\$3,327,522	\$558,959	-	-	\$3,327,522	60.3	23.3	83.6
Obica	\$3,306,516	1.0	\$3,306,516	\$525,835	-	-	\$3,306,516	59.9	18.3	78.2
Yong Kang Street	\$2,895,061	1.0	\$2,895,061	\$84,062	-	-	\$2,895,061	52.4	11.6	64.0
Dr. Smood	\$2,797,821	1.0	\$2,797,821	\$2,644,015	-	-	\$2,797,821	50.7	19	69.7
Vintry	\$2,797,821	1.0	\$2,797,821	\$819,528	.38	\$313,155	\$3,110,976	56.3	26.6	83.0
Melba's	\$2,473,736	1.0	\$2,473,736	-	-	-	\$2,473,736	44.8	15	59.8
Eli Zabar	\$2,394,900	1.0	\$2,394,900	\$1,009,467	.03	\$33,648	\$2,428,548	44	21.3	65.3

Staff Summary

Subject LEASE AGREEMENT
Department REAL ESTATE
Department Head Name JEFFREY B. ROSEN
Department Head Signature 
Project Manager Name ROBERT GOLDBERG

Date DECEMBER 12, 2016
Vendor Name
Contract Number
Contract Manager Name
Table of Contents Ref. #

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance Committee	12/12/16	X		
2	Board	12/14/16	X		

Internal Approvals			
Order	Approval	Order	Approval
		1	Legal 
3	Chief of Staff 		
2	Chief Financial Officer 		

AGENCY: MTA Long Island Rail Road Company ("LIRR")

LESSEE: Global Administrative Services, LLC

LOCATION: Little Neck station, Borough/County of Queens

ACTIVITY: Taxi dispatch office and 6 taxi parking spaces

ACTION REQUESTED: Approval of terms

TERM: 10 years

SPACE: Dispatch office approximately 118 s/f; parking spaces approximately 120 s/f each

RENT: \$17,250 first year with 3% increases annually thereafter during the term

COMMENTS:


LIRR's taxi dispatch office and 6 taxi parking spaces were included in a recent RFP. The taxi office and spaces are located on the south side of the right of way, east of Little Neck Parkway, within the commuter parking lot. Global Administrative Services, LLC was the sole proposer and is the incumbent tenant. It offered rent in the amount of \$143,499.37 NPV for the proposed ten year term.

The tenant will be responsible for refurbishing and maintaining the interior of the taxi office and repainting the stripes for its parking spaces, as well as providing standard insurance coverages, at its sole cost and expense.

The proposed rent is within the range of fair market value for the property as estimated in advance by MTA Real Estate's independent consultant.

Based on the foregoing, MTA Real Estate requests authorization to enter into a lease with Global Administrative Services, LLC, on the above-described terms and conditions.

Staff Summary

Subject LEASE AGREEMENT
Department REAL ESTATE
Department Head Name JEFFREY B. ROSEN
Department Head Signature 
Project Manager Name ROBERT GOLDBERG

Date DECEMBER 12, 2016
Vendor Name
Contract Number
Contract Manager Name
Table of Contents Ref. #

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance Committee	12/12/16	X		
2	Board	12/14/16	X		

Internal Approvals			
Order	Approval	Order	Approval
		1	Legal 
3	Chief of Staff 		
2	Chief Financial Officer 		

AGENCY: MTA Long Island Rail Road Company ("LIRR")

LESSEE: Global Administrative Services, LLC

LOCATION: Lynbrook station, Nassau County

ACTIVITY: Taxi dispatch office and five taxi parking spaces

ACTION REQUESTED: Approval of terms

TERM: 10 Years

SPACE: Dispatch office approximately 220 s/f; parking spaces approximately 120 s/f each

RENT: \$42,100 first year with 3% annual increases thereafter during the term

COMMENTS:

LIRR's taxi dispatch office and five taxi parking spaces at its Lynbrook station were included in a recent RFP. The taxi office and spaces are located on the south side of the elevated LIRR right of way, west of Broadway, within the commuter parking lot. Two proposals were submitted; (1) Global Administrative Services, LLC, an entity controlled by the principal owner of All Island Travel Corp. (the incumbent tenant of the dispatch office), submitted a proposal in the amount of \$350,208.89 NPV for the ten-year term and (2) Village Car Service, Inc., the incumbent tenant of the five taxi parking spaces, submitted a proposal in the amount of \$179,686.17 NPV for such term.


The selected tenant will be responsible for refurbishing the interior of the taxi office, repainting stripes for the taxi spaces, operation and maintenance of the premises and providing standard insurance coverages, at its sole cost and expense.



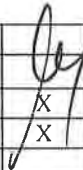

The proposed rent is consistent with the fair market rental value of the premises as estimated in advance by MTA Real Estate's independent consultant.

Based on the foregoing, MTA Real Estate requests authorization to enter into a lease with Global Administrative Services, LLC on the above-described terms and conditions.

PROCUREMENTS

The Procurement Agenda this month includes 8 actions for a proposed expenditure of \$265.6M.

Subject Request for Authorization to Award Various Procurements					
Department Materiel – NYCT					
Department Head Name Stephen M. Plochochi					
Department Head Signature 					
Project Manager Name Rose Davis					
Board Action					
Order	To	Date	Approval	Info	Other
1	Committee	12/12/16			
2	Board	12/14/16			

December 7, 2016			
Department Law and Procurement – MTACC			
Department Head Name Evan Eisland			
Department Head Signature 			
Internal Approvals			
	Approval		Approval
	President NYCT		President MTACC
	Executive VP	X	Subways
X	Capital Prog. Management	X	Diversity/Civil Rights
	Law		

Internal Approvals (cont.)							
Order	Approval	Order	Approval	Order	Approval	Order	Approval

PURPOSE:

To obtain approval of the Board to award various contracts and purchase orders, and to inform the NYC Transit Committee of these procurement actions.

DISCUSSION:

NYC Transit proposes to award Noncompetitive procurements in the following categories:

<u>Procurements Requiring Two-Thirds Vote:</u>		<u># of Actions</u>	<u>\$ Amount</u>
Schedule A:	Noncompetitive Purchases and Public Work Contracts	1	\$ 5.0 M
	• Knorr Brake Corporation \$ 5.0 M		
<u>Schedules Requiring Majority Vote:</u>			
Schedule G:	Miscellaneous Service Contracts	1	\$ 11.1 M
	• Loram Maintenance of Way, Inc. \$ 11.1 M		
SUBTOTAL		2	\$ 16.1 M

MTA Capital Construction proposes to award Noncompetitive procurements in the following categories: NONE

MTA Bus Company proposes to award Noncompetitive procurements in the following categories: NONE

NYC Transit proposes to award Competitive procurements in the following categories:

<u>Procurements Requiring Two-Thirds Vote:</u>		<u># of Actions</u>	<u>\$ Amount</u>
Schedule C:	Competitive Requests for Proposals (Award of Purchase and Public Work Contracts)	2	\$ 244.4 M
SUBTOTAL		2	\$ 244.4 M

MTA Capital Construction proposes to award Competitive procurements in the following categories: NONE

MTA Bus Company proposes to award Competitive procurements in the following categories: NONE

MTA Bus Company proposes to award Ratifications in the following categories: NONE

NYC Transit proposes to award Ratifications in the following categories: NONE

MTA Capital Construction proposes to award Ratifications in the following categories:

Schedules Requiring Majority Vote:

Schedule K:	Ratification of Completed Procurement Actions	4	\$ 5.1 M
SUBTOTAL		4	\$ 5.1 M
TOTAL		8	\$ 265.6 M

COMPETITIVE BIDDING REQUIREMENTS: The procurement actions in Schedules A, B, C, and D are subject to the competitive bidding requirements of PAL 1209 or 1265-a relating to contracts for the purchase of goods or public work. Procurement actions in the remaining Schedules are not subject to these requirements.

BUDGET IMPACT: The purchases/contracts will result in obligating funds in the amounts listed. Funds are available in the current operating/capital budgets for this purpose.

RECOMMENDATION: That the purchases/contracts be approved as proposed. (Items are included in the resolution of approval at the beginning of the Procurement Section.)

BOARD RESOLUTION

WHEREAS, in accordance with Section 1265-a and 1209 of the Public Authorities Law and the All-Agency Procurement Guidelines, the Board authorizes the award of certain noncompetitive purchase and public work contracts, and the solicitation and award of request for proposals in regard to purchase and public work contracts; and

WHEREAS, in accordance with the All-Agency Procurement Guidelines, the Board authorizes the award of certain noncompetitive miscellaneous service and miscellaneous procurement contracts, certain change orders to purchase, public work, and miscellaneous service and miscellaneous procurement contracts, and certain budget adjustments to estimated quantity contracts; and

WHEREAS, in accordance with Section 2879 of the Public Authorities Law and the All-Agency Guidelines for Procurement of Services, the Board authorizes the award of certain service contracts and certain change orders to service contracts.

NOW, the Board resolves as follows:

1. As to each purchase and public work contract set forth in annexed Schedule A, the Board declares competitive bidding to be impractical or inappropriate for the reasons specified therein and authorizes the execution of each such contract.

2. As to each request for proposals (for purchase and public work contracts) set forth in Schedule B for which authorization to solicit proposals is requested, for the reasons specified therein, the Board declares competitive bidding to be impractical or inappropriate, declares it is in the public interest to solicit competitive request for proposals, and authorizes the solicitation of such proposals.

3. As to each request for proposals (for purchase and public work contracts) set forth in Schedule C for which a recommendation is made to award the contract, the Board authorizes the execution of said contract.

4. As to each action set forth in Schedule D, the Board declares competitive bidding impractical or inappropriate for the reasons specified therein, and ratifies each action for which ratification is requested.

5. The Board authorizes the execution of each of the following for which Board authorization is required: (i) the miscellaneous procurement contracts set forth in Schedule E; (ii) the personal service contracts set forth in Schedule F; (iii) the miscellaneous service contracts set forth in Schedule G; (iv) the modifications to personal/miscellaneous service contracts set forth in Schedule H; (v) the contract modifications to purchase and public work contracts set forth in Schedule I; and (vi) the modifications to miscellaneous procurement contracts set forth in Schedule J.

6. The Board ratifies each action taken set forth in Schedule K for which ratification is requested.

7. The Board authorizes the budget adjustments to estimated contracts set forth in Schedule L

DECEMBER 2016

LIST OF NONCOMPETITIVE PROCUREMENTS FOR BOARD APPROVAL

Procurements Requiring Two-Thirds Vote:

A. Noncompetitive Purchases and Public Work Contracts

(Staff Summaries required for all items greater than: \$100K Sole Source; \$250K Other Noncompetitive.) Note: In the following solicitations, NYC Transit attempted to secure a price reduction. No other substantive negotiations were held except as indicated for individual solicitations.

- | | | |
|--|---------------------------|--------------------------------------|
| 1. Knorr Brake Corporation | \$5,000,000 (Est.) | <u>Staff Summary Attached</u> |
| Sole Source – Three-year omnibus | | |
| Purchase of inventory and non-inventory air brake parts. | | |

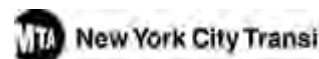
Procurements Requiring Majority Vote:

G. Miscellaneous Service Contracts

(Staff Summaries required for all items greater than: \$100K Sole Source; \$250K Other Noncompetitive; \$1M RFP; No Staff Summary required if sealed-bid procurement.)

- | | | |
|--|----------------------------|--------------------------------------|
| 2. Loram Maintenance of Way, Inc. | \$11,081,850 (Est.) | <u>Staff Summary Attached</u> |
| Sole Source | | |
| RFQ# 122156 | | |
| Provide rail-grinding services. | | |

Schedule A: Noncompetitive Purchases and Public Work Contracts



Item Number: 1

Vendor Name (Location) Knorr Brake Corporation (Westminster, Maryland)		Contract Number NONE	Renewal? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Description Purchase of inventory and non-inventory air brake parts		Total Amount: \$5,000,000 (Est.)	
Contract Term (including Options, if any) December 15, 2016–December 14, 2019		Funding Source <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	
Option(s) included in Total Amount? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> n/a		Requesting Dept./Div., Dept./Div. Head Name: Department of Materiel, Stephen M. Plochochi	
Procurement Type <input type="checkbox"/> Competitive <input checked="" type="checkbox"/> Noncompetitive			
Solicitation Type <input type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Omnibus Sole-Source Approval			

Discussion:

This is an omnibus approval request for items identified as obtainable only from Knorr Brake Corporation (“Knorr”), and will eliminate the need to advertise and prepare individual procurement staff summaries for Board approval for each procurement over the small purchase threshold. NYC Transit is not obligated to generate any purchase orders pursuant to an omnibus approval. Any purchases made under this approval will be made pursuant to paragraph 9(b) of Public Authorities Law 1209, which allows for purchases of items that are available from only a single responsible source to be conducted without competitive bidding.

There are approximately 2,624 items covered by this approval for the purchase of replacement air brake parts for NYC Transit subway cars. These items are identified as obtainable only from Knorr for the following reasons: sole pre-qualified item on the Qualified Products List and not available from any distributors or other sources; publicly advertised within a 12-month period without an acceptable alternate supplier, or; proprietary to Knorr. These items are advertised a minimum of once every 12 months to seek competition. A list of Knorr’s sole-source items, as well as NYC Transit’s intention to buy items on the list without competitive bidding, is available for download from the NYC Transit website at any time by any prospective vendor. These sole source replacement parts will be used by the Division of Car Equipment (“DCE”) for Scheduled Maintenance System (“SMS”) and normal maintenance for approximately 3,031 subway cars (752 R46, 824 R62A, 425 R68, and 1,030 R142) in the NYC Transit fleet.

The existing Knorr omnibus approval for \$3,000,000 was approved by the Board in October 2014 and will expire on December 1, 2017. There is a remaining balance of \$186,465 of unexpended funds on the existing omnibus approval, which is insufficient to support the requirements through the end of the existing omnibus approval period; therefore Board approval is being sought early.

Procurement performed an analysis on the 52 contracts issued during the term of the existing omnibus approval that exceeded the small purchase threshold, which represents a total contract value of \$3,171,632. Of the 52 contracts, 24 items have comparative price history and represent 58.26%, or \$1,847,643, of the total dollar value of the contracts. A comparative price analysis of the 24 items revealed an annual weighted average price decrease of 0.36%, which compares favorably with the Producer Price Index over the same time period, which showed an annual average price increase of 1.20%.

Based on the current forecasts as well as projections for 2017 through 2020, it is anticipated that DCE will require approximately \$5,000,000 for the purchase from Knorr of sole-source items exceeding the small purchase threshold. During the term of this new omnibus approval, the overhaul (14-year SMS) on 174 R46 and 465 R142 subway cars, and the overhaul (seven-year SMS) on 724 R62A, 425 R68, and 190 R142 subway cars will be performed. Procurement believes that the amount requested will be sufficient to procure all sole-source materials that exceed the small purchase threshold from Knorr for the next three-year period. Procurement and DCE will continue to research alternate sources of supply wherever possible. Under this new omnibus approval, pricing for any procurement is established by requesting a quote for each item from Knorr on an as-required basis. Each item to be purchased under this new omnibus approval will be subject to a cost and/or price analysis and determination that the price is found to be fair and reasonable.

Schedule G: Miscellaneous Service Contracts

Item Number: 2

Vendor Name (Location) Loram Maintenance of Way, Inc. (Hamel, Minnesota)
Description Provide rail-grinding services
Contract Term (including Options, if any) March 1, 2017–February 29, 2020
Option(s) included in Total Amount? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> n/a
Procurement Type <input type="checkbox"/> Competitive <input checked="" type="checkbox"/> Noncompetitive
Solicitation Type <input type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Noncompetitive

Contract Number RFQ 122156	Renewal? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Total Amount: \$11,081,850	
Funding Source <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	
Requesting Dept./Div., Dept./Div. Head Name: Department of Subways, Wynton Habersham	

Discussion:

It is requested that the Board declare, pursuant to the All-Agency Service Contract Procurement Guidelines, that a competitive selection process is inappropriate due to the existence of a single responsible source, and approve the award of a three-year noncompetitive miscellaneous service contract to Loram Maintenance of Way, Inc. (“Loram”) for rail-grinding services for NYC Transit.

Rail grinding improves the condition of the rail by reducing rail surface imperfections. This increases the useful life of the rail and, as a result of improved wheel/rail interface, reduces premature wear on subway car wheels. It is therefore a cost-effective alternative to rail and rolling stock component replacement.

Loram utilizes its own personnel and its own proprietary equipment. In the past, NYC Transit employed the rail-grinding services of Loram through a competitive solicitation with Long Island Rail Road (“LIRR”) and Metro-North Railroad (“MNR”), under which Loram was the only company offering equipment that was readily available and suitable for use in NYC Transit’s system. MNR and LIRR have different operating environments than NYC Transit (including tunnel clearances and radius of curves), and are therefore able to utilize larger 16-stone and 24-stone rail grinders. The rail grinder for NYC Transit, the self-propelled Loram 8-stone L-Series LPC1, has several features which make it operationally suited to NYC Transit’s use. This includes its smaller size (to accommodate limited tunnel clearances and tighter curves) and on-board system to collect steel dust generated from the grinder.

NYC Transit confirmed through market research that Loram is considered a premier rail grinding service provider both nationally and internationally. While there are two companies providing this service in North America, Loram has a rail grinder that is readily available and previously used in the NYC Transit system. The other provider indicated that it would have to custom design and manufacture a rail grinder to operate as required in the NYC Transit environment. A published advertisement for rail-grinding services received no response. Accordingly, NYC Transit decided to develop a noncompetitive contract independent of any LIRR/MNR efforts.

This contract is an estimated quantities contract. After a series of negotiations, Loram agreed to all-inclusive hourly rates for labor, equipment, and grinding, and further agreed to a reduction in the rates of up to 9%, resulting in an estimated savings of \$766,770 over the life of the contract. Loram has confirmed that NYC Transit is receiving its most favored customer pricing. Cost Price has determined that Loram’s rates are fair and reasonable.

Since the value of the award for this item exceeds \$1,000,000 and is a noncompetitive procurement, pursuant to Public Authorities Law Section 2879-a and Part 206 of Title 2 of the New York Codes, Rules and Regulations, this contract will be submitted to the Office of the New York State Comptroller for its formal review and approval prior to providing Loram with a Notice to Proceed.

In connection with a previous contract awarded to Loram, Loram was found to be responsible notwithstanding significant adverse information pursuant to the All-Agency Responsibility Guidelines and such responsibility finding was approved by the MTA Chairman/CEO in consultation with the MTA General Counsel in December 2009. No new SAI has been found relating to Loram and Loram has been found to be responsible.

DECEMBER 2016

LIST OF COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL

Procurements Requiring Two-Thirds Vote:

C. Competitive Requests for Proposals (Award of Purchase and Public Work Contracts)
(Staff Summaries required for items requiring Board approval.)

1. **Prismatic Development Corporation** **\$163,750,000** **Staff Summary Attached**
Five Proposals – 43-month contract
Contract# C-82004
Contract for the design and construction of the Clifton Car Repair Shop in Staten Island.
2. **Schiavone Construction Co. LLC** **\$80,680,000** **Staff Summary Attached**
Two Proposals – 24-month contract
Contract# C-48702
Viaduct and Bridge Replacement on the Myrtle Avenue Line.

Staff Summary

Item Number 1			
Department, Department Head Name: VP Materiel, Stephen M. Plochochi 			
Internal Approvals			
Order	Approval	Date	Approval
1 	Materiel	6 X	CPM
2 X	Law	7 X	CFO
3 X	Budget	8 	EVP
4 X	DDCR	9 	President
5 X	Subways		

SUMMARY INFORMATION	
Vendor Name Prismatic Development Corporation	Contract No. C-82004
Description Design and Construction of the Clifton Shop in the Borough of Staten Island	
Total Amount \$163,750,000	
Contract Term (including Options, if any) 43 months	
Option(s) included in Total Amount? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Renewal? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Noncompetitive	
Solicitation Type <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:	
Funding Source <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Other:	

PURPOSE:

To obtain approval of the Board to award a competitive contract to Prismatic Development Corporation ("Prismatic") for the Design and Construction of the Clifton Car Repair Shop ("Clifton Shop") in the Borough of Staten Island. The contract amount is \$163,750,000 with a term of 43 months. Additionally, in accordance with MTA policy regarding the use of design/build, and to enhance competition and defray proposal costs, this solicitation included a stipend of up to \$420,000 to be paid to each unsuccessful Step 2 proposer whose proposal met a defined standard. Accordingly, permission is also requested to pay a total stipend of \$1,680,000.

DISCUSSION:

Superstorm Sandy flooded and incapacitated the existing Staten Island Railway ("SIR") Clifton Shop with seawater. While urgent repairs were made to the facility shortly after the storm to restore limited operations, the shop is still not operating at full pre-storm functionality and experiences flooding when there is a heavy rainfall. While making long-term repairs would restore the shop's full functionality, making such a significant investment in an aging facility would still leave the shop vulnerable to future storm events and require the construction of a freestanding perimeter wall for protection. In addition, any improvements in the shop will need to be designed to deal with future fleet plans and maintenance practices for servicing new rail cars. When comparing the cost of this work to other alternatives that meet SIR's current and future operational needs, replacement of the existing facility with a new state-of-the-art resilient shop emerged as the most cost-effective alternative to protect against future storm-related damages, meet SIR's current and future demand for maintaining new rail cars, and relocate administrative staff currently situated in nearby rented space.

The new Clifton Shop will include resiliency measures such as exterior walls that can sustain Category 2 plus three-foot storm conditions as well as protection for all exterior openings and enhanced site drainage. Also included are new overhead cranes to lift rail car air conditioners, a wheel truing machine, shop equipment, parts storage, administrative space, and fire alarm and security systems while still retaining most of the existing shop equipment used to service rail cars.

An Authorizing Resolution requesting the use of a two-step competitive Request for Proposal ("RFP") procurement process was approved by the Board in order to evaluate technical factors in addition to cost. A request for letters of interest and qualification packages was advertised, resulting in the submission of eight responses.

The Step-1 qualification packages were evaluated against preestablished selection criteria addressing relevant experience, general responsibility, financial resources, and safety record. Five firms were selected to receive the RFP: E. E. Cruz & Company, Inc. (“E. E. Cruz”); John P. Picone, Inc. (“Picone”); Judlau Contracting, Inc. (“Judlau”); Prismatic; and Skanska USA Civil Northeast (“Skanska”). These proposers, including design team consultants, had the most relevant design/build experience and key personnel to best perform this project. They also have established relationships working as contractor and designer, which is a key component to a design/build project. Three firms were not selected: Halmer International LLC; Kiewit Infrastructure Co.; and Railroad/Scalamandre, Joint Venture because their experience was deemed not in the competitive range of the five selected firms. The proposed key personnel for each team not selected did not have as sufficient experience.

The package for Step 2 of the RFP was issued to the five selected firms and initial proposals were received on from E. E. Cruz (\$179,500,000), Picone (\$218,522,000), Judlau (\$168,800,000), Prismatic (\$177,770,249), and Skanska (\$197,980,000).

Proposals were evaluated by a Selection Committee (“SC”) utilizing preestablished selection criteria addressing each proposer’s design and construction approach; team experience and qualifications; project innovations and schedule; safety and quality; qualifications and coordination of subcontractors; commissioning, DBE plans and other relevant matters. After technical factors, the overall project cost was considered. Supporting the SC’s evaluation effort was a Technical Advisory Subcommittee comprised of members from various NYC Transit departments responsible for verifying proposal compliance with the RFP requirements. The SC reviewed the technical proposals, discussed them with the Technical Advisory Subcommittee, observed the oral presentations, reviewed the price proposals submitted by each proposer, and recommended that Judlau, Prismatic, and Skanska be invited for negotiations. Skanska has the most relevant maintenance shop and design/build experience of all the proposers. Prismatic’s experience includes public sector design/build projects and facilities construction of a similar high-dollar value, and its proposal demonstrated a high comprehension of the overall project. Notably, Prismatic also developed the preliminary design the furthest as part of its proposal. Judlau submitted a well thought-out plan of approach that included design packages with a detailed phasing plan. The SC did not recommend two firms for negotiation: E. E. Cruz and Picone. E. E. Cruz’s proposal lacked detailed information on how it would maintain the existing facility during construction. Picone lacked a detailed plan on approach for each discipline. Neither firm proposed a satisfactory commissioning plan.

Negotiations were conducted with the three firms and included discussion on technical requirements, alternate design and technical concepts and assumptions, potential for schedule acceleration, and overall cost. At the conclusion of negotiations, the three firms were requested to submit their Best and Final Offer (“BAFO”). BAFO requests included alternative technical concepts specific to each proposer. Prismatic’s BAFO was \$163,750,000, which represented a reduction of \$14,020,000 or 7.9% from its initial proposal. Judlau’s BAFO was \$170,200,000, which represented an increase of \$1,400,000 or 0.8% from its initial proposal. Skanska’s BAFO was \$184,490,000, which represented a reduction of \$13,490,000 or 6.8% from its initial proposal.

Upon review of each firm’s final technical rating and BAFO, the SC unanimously recommended Prismatic for award, determining that they are technically strong and well suited to perform the work, and having submitted the lowest BAFO, will provide the best overall value to NYC Transit and SIR based on the selection criteria. Prismatic’s design approach included the most comprehensive phasing plan, which assured that shop operations will be maintained during construction. In addition, they had the strongest commitment to the commissioning process. During negotiations, Prismatic impressed the SC and convinced NYC Transit that it could produce a new maintenance facility pursuant to the specifications. Prismatic’s design consultants, Stantec and di Domenico & Partners, along with the electrical subcontractor, have extensive experience on NYC Transit projects. References were substantiated with MTA and other public agencies, who all endorsed Prismatic. Prismatic’s BAFO of \$163,750,000 is \$1,720,000 or 1% lower than the in-house estimate of \$165,470,000, was also \$6.5M to \$20.7M, or 4% to 12% lower than its competitors, and is considered to be fair and reasonable by Procurement based on a comparison to the in-house estimate and the competitive RFP. NYC Transit’s Department of Capital Program Management and SIR concur with this determination and recommend award.

In connection with a previous contract awarded to Prismatic, Prismatic was found to be responsible notwithstanding significant adverse information (“SAI”) pursuant to the All-Agency Responsibility Guidelines and such responsibility finding was approved by the MTA Chairman/CEO in consultation with the MTA General Counsel in July 2013. No new SAI has been found relating to Prismatic and Prismatic has been found to be responsible.

M/W/DBE INFORMATION:

The MTA Department of Diversity and Civil Rights has established goals at 17% DBE. Award will not be made until the Department of Diversity and Civil Rights' approval is obtained. Prismatic has not completed any MTA contract; therefore, no assessment of the firm's M/W/DBE performance can be determined at this time.

CAPITAL PROGRAM REPORTING:

This contract has been reviewed for compliance with the requirements of the 1986 legislation applicable to Capital Contract Awards and the necessary inputs have been secured from the responsible functional departments.

IMPACT ON FUNDING:

This project will be funded by the Federal Transit Administration and the MTA, and managed by NYC Transit under the MTA Capital Program. Clifton Shop funding will be provided through Superstorm Sandy repair and resiliency funds, and the cost of centralizing staff will be funded through a project in the NYC Transit core capital program. The Contract will not be awarded until funding is in place and a WAR Certificate is received.


ALTERNATIVES:

Perform the work using in-house personal. Not recommended as in-house forces do not have the resources to perform the scope of this project.

RECOMMENDATION:

It is recommended that the Board approve the award of Contract C-82004 for the Design and Construction of the Clifton Car Repair Shop in the Borough of Staten Island to Prismatic Development Corporation in the amount of \$163,750,000 and the Stipend of \$1,680,000 to the unsuccessful Step 2 proposers.

Staff Summary

Item Number 2			
Department, Department Head Name: VP Materiel, Stephen M. Plochochi			
			
Internal Approvals			
Order	Approval	Date	Approval
1 WD	Materiel	6 X	CPM
2 X	Law	7 X	CFO
3 X	Budget	8 TM	EVP
4 X	DDCR	9 WK	President
5 X	Subways		

SUMMARY INFORMATION	
Vendor Name	Contract No.
Schiavone Construction Co. LLC	C-48702
Description	
Viaduct and Bridge Replacement on the Myrtle Avenue Line, in the Boroughs of Brooklyn and Queens	
Total Amount	
\$80,680,000	
Contract Term (including Options, if any)	
24 months	
Option(s) included in Total Amount?	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Renewal?	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Procurement Type	
<input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Noncompetitive	
Solicitation Type	
<input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:	
Funding Source	
<input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Other:	

PURPOSE:

To obtain approval of the Board to award Contract C-48702, Viaduct and Bridge Replacement on the Myrtle Avenue Line (BMT) in the Boroughs of Brooklyn and Queens to Schiavone Construction Co., LLC ("Schiavone") in the amount of \$80,680,000 and a duration of 24 months.

DISCUSSION:

This project will replace two elevated structures (the Bushwick Cut and the bridge located over the New York & Atlantic Railway) on the Myrtle Line and construct a car inspection facility at the Fresh Pond Rail Yard in Queens. The Bushwick Cut is a 310-foot viaduct located between Broadway and Myrtle Avenue and connects the Myrtle Avenue ("M") and Jamaica (J/Z) lines. The bridge is a 52-foot structure located over New York & Atlantic Railway and is adjacent to the Fresh Pond Rail Yard. Both the viaduct and the bridge are more than 100 years old, have severely deteriorated, and need to be replaced.

The work under this contract includes the demolition and replacement of the Bushwick Cut and the single-span bridge over New York and Atlantic Railway, including track and third rail. During construction, trains will not be able to access the East New York Maintenance Facility, where cars on the M Line are inspected and maintained. As a result, a two-car inspection enclosure will be constructed at the Fresh Pond Rail Yard for inspection and maintenance of the subway-car fleet that will provide shuttle service during the M Line closure.

Prior to effecting repairs on the Canarsie Tunnel, NYC Transit has an urgent need to replace both elevated structures on the M Line. These repairs will resolve structural and operational issues necessary to increase service reliability on the M Line for the customers during the tunnel rehabilitation.

An Authorizing Resolution requesting the use of a competitive Request for Proposal ("RFP") procurement process was approved by the Board in March 2016 in order that technical factors, in addition to cost, could be evaluated. In October 2016, the Board approved the Determinations and Findings under the New York Eminent Domain Procedure Law with respect to temporary residential relocations, temporary business closures, and acquisition of property interests needed to facilitate the project. The RFP was advertised in May 2016. Selection was accomplished by use of a two-step RFP process in which the most qualified firms were selected to submit technical and cost proposals in Step 2. Firms were reviewed in accordance with preestablished selection criteria stated in the RFP. For Step 1, NYC Transit's selection was based on relevant experience and general responsibility to receive a contract award, and to successfully and faithfully perform the work. For Step 2, proposers were evaluated based on their technical proposal and approach, overall project cost, and other relevant matters. Criteria focused on the ability to minimize operational impact and outages, as well as managing community impact.

Step 1: In response to NYC Transit's advertisement, 15 Qualification Packages, including (1) a Letter of Interest, (2) Schedule-J (Responsibility Questionnaire), (3) a Qualification Statement, and (4) an affirmation that the proposer will provide the appropriate equipment and staffing resources to complete the project and that the prime contractor and/or joint venture team will perform significant portions of the work, were received. The Selection Committee ("SC") reviewed the submissions and recommended the following five firms to move to Step 2: Kiewit Infrastructure Co. ("Kiewit"), Michels Corporation, Posillico Civil Inc. ("Posillico"), Schiavone, and Skanska USA Civil Northeast Inc. ("Skanska"). These firms best demonstrated the ability to perform all three portions of the project. The firms not selected, American Bridge Company; CCA Civil, Inc.; E. E. Cruz & Company, Inc.; Granite Construction Northeast Inc.; Halmar International Inc.; Judlau Contracting Inc.; Perfetto Contracting Co.; Railroad/GCCOM, Joint Venture; Tully Construction Co, Inc.; and Yonkers Contracting Co. did not demonstrate sufficient ability to perform the entire project scope, mostly with regard to constructing the temporary car inspection facility, which accounts for one-third of the project estimate.

Step 2: Technical proposals were received from four short-listed firms. Michels did not propose and indicated it could not provide a proposal within the time required. Following the Technical Advisory Committee and the SC's review and evaluation in accordance with the evaluation criteria, two firms were selected for negotiations: Kiewit, with an initial cost proposal of \$82,413,000, and Schiavone, with an initial cost proposal of \$75,351,000. The firms were chosen based on their ability to expedite the project schedule, detailed technical approach, and prior experience performing similar work. The firms not recommended for negotiations, Posillico and Skanska, met the minimum requirements of the RFP but could not provide a technical approach that would ensure timely performance of the work.

Negotiations were held October 31 through November 30, 2016. Items addressed were (1) project schedule and staffing, (2) technical solutions, including acceleration to minimize the viaduct outage, (3) terms and conditions, and (4) pricing. Proposals were received on November 2, 2016, following initial discussions with both firms: Kiewit Infrastructure Co. (\$90,784,000) and Schiavone (\$77,775,000). Pricing for both proposers increased based on clarifications to NYC Transit's technical requirements for the installation of low-vibration track, and owner-provided services associated with the bridgework at New York & Atlantic Railway. After careful review, additional clarifications were sought to address the constructability of the project milestones. Best and Final Offers ("BAFO") were received on December 1, 2016: Kiewit (\$90,990,997) and Schiavone (\$80,680,000). The revised in-house cost estimate was \$79,422,000. Both firms also submitted alternate proposals (nominally accelerating the viaduct work), which the SC ultimately determined did not provide added value in light of the additional cost.

The SC unanimously ranked Schiavone as the most technically qualified firm and unanimously recommended it for award based on the selection criteria. The SC concurred that Schiavone's BAFO provided the best value to NYC Transit. Schiavone provided a strong project team with extensive NYC Transit and elevated structure experience and a plan of approach that evoked confidence that it will achieve all project milestones within the project timeline. Schiavone brings a history of timely and/or accelerated performance of similar work in confined spaces, including work at a Long Island Rail Road Yard and a NYC Transit car washer and train storage yard; and accelerated bridgework underpinning for MTA Capital Construction and other public projects for bridge reconstruction. Schiavone's prior experience on similar projects affecting the surrounding community and ridership, including work replacing the elevated structures at the Stillwell Avenue station and accelerating reconstruction of elevated structures demonstrate its ability to complete similar work early or on time and within budget.

Schiavone's BAFO most effectively utilizes NYC Transit-supplied services for access to the car inspection facility and the bridge over the New York & Atlantic Railway. This ensures timely progression of the project, gives multiple approaches for completing the bridgework, and provides a mitigation plan to accelerate the viaduct in the future. Additionally, Schiavone proposed a one-month time savings to shorten the duration of the viaduct reconstruction work. While Kiewit's proposal cited a reduced outage and schedule, ultimately Schiavone's technical approach provided a similar outage duration with additional means for expediting the work to further minimize the project's impact on the community and operations on the M Line.

Given the critical nature of the project schedule, acceleration provisions were included in the contract, affording NYC Transit the ability to accelerate the work if the opportunity arises.

Schiavone's BAFO is \$1,258,000, or 1.6% higher than the in-house estimate, and \$10,310,997, or 11.3% less than Kiewit's BAFO. The final negotiated price of \$80,680,000 is considered fair and reasonable based on a comparison to the in-house estimate and the competitive RFP.

References checked for Schiavone were satisfactory. Bonds, financial, and insurance approval are pending. No award will be made until all such approvals are received. Additionally, Schiavone has certified that it is not on the list of firms debarred from obtaining an award under the Iran Energy Sector Divestment Law.

Schiavone is currently performing as a prime contractor (as a joint venture partner) on Contract A-36916, Dyre Avenue Station/Bridge Construction, at a value of \$16,224,000; and Contract C-26012, Second Avenue Subway, 86th Street Station Entrances, at a value of \$208,376,000.

In connection with a previous contract awarded to Schiavone, Schiavone was found to be responsible notwithstanding significant adverse information (“SAI”) pursuant to the All-Agency Responsibility Guidelines, and such responsibility finding was approved by the MTA Chairman/CEO, in consultation with the MTA General Counsel, in April 2014. No new SAI has been found relating to Schiavone and Schiavone has been found to be responsible.

Schiavone has submitted the names of 23 subcontractors executing work in excess of \$1M on this contract, performing electrical, track, micropiles, mechanical and structural steelwork; fabrication of the rail car lift, precast viaduct sections, and a pre-engineered building. In connection with a previous subcontract awarded to Kleinberg Electric, Inc. (“Kleinberg”), Kleinberg was found to be responsible notwithstanding SAI pursuant to the All-Agency Responsibility Guidelines and such responsibility finding was approved by the NYC Transit President in May 2015. No new SAI has been found relating to Kleinberg and Kleinberg has been found to be responsible.

M/D/WBE INFORMATION

The MTA Department of Diversity and Civil Rights established M/WBE goals of 15% and 15% respectively. Schiavone has submitted a utilization plan committing to exercise good faith efforts to achieve the goals during the term of the project. Schiavone has achieved its M/D/WBE goals on previous MTA contracts.

CAPITAL PROGRAM REPORTING

This contract has been reviewed for compliance with the requirements of the 1986 legislation applicable to Capital Contract Awards and the necessary inputs have been secured from the responsible functional departments.

IMPACT ON FUNDING

This contract is 100% MTA funded. Funds are available through Project ID #s T70703/04; T70703/02; T70502/39 and the balance is temporarily available in T70703/19 pending funds identified in the upcoming Plan Revision. The contract will not be awarded until a WAR Certificate is received.

ALTERNATIVES

Perform work with In-House forces. Not recommended as in-house forces are committed to other projects.

RECOMMENDATION:

It is recommended that the Board approve the award of Contract C-48702, Viaduct and Bridge Replacement on the Myrtle Avenue Line (BMT) in the boroughs of Brooklyn and Queens to Schiavone Construction Co., LLC in the amount of \$80,680,000.

DECEMBER 2016

LIST OF RATIFICATIONS FOR BOARD APPROVAL

Procurements Requiring Majority Vote:

K. Ratification of Completed Procurement Actions (Involving Schedules E–J)

(Staff Summaries required for items requiring Board approval.)

- | | | | |
|----|---|--------------------|-------------------------------|
| | 86th Street Constructors, JV | | <u>Staff Summary Attached</u> |
| 1. | Contract# C-26012.156 | \$995,000 | ↓ |
| 2. | Contract# C-26012.157 | \$999,500 | ↓ |
| | Modifications to the contract for the construction of the Second Avenue Subway – 86th Street Station Finishes, in order to address (1) the replacement of specified breakers with upgraded breakers and fused disconnect switches, and (2) the provision of items required for Con Edison permanent power energization. | | |
| | | | |
| 3. | E.E. Cruz/Tully Construction JV | \$1,357,000 | <u>Staff Summary Attached</u> |
| | Contract# C-26010.181 | | |
| | Modification to the contract for the Second Avenue Subway Route 132A – 96th Street Station Finishes, in order to address additional heating, ventilation, and air-conditioning equipment for the two communication rooms and one uninterrupted power supply room. | | |
| | | | |
| 4. | Judlau Contracting, Inc. | \$1,767,000 | <u>Staff Summary Attached</u> |
| | Contract# C-26011.210 | | |
| | Modification to the contract for the construction of the Second Avenue Subway – 72nd Street Station Finishes, in order to provide items required for Con Edison permanent power energization. | | |

Schedule K: Ratification of Completed Procurement Actions

Item Number: 1–2

Vendor Name (Location) 86th Street Constructors, JV (New York, New York)		Contract Number C-26012	AWO/Mod. #: 156 and 157
Second Avenue Subway – 86th Street Station Finishes, Mechanical, Electrical and Plumbing Systems, Ancillary Buildings and Entrances			
Contract Term (including Options, if any) June 12, 2013–December 24, 2016		Original Amount:	\$ 208,376,000
Option(s) included in Total Amount? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> n/a		Prior Modifications:	\$ 26,791,581
Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Noncompetitive		Prior Budgetary Increases:	\$ 0
Solicitation Type <input type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Modification		Current Amount:	\$ 235,167,581
Funding Source <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Other:		This Request:	
Requesting Dept./Div., Dept./Div. Head Name: MTA Capital Construction, Dr. Michael Horodniceanu		Mod 156: \$995,000	\$ 1,994,500
		Mod 157: \$999,500	
		% of This Request to Current Amount:	1.0%
		% of Modifications (including This Request) to Original Amount:	13.8%

Discussion:

These retroactive modifications incorporate changes that are necessary for Con Edison to provide permanent facility power to the 86th Street station.

The original contract work includes (1) installation of mechanical systems including heating, ventilation, and air-conditioning in the station and ancillary facilities; tunnel ventilation systems in the adjacent tunnels; electrical medium voltage and 120-volt systems, (2) plumbing for track, sanitary, and storm drainage; hot-and-cold water supply, pump systems, and fire suppression, (3) escalators and elevators in the station entrances; construction of the station platform and mezzanine levels, ancillary facilities and entrances, (4) construction of interior walls and rooms; architectural finishes including floors, ceiling, wall treatments, signage, stairs, handrails, guardrails, and station elements including the station service center and concession booth, (5) constructing exteriors including walls, roofing, glazed storefronts, and canopies at station entrances and ancillary facilities, and (6) restoration of the surface of Second Avenue and adjacent streets impacted by construction.

Modification 156

This modification is necessary to comply with Con Edison’s requirements and the National Electric Code. After receiving and reviewing the contractor’s coordination study submittal and conducting the testing required for permanent facility power, Con Edison determined that it was necessary to make certain changes to the facility power substation design. These changes include (1) relocation of the contractually required disconnect switches, (2) installation of additional disconnect switches, and (3) the replacement of contractually required circuit breakers with circuit breakers that have a higher electrical voltage. Con Edison would not provide permanent facility power for the operation of electrical accessories including lighting, elevators, escalators, fans, and tunnel lighting until these changes were made. Some of these changes are the result of potential design errors and omissions.

The contractor, 86th Street Constructors, Joint Venture (“86th Street Constructors”), a joint venture of John P. Picone, Inc. and Schiavone Construction Co. LLC, submitted its proposal in the amount of \$1,110,317. MTA Capital Construction’s (“MTACC”) in-house estimate was \$968,118. After negotiation, a lump-sum price of \$995,000 was agreed upon and found to be fair and reasonable. Savings of \$115,317 were achieved.

The MTACC President has approved the processing of this modification on a retroactive basis.

Modification 157

This modification addresses items required to provide permanent facility power to the four incoming power feeders for the facility power rooms at the 86th Street station. This modification incorporates items based upon lessons learned working with Con Edison and New York City Transit to provide permanent power for the 96th Street Station. Some of these changes are the result of potential design errors and omissions.

The scope of work for this modification includes (1) replacing the previously installed ten-point meter pans with seven-point meter pans within the facility power rooms located at the south mezzanine and north mezzanine, (2) installation of a dedicated telephone line for meter readings, (3) changes to electrical nameplates and tags, (4) facility power battery room changes including changes to the conduit and wiring and the addition of junction boxes, (5) replacement of light switches, receptacles, and light fixtures in the south battery room with explosion-proof materials and (6) changes to medium-voltage switchgear.

86th Street Constructors submitted a final proposal in the amount of \$1,240,713. MTACC's final in-house estimate was in the amount of \$1,049,426. After negotiations, a lump-sum amount of \$999,500 was agreed upon and found to be fair and reasonable. Savings of \$241,213 were achieved.

The MTACC President has approved the processing of this modification on a retroactive basis.

In connection with a previous contract awarded to John P. Picone, Inc. ("Picone"), Picone was found to be responsible notwithstanding significant adverse information ("SAI") pursuant to the All-Agency Responsibility Guidelines and such responsibility finding was approved by the MTA Chairman/CEO in consultation with the MTA General Counsel in April 2014. No new SAI has been found relating to Picone, and Picone has been found to be responsible.

In connection with a previous contract awarded to Schiavone Construction Co. LLC ("Schiavone"), Schiavone was found to be responsible notwithstanding SAI pursuant to the All-Agency Responsibility Guidelines and such responsibility finding was approved by the MTA Chairman/CEO in consultation with the MTA General Counsel in April 2014. No new SAI has been found relating to Schiavone, and Schiavone has been found to be responsible.

Schedule K: Ratification of Completed Procurement Actions

Item Number: 3

Vendor Name (Location) E.E. Cruz/Tully Construction Company, Joint Venture, LLC (New York, New York)
Description Second Avenue Subway Route 132A, 96th Street Station Finishes
Contract Term (including Options, if any) June 22, 2012–October 5, 2016
Option(s) included in Total Amount? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> n/a
Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Noncompetitive
Solicitation Type <input type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Modification
Funding Source <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Other:
Requesting Dept./Div., Dept./Div. Head Name: MTA Capital Construction, Dr. Michael Horodniceanu

Contract Number	AWO/Mod. #
C-26010	181
Original Amount:	\$ 324,600,000
Prior Modifications:	\$ 31,765,461
Prior Budgetary Increases:	\$ 0
Current Amount:	\$ 356,365,461
This Request:	\$ 1,357,000
% of This Request to Current Amount:	0.4%
% of Modifications (including This Request) to Original Amount:	10.2%

Discussion:

This retroactive modification addresses the addition of heating, ventilation, and air-conditioning (“HVAC”) equipment in: (1) two communication rooms, (2) three communication closets, and (3) one uninterrupted power supply (“UPS”) room.

The original contract was awarded with a 42-month duration and covered work necessary to complete the 96th Street station, including (1) rehabilitation and retrofitting of the existing 99th–105th Street Tunnel, (2) the installation of mechanical systems including HVAC, electrical medium voltage, and 120-volt systems, (3) the supply and installation of elevators and escalators at the station entrances, (4) installation of architectural finishes, and (5) restoration of Second Avenue’s surface and those of adjacent streets.

The contract provides for the use of fan coil units (“FCU”) to cool communication rooms 3118 and 3119, and communication closets 3005, 3058, and 3148. The FCUs are located in neighboring rooms and ductwork is used to move cool air into these rooms. The Building Management System (“BMS”) is used to control these FCUs. Fresh air for the UPS room, 3128, is provided by a supply fan and controlled by a thermostat.

The systems housed in these rooms are considered critical. In the event of an FCU failure, the temperature in the communication rooms/closets could rise and cause equipment failure or shutdown.

During testing of the UPS rooms at the 63rd Street station along the Second Avenue line, it was discovered that (1) more heat was generated within the rooms than anticipated, (2) the cooling system was insufficient, and (3) the UPS room required additional ventilation. As a result, the Designer of Record reviewed the cooling of the communication rooms and closets at 96th Street and determined that additional cooling units were necessary.

Due to the critical nature of these rooms, it was determined that a secondary system be installed for each of the communication rooms and closets.

This modification covers (1) the addition of supply fans in each of the communication closets to add fresh air, (2) split air conditioners and supply fans (the split air conditioners consist of compressor units outside the rooms with the cooling units inside the rooms) in the communication rooms, and (3) two additional FCUs and an additional exhaust fan in the UPS room and communication room 3119.

The new equipment will be controlled by the BMS.

Retroactive approval was obtained from MTA Capital Construction’s (“MTACC”) President and the contractor, E. E. Cruz/Tully Construction Company, Joint Venture, LLC (“CTJV”), was directed to proceed. On November 9, 2016, the Vice President, Materiel authorized partial payments to CTJV prior to approval of the modification.

CTJV submitted its initial proposal in the amount of \$1,627,998. MTACC’s in-house estimate was \$1,286,476. Negotiations resulted in a net lump-sum price of \$1,357,000, which was found to be fair and reasonable. Savings of \$270,998 were achieved.

Schedule K: Ratification of Completed Procurement Actions

Item Number: 4

Vendor Name (Location) Judlau Contracting, Inc. (College Point, New York)
Description Second Avenue Subway – 72nd Street Station finishes; mechanical, electrical and plumbing systems, ancillary buildings and entrances
Contract Term (including Options, if any) February 14, 2013–November 13, 2015
Option(s) included in Total Amount? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a
Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Noncompetitive
Solicitation Type <input type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Modification
Funding Source <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Other:
Requesting Dept./Div., Dept./Div. Head Name: MTA Capital Construction, Dr. Michael Horodniceanu

Contract Number	AWO/Mod. #
C-26011	210
Original Amount:	\$ 258,353,000
Option 1:	\$ 3,934,595
Option 2:	\$ 1,270,000
Option 3:	\$ 6,100,000
Total Amount:	\$ 258,353,000
Prior Modifications:	\$ 41,285,934
Prior Budgetary Increases:	\$ 0
Current Amount:	\$ 299,638,934
This Request:	\$ 1,767,000
% of This Request to Current Amount:	0.6%
% of Modifications (including This Request) to Total Amount:	14.5%

Discussion:

This retroactive modification incorporates changes required for Con Edison to provide permanent facility power to the 72nd Street station.

The original contract for the Second Avenue Subway – Route 132A – 72nd Street Station Finishes; Mechanical, Electrical and Plumbing, Ancillary Buildings and Entrances provides for the installation of mechanical systems including (1) heating, ventilation, and air-conditioning work in the station and ancillaries, (2) tunnel ventilation systems in the adjacent tunnels, (3) supply and installation of medium-voltage and 120-volt electrical systems including electrical distribution in the station and adjacent tunnels, (4) supply and installation of elevators and escalators in the station and entrances, (5) wall treatments, signage, stairs, handrails, guardrails, and (6) restoration of the surface of Second Avenue and adjacent streets impacted by construction.

This modification addresses items required to provide permanent facility power to the four incoming power feeders for the facility power rooms at the 72nd Street station. This modification incorporates items based upon lessons learned working with Con Edison and New York City Transit to provide permanent power for the 96th Street Station. Some of these changes are the result of potential design errors and omissions.

The scope of work for this modification includes (1) replacing the previously installed ten-point meter pans with seven-point meter pans within the facility power rooms located at the south mezzanine and north mezzanine, (2) installation of a dedicated telephone line for meter readings, (3) changes to electrical nameplates and tags, (4) facility power battery room changes including changes to the conduit and wiring and the addition of junction boxes, (5) replacement of light switches, receptacles, and light fixtures in the south battery room with explosion-proof materials and (6) changes to medium-voltage switchgear.

In order to mitigate schedule delays, approval to process this modification on a retroactive basis was obtained from the MTA Capital Construction (“MTACC”) President.

On November 18, 2016, the Vice President, Materiel authorized partial payments to the contractor, Judlau Contracting, Inc. (“Judlau”) prior to approval of the modification.

Judlau, submitted its revised proposal in the amount of \$2,008,162. MTACC’s final in-house estimate was \$1,812,001. After negotiations, an agreement was reached for the lump-sum price of \$1,767,000, which was found to be fair and reasonable. Savings of \$241,162 were achieved.

In connection with a previous contract awarded to Judlau, Judlau was found to be responsible notwithstanding significant adverse information (“SAI”) pursuant to the All-Agency Responsibility Guidelines and such responsibility finding was approved by the MTA Chairman/CEO in consultation with the MTA General Counsel in April 2014. No new SAI has been found relating to Judlau, and Judlau has been found to be responsible.



Metro-North Railroad

Procurements

Subject	Request for Authorization to Award Various Procurements
Department	Procurement and Material Management
Department Head Name	Alfred Muir, Sr. Director
Department Head Signature	
Project Manager Name	

Date	12-5-16
Vendor Name	Various
Contract Number	Various
Contract Manager Name	Various
Table of Contents Ref #	

Board Action					
Order	To	Date	Approval	Info	Other
1	MNR Comm. Mtg.	12-12-16	X		
2	MTA Board Mtg.	12-14-16	X		

Internal Approvals			
	Approval		Approval
X	President	X	Chief Security Officer
X	Executive V.P.		V.P. Capital Programs
X	Sr. V.P. Operations	X	V.P. & General Counsel
X	V.P. Finance & IT		

Internal Approvals (cont.)							
Order	Approval	Order	Approval	Order	Approval	Order	Approval

PURPOSE:

To obtain approval of the Board to award various contracts/contract modifications and purchase orders, and to inform the MTA Metro-North Railroad Committee of these procurement actions.

DISCUSSION:

MNR proposes to award non-competitive procurements in the following categories:

	<u># of Actions</u>	<u>\$ Amount</u>
<u>Schedules Requiring Two-Thirds Vote (or more, where noted)</u>	NONE	
<u>Schedules Requiring Majority Vote</u>		
Schedule G: Miscellaneous Service Contracts	1	\$1,975,000
• KD Analytical LLC \$1,975,000		
SUB TOTAL:		1 \$1,975,000

MNR proposes to award competitive procurements in the following categories:

	<u># of Actions</u>	<u>\$ Amount</u>
<u>Schedules Requiring Two-Thirds Vote (or more, where noted)</u>	NONE	
<u>Schedules Requiring Majority Vote</u>		
Schedule H: Modifications to Personal/Miscellaneous Service Contracts	1	\$1,808,458
• Abalon Exterminating Company \$1,808,458		
SUB TOTAL:	1	\$1,808,458

MNR presents the following procurement actions for Ratification:

<u>Schedules Requiring Two-Thirds Vote (or more, where noted)</u>	NONE	
<u>Schedules Requiring Majority Vote</u>	NONE	
SUB TOTAL:		
TOTAL:	2	\$3,783,458

The contractors noted above and on the following Staff Summary Sheets have been found in all respects responsive and responsible, and are in compliance with State laws and regulations concerning procurements.

BUDGET IMPACT: The purchases/contracts will result in obligating MNR operating and capital funds in the amount listed. Funds are available in the current MNR operating/capital budgets for this purpose.

RECOMMENDATION: That the purchases/contracts be approved as proposed. (Items are included in the resolution of approval at the beginning of the Procurement Section.)

METROPOLITAN TRANSPORTATION AUTHORITY

WHEREAS, in accordance with Section 1265-a and Section 1209 of the Public Authorities law and the All Agency Procurement Guidelines, the Board authorizes the award of certain non-competitive purchase and public work contracts, and the solicitation and award of request for proposals in regard to purchase and public work contracts; and

WHEREAS, in accordance with the All Agency Procurement Guidelines, the Board authorizes the award of certain non-competitive miscellaneous procurement contracts, and certain change orders to procurement, public work, and miscellaneous procurement contracts; and

WHEREAS, in accordance with Section 2879 of the Public Authorities Law and the All Agency Guidelines for Procurement of Services, the Board authorizes the award of certain service contracts and certain change orders to service contracts.

NOW, the Board resolves as follows:

1. As to each purchase and public work contract set forth in the annexed Schedule A, the Board declares competitive bidding to be impractical or inappropriate for the reasons specified therein and authorizes the execution of each such contract.

2. As to each request for proposals (for purchase and public work contracts) set forth in Schedule B for which it is deemed in the public interest to obtain authorization to solicit competitive proposals through a publicly advertised RFP for the reasons specified therein the Board declares it to be impractical or inappropriate to utilize a procurement process inviting sealed bids with award to the lowest responsive/responsible bidder.

3. As to each request for proposals (for purchase and public work contracts) set forth in Schedule C for which a recommendation is made to award the contract, the Board authorizes the execution of said contract.

4. The Board ratifies each action taken set forth in Schedule D for which ratification is requested.

5. The Board authorizes the execution of each of the following for which Board authorization is required: i) the miscellaneous procurement contracts set forth in Schedule E; ii) the personal service contracts set forth in Schedule F; iii) the miscellaneous service contracts set forth in Schedule G; iv) the modifications to personal/miscellaneous service contracts set forth in Schedule H; v) the contract modifications to purchase and public work contracts set forth in Schedule I; and vi) the modifications to miscellaneous procurement contracts set forth in Schedule J.

6. The Board ratifies each action taken set forth in Schedule K for which ratification is requested.

DECEMBER 2016

METRO-NORTH RAILROAD

LIST OF NON-COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL

Schedules Requiring Majority Vote:

G. Miscellaneous Service Contracts

(Staff Summaries required for all items greater than: \$100K Sole Source; \$250K Other Non-Competitive; \$1M RFP; No Staff Summary required if Sealed Bid Procurement.)

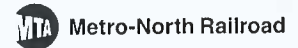
1. KD Analytical LLC	\$1,975,000 (not-to-exceed)	<u>Staff Summary Attached</u>
Maintenance Contract for the 'PROTECT' Chemical Detection System		

Approval is requested to award a joint Agency, non-competitive, (one year base and 2 one year options) miscellaneous service contract for maintenance to the 'PROTECT' Chemical Detection System presently installed in Grand Central Terminal (GCT) and Penn Station for MNR and LIRR, to the firm KD Analytical, LLC.

Currently, KD Analytical is the sole vendor for the systems integration of the PROTECT System and current holder of the PROTECT maintenance contract through an Assignment of Contract with Smiths Detection Systems, Inc., the original systems maintainer. KD has an established unique interface with DHS and Argonne where they can interact specifically regarding information and issues with the PROTECT system. In the event of a chemical release at either of MTA's` two high-profile facilities, PROTECT will provide essential detection and notification to key response MTA, MNR, & LIRR personnel. Services provided by KD Analytical will be to maintain the equipment and system in optimum working condition which includes periodic on-site maintenance, system and network software support, and hardware maintenance including replacement parts and on-going testing.

The overall three year cost for this maintenance contract is in the not-to-exceed amount of \$1,975,000. (First year \$600,000 with two option years totaling \$1,375,000) Under this contract, the MTA and the Railroads are afforded pricing negotiated by the U.S. General Services Administration (GSA) for comprehensive maintenance and support. Funding for this procurement is to be provided through the MTA Headquarters (Office of Security) from Near Term Funds.

Schedule G: Miscellaneous Service Contracts



Item Number: G

Vendor Name (& Location) KD Analytical, LLC
Description Maintenance contract for the "PROTECT" Chemical Detection System
Contract Term (including Options, if any) Three Years
Option(s) included in Total Amount? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Procurement Type <input type="checkbox"/> Competitive <input checked="" type="checkbox"/> Non-competitive
Solicitation Type <input type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Sole Source

Contract Number 1000076648	AWO/Modification #
Renewal? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Total Amount: \$1,975,000	
Funding Source <input type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input checked="" type="checkbox"/> Other:	
Requesting Dept/Div & Dept/Div Head Name: Procurement & Material Management, Al Muir, Sr. Director	

Discussion:

Approval is requested to award a joint Agency, non-competitive, miscellaneous service contract (one year base and 2 one year options) for maintenance to the 'PROTECT' Chemical Detection System presently installed in Grand Central Terminal (GCT) and Penn Station for MNR and LIRR, to the firm KD Analytical, LLC.

In 2006, the MTA Office of Security in conjunction with the Department of Homeland Security (DHS), evaluated and concluded that the sensor mechanisms within the devices that were developed by Argonne National Laboratories, were the premiere equipment for detecting aerosolized chemicals. The detail of the systems' software and hardware is called the "PROTECT" system, and was licensed exclusively to Smiths Detection Systems, Inc. In the event of a chemical release at either of MTA's two high-profile facilities, PROTECT will provide essential detection and notification to key response MTA, MNR, & LIRR personnel.

Currently, KD Analytical is the sole vendor for the systems integration of the PROTECT System and current holder of the PROTECT maintenance contract through an Assignment of Contract with Smiths Detection Systems, Inc., the original systems maintainer. KD has an established unique interface with DHS and Argonne where they can interact specifically regarding information and issues with the PROTECT system. Previous non-competitive contracts were approved by the MTA Board and awarded to Smiths Detection Systems Inc. for the maintenance and support of the PROTECT system for LIRR (Penn Station) and for MNR (GCT). The current maintenance and support contract is set to expire in January 2017.

Services provided by KD Analytical will be to maintain the equipment and system in optimum working condition which includes periodic on-site maintenance, system and network software support, and hardware maintenance including replacement parts and on-going testing. The MTA Department of Diversity and Civil Rights has reviewed this contract and found that due to insufficient availability of MWBE firms in the marketplace, no M/WBE goals would be assigned.

At this time, MNR seeks approval for a new one year contract with 2 one year options to KD Analytical, LLC in the overall not-to-exceed amount of \$1,975,000. (First year \$600,000 with 2 one year options totaling \$1,375,000) Under this contract, the MTA and the Railroads are afforded pricing negotiated by the U.S. General Services Administration (GSA) for comprehensive maintenance and support. Funding for this procurement will be provided through the MTA Headquarters (Office of Security) from Near Term Funds.

DECEMBER 2016

METRO-NORTH RAILROAD

LIST OF COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL

Schedules Requiring Majority Vote:

H. Modifications to Personal/Miscellaneous Service Contracts

(Approvals/Staff Summaries required for substantial change orders and change orders that cause the original contract to equal or exceed monetary or durational threshold required for Board approval)

1. Abalon Exterminating Company \$1,808,458
Multi-Agency Pest Control Services

Staff Summary Attached

On behalf of Metro-North Railroad (MNR) and New York City Transit (NYCT), approval is requested to extend this multi-agency miscellaneous service contract for an additional 18 months from January 1, 2017 – June 30, 2018 with Abalon Exterminating Company (“Abalon”) in the total not-to-exceed amount of \$1,808,458. This modification is required to allow sufficient time for (i) reassignment of this multi-agency master service agreement to the MTA Business Service Center (ii) initiate and complete a consolidated pest control renewal contract covering the large geographical territory of the Agencies (iii) allow a transition period to a new supplier(s), if required.

Under this contract, Abalon provides comprehensive and integrated pest control management services encompassing project management, service technicians, pesticides, multi-purpose bait stations, mechanical catch traps, pet monitors and other material and equipment necessary to treat, control and/or prevent infestation or re-infestation of pests on a scheduled and as-needed basis. The locations to be serviced include, but are not limited to: offices, employee facilities, shops, yard and maintenance/storage facilities, and loading dock areas as well as railcars, train stations and refuse rooms.

The total cost for the 18 month contract extension is \$1,808,458 (MNR - \$403,000 & NYCT \$1,405,458). All rates and terms and conditions previously established under the current agreement shall remain the same for the extension period, which is deemed fair and reasonable. This procurement is to be funded by each Agency’s Operating Budget.

Schedule H: Modifications to Personal Service and Miscellaneous Service Contracts

Item Number: H

Vendor Name (& Location) Abalon Exterminating Company	Contract Number 1000003672	AWO/Modification # 4
Description MTA Multi-Agency Facility & Property Pest Control Services	Original Amount:	\$2,798,156
Contract Term (including Options, if any) 18 Months (1/1/17 – 6/30/18)	Prior Modifications:	\$2,521,754 (MNR-\$256,352, NYCT-\$2,265,402)
Option(s) included in Total Amount? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Prior Budgetary Increases:	\$
Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	Current Amount:	\$5,319,910
Solicitation Type <input type="checkbox"/> RFP <input checked="" type="checkbox"/> Bid <input type="checkbox"/> Other:	This Request:	\$1,808,458 (Est.)
Funding Source <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	% of This Request to Current Amount:	33%
Requesting Dept./Div. & Dept./Div. Head Name: Procurement & Material Management, Al Muir, Sr. Director	% of Modifications (including This Request) to Original Amount:	154%

Discussion:

On behalf of Metro-North Railroad (MNR) and New York City Transit (NYCT), approval is requested to extend this multi-agency miscellaneous service contract for an additional 18 months from January 1, 2017 – June 30, 2018 with Abalon Exterminating Company (“Abalon”) in the total amount of \$1,808,458. The prior contract modifications were executed by the individual agency and were necessitated by larger than expected usage.

In December 2011, Metro-North Railroad (MNR) on behalf of itself and New York City Transit (NYCT) and MTA Bus requested and received approval to award a four year multi-Agency master service agreement for facility and property pest control services. Under this contract, Abalon provides comprehensive and integrated pest control management services encompassing project management, service technicians, pesticides, multi-purpose bait stations, mechanical catch traps, pet monitors and other material and equipment necessary to treat, control and/or prevent infestation or re-infestation of pests on a scheduled and as-needed basis. The locations to be serviced include, but are not limited to: offices, employee facilities, shops, yard and maintenance/storage facilities, and loading dock areas as well as railcars, train stations and refuse rooms. The solicitation did not include Grand Central Terminal (GCT), which due to its unique environment was treated separately and solicited on a square foot basis due to the large number of individual tenants.

Given the large geographical territory of the Agencies when this procurement was first solicited, bidders were permitted to provide pricing to cover Agency requirements within any combination of four specified geographical areas (the NYC 5 Boroughs, Nassau/Suffolk, Orange/Rockland/Putnam/Westchester and Connecticut). Abalon, the low bidder submitted a bid for each of the geographical areas, which was 40% less than the next lowest bid. Abalon was deemed well qualified to provide the required level of industrial pest management services throughout the Agencies given its relevant experience with large clients, mixed-use facilities, and their pro-active approach to pest control services.

This modification is required to allow sufficient time for (i) reassignment of this multi-agency master service agreement to the MTA Business Service Center (ii) initiate and complete a consolidated pest control renewal contract covering the large geographical territory of the Agencies (iii) allow a transition period to a new supplier(s), if required.

The total cost for the 18 month contract extension is \$1,808,458 (MNR = \$403,000 & NYCT = \$1,405,458). All rates and terms and conditions previously established under the current agreement shall remain the same for the 18- month extension period, which is deemed fair and reasonable. This procurement is to be funded by each Agency’s Operating Budget.

LONG ISLAND RAIL ROAD

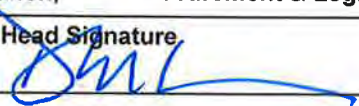
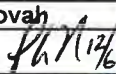

PROCUREMENTS

FOR

BOARD ACTION

December 14, 2016

Staff Summary

Subject : Request for Authorization to Award Various Procurements						Date <div style="text-align: center;">December 12, 2016</div>			
Department Procurement & Logistics									
Department Head Name Dennis L. Mahon, Chief Procurement & Logistics Officer									
Department Head Signature 									
Board Action						Internal Approvals			
Order	To	Date	Approval	Info	Other	Order	Approval	Order	Approval
1	LI Committee	12.12.16				X	President 		VP & CFO
2	MTA Board	12.14.16				X	Exec. Vice President 		VP, Gen. Counsel & Secy
							Sr. VP-Operations		
							Sr. VP-Engineering		

PURPOSE:

To obtain approval of the Board to award various contracts and purchase orders, and to inform the Long Island Rail Road Committee of these procurement actions.

DISCUSSION:

LIRR proposes to award Non-Competitive Procurements in the following categories:

<u># of Actions</u>	<u>\$ Amount</u>
None	

LIRR proposes to award Competitive Procurements in the following categories:

Schedules Requiring Two-Thirds Vote

Schedule C: Competitive Requests for Proposals (Award of Purch & Pub Work Contracts)	1	\$325,851
SUBTOTAL	1	\$325,851

LIRR proposes to award Ratifications in the following categories:

<u># of Actions</u>	<u>\$ Amount</u>
None	

<u>TOTAL:</u>	<u>1</u>	<u>\$325,851</u>
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BUDGET IMPACT:

The purchases/contracts will result in obligating LIRR operating and capital funds in the amounts listed. Funds are available in the current operating budget for this purpose.

RECOMMENDATION:

That the purchases/contracts be approved as proposed. (Items are included in the resolution of approval at the beginning of the Procurement Section.)

METROPOLITAN TRANSPORTATION AUTHORITY

WHEREAS, in accordance with Section 1265-a and Section 1209 of the Public Authorities law and the All Agency Procurement Guidelines, the Board authorizes the award of certain non-competitive purchase and public work contracts, and the solicitation and award of request for proposals in regard to purchase and public work contracts; and

WHEREAS, in accordance with the All Agency Procurement Guidelines, the Board authorizes the award of certain non-competitive miscellaneous procurement contracts, and certain change orders to procurement, public work, and miscellaneous procurement contracts; and

WHEREAS, in accordance with Section 2879 of the Public Authorities Law and the All Agency Guidelines for Procurement of Services, the Board authorizes the award of certain service contracts and certain change orders to service contracts.

NOW, the Board resolves as follows:

1. As to each purchase and public work contract set forth in the annexed Schedule A, the Board declares competitive bidding to be impractical or inappropriate for the reasons specified therein and authorizes the execution of each such contract.
2. As to each request for proposals (for purchase and public work contracts) set forth in Schedule B for which it is deemed in the public interest to obtain authorization to solicit competitive proposals through a publicly advertised RFP for the reasons specified therein the Board declares it to be impractical or inappropriate to utilize a procurement process inviting sealed bids with award to the lowest responsive/responsible bidder.
3. As to each request for proposals (for purchase and public work contracts) set forth in Schedule C for which a recommendation is made to award the contract, the Board authorizes the execution of said contract.
4. The Board ratifies each action taken set forth in Schedule D for which ratification is requested.
5. The Board authorizes the execution of each of the following for which Board authorization is required: i) the miscellaneous procurement contracts set forth in Schedule E; ii) the personal service contracts set forth in Schedule F; iii) the miscellaneous service contracts set forth in Schedule G; iv) the modifications to personal/miscellaneous service contracts set forth in Schedule H; v) the contract modifications to purchase and public work contracts set forth in Schedule I; and vi) the modifications to miscellaneous procurement contracts set forth in Schedule J.
6. The Board ratifies each action taken set forth in Schedule K for which ratification is requested.

DECEMBER 2016

MTA LONG ISLAND RAIL ROAD

LIST OF COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL

Procurements Requiring Two-Thirds Vote

Schedule C: Competitive Request for Proposals (Award of Purchase and Public Work Contracts) (Staff Summaries only required for items requiring Board approval)

- | | | | |
|-----------|--|------------------|--------------------------------------|
| 1. | Ansaldo STS USA, Inc.
Competitive RFP
Contract No. 6218 | \$325,851 | <i><u>Staff Summary Attached</u></i> |
|-----------|--|------------------|--------------------------------------|

LIRR requests MTA Board approval to award a Public Works contract to Ansaldo STS USA, Inc. in the amount of \$325,851 to Design, Furnish, and Deliver Switch Machine Kits and Equipment for LIRR's West-Side Yard. This work is part of the MTA/LIRR Super-Storm Sandy recovery program (Project PNZD, Western Rail Yards). The switches at West-Side Yard were severely damaged as a result of Super-Storm Sandy in October 2012. LIRR requires the expertise of a contractor to design and manufacture Switch Machine components for rod mechanisms to move in a non-conventional way due to clearance issues.

Staff Summary



Long Island Rail Road

Page 1 of 2

Item Number: 1					
Dept & Dept Head Name: Procurement & Logistics, Dennis Mahon					
Department Head Signature & Date <i>[Signature]</i> 12/16/16					
Division & Division Head Name: Department of Program Management, Richard Oakley					
Division Head Signature & Date <i>[Signature]</i> 12/5/16					
Board Reviews					
Order	To	Date	Approval	Info	Other
1	LI Committee	12.12.16			
2	MTA Board	12.14.16			
Internal Approvals					
Order	Approval	Order	Approval		
6	President <i>[Signature]</i> 12/16	3	Sr. VP/Engineering <i>[Signature]</i>		
5	Executive VP <i>[Signature]</i>	2	VP & CFO <i>[Signature]</i>		
4	Sr. VP/Operations <i>[Signature]</i>	1	VP, Gen'l Counsel & Sec'y <i>[Signature]</i>		

SUMMARY INFORMATION	
Vendor Name	Contract Number
Ansaldo STS USA, Inc. (ASTS)	6218
Description Design/Furnish/Deliver Switch Machine Kits and Equipment – West Side Yard	
Total Amount	
\$325,851	
Contract Term (including Options, if any)	
450 consecutive calendar days	
Options(s) included in Total Amount: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Renewal? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Procurement Type	
<input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-Competitive	
Solicitation Type	
<input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:	
Funding Source	
<input type="checkbox"/> Operating <input type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input checked="" type="checkbox"/> Other: SANDY	

Narrative

I. PURPOSE/RECOMMENDATION:

The Long Island Rail Road (LIRR) requests MTA Board approval to award a Public Works contract to Ansaldo STS USA, Inc. in the amount of \$325,851 to Design, Furnish, and Deliver Switch Machine Kits and Equipment for LIRR's West-Side Yard. This work is part of the MTA/LIRR Super-Storm Sandy recovery program (Project PNZD, Western Rail Yards). The switches at West-Side Yard were severely damaged as a result of Super-Storm Sandy in October 2012. LIRR requires the expertise of a contractor to design and manufacture Switch Machine components for rod mechanisms to move in a non-conventional way due to clearance issues.

II. DISCUSSION:

The contract requires Ansaldo STS USA, Inc. (ASTS) to design, manufacture and deliver ten (10) Switch Machine Layout Kits (machines are not included) to be installed by LIRR forces. The contract also requires submittals at 60% and 100% design completion.

The MTA Board granted an "omnibus" approval to use the "Request for Proposal" (RFP) method to solicit various Design-Build and other contracts in connection with post-Super Storm Sandy restoration, mitigation and resiliency initiatives (specifically citing the West-Side Yard, among others) at its November 2013 meeting. On June 14, 2016, LIRR publicly advertised the RFP for this project in the New York State Contract Reporter, N.Y. Post, and on the MTA website.

A single proposal was received from ASTS. Two other prospective proposers who expressed interest advised they could not satisfy the FRA requirements of the RFP. LIRR conducted a technical evaluation of the proposal submitted by ASTS. It was determined that ASTS demonstrated an acceptable approach to the work, utilized effective means and methods, and met the RFP's experience requirements. Therefore, LIRR entered into negotiations with Ansaldo, addressing various cost-saving initiatives such as the frequency/location of progress meetings, reductions to labor costs and efficiencies with the required materials. As a result, ASTS reduced their labor and material costs by \$60,000, resulting in the final negotiated price of \$325,851. Accordingly, Ansaldo STS USA, Inc.'s proposal was deemed fair and reasonable.

A responsibility review of Ansaldo was performed and no SAI was found. Accordingly, Ansaldo is deemed a responsible firm.

Staff Summary



Long Island Rail Road

Page 2 of 2

III. D/M/WBE INFORMATION:

The MTA Department of Diversity and Civil Rights (DDCR) have established 0% DBE goals for this project.

Ansaldo STS USA, Inc. has NOT completed any MTA contracts with goals; therefore, no assessment of the firm's MWDBE performance can be determined at this time.

IV. IMPACT ON FUNDING:

This contract will be funded by the LIRR Capital Budget supported by federal Super Storm Sandy relief funding.

V. ALTERNATIVES:

There are no alternatives, since LIRR does not have the ability to undertake the design and fabrication of these customized Switch Machine components with in-house forces.



Bridges and Tunnels

Procurements December 2016



Staff Summary

Subject:	Request for Authorization to Award Various Procurements
Department:	Procurement
Department Head Name	M. Margaret Terry <i>MMT</i>
Department Head Signature	
Project Manager Name	Various

Date	11/30/2016
Vendor Name	
Contract Number	
Contract Manager Name	
Table of Contents Ref #	

Board Action					
Order	To	Date	Approval	Info	Other
1	President	11/30/16			
2	MTA B&T Committee	12/12/16			
3	MTA Board	12/14/16			

Internal Approvals			
Order	Approval	Order	Approval
	President <i>RT</i>		VP Operations
	Executive Vice President		VP & Chief Engineer
	SVP & General Counsel		VP & Chief Procurement Officer <i>CPM</i>
	VP Administration		

Internal Approvals (cont.)							
Order	Approval	Order	Approval	Order	Approval	Order	Approval
	Chief Financial Officer <i>AF</i>		Chief Technology Officer		Chief Health & Safety Officer		Chief EEO Officer
	Chief Security Officer		Chief Maintenance Officer		MTA Office of Civil Rights		

PURPOSE:

To obtain approval of the Board to award various contracts and purchase orders, and to inform the MTA B&T Committee of these procurement actions.

DISCUSSION:

MTA B&T proposes to award Non-Competitive procurements in the following categories: None

MTA B&T proposes to award Competitive procurements in the following categories:

<u>Schedules Requiring Two-Thirds Vote:</u>	<u># of Actions</u>	<u>\$ Amount</u>
Schedule C: Competitive Requests for Proposals (Award of Purchase and Public Work Contracts)	1	\$64.78M
<u>Schedules Requiring Majority Vote:</u>	<u># of Actions</u>	<u>\$ Amount</u>
Schedule H: Modifications to Personal Service Contracts and Miscellaneous Service Contracts	2	\$ 3.17M
SUBTOTAL	3	\$67.95M

MTA B&T presents the following procurement actions for Ratification: None

TOTAL	3	\$67.95M
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BUDGET IMPACT:

The purchases/contracts will result in obligating MTA B&T and Capital funds in the amount listed. Funds are available in the current MTA B&T operating/capital budgets for this purpose.

RECOMMENDATION:

That the purchases/contracts be approved as proposed. (Items are included in the resolution of approval at the beginning of the Procurement Section.)

MTA BRIDGES & TUNNELS
TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

WHEREAS, in accordance with §559 and §2879 of the Public Authorities Law and the All Agency Procurement Guidelines, the Board authorizes the award of certain non-competitive purchase and public work contracts, and the solicitation and award of request for proposals in regard to purchase and public work contracts; and

WHEREAS, in accordance with §2879 of the Public Authorities Law and the All Agency Procurement Guidelines, the Board authorizes the award of certain non-competitive miscellaneous procurement contracts, and certain changes orders to procurement, public work, and miscellaneous procurement contracts; and

WHEREAS, in accordance with § 2879 of the Public Authorities Law and the All Agency Guidelines for Procurement of Services, the Board authorizes the award of certain service contracts, and certain change orders to service contracts; and

NOW, the Board resolves as follows:

1. As to each purchase and public work contract set forth in annexed Schedule A, the Board declares competitive bidding to be impractical or inappropriate for the reasons specified therein and authorizes the execution of each such contract.
2. As to each request for proposals (for purchase and public work contracts) set forth in Schedule B for which authorization to solicit proposals is requested, for the reasons specified therein, the Board declares competitive bidding to be impractical or inappropriate, declares it is in the public interest to solicit competitive request for proposals and authorizes the solicitation of such proposals.
3. As to each request for proposals (for purchase and public work contracts) set forth in Schedule C for which a recommendation is made to award the contract, the Board authorizes the execution of said contract.
4. The Board ratifies each action set forth in Schedule D for which ratification is requested.
5. The Board authorizes the execution of each of the following for which Board authorization is required: i) the miscellaneous procurement contracts set forth in Schedule E; ii) the personal service contracts set forth in Schedule F; iii) the miscellaneous service contracts set forth in Schedule G; iv) the modifications to personal/miscellaneous service contracts set forth in Schedule H; the contract modifications to purchase and public work contracts set forth in Schedule I; and vi) the modifications to miscellaneous procurement contracts set forth in Schedule J.
6. The Board ratifies each action taken set forth in Schedule K for which ratification is requested.
7. The Board authorizes the budget adjustments to estimated contracts set forth in Schedule L.

LIST OF COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL
DECEMBER 2016

MTA BRIDGES & TUNNELS

Procurements Requiring Two-Thirds Vote:

C: Competitive Requests for Proposals (Award of Purchase and Public Work Contracts)
(Staff Summaries required for items requiring Board approval)

- | | | |
|-----------------------------------|------------------------|--------------------------------------|
| 1. Judlau Contracting Inc. | \$64,784,000.00 | <u>Staff Summary Attached</u> |
| Contract No. TUN-MIT-01 | | |

2yr, 6 month Contract- Competitive RFP

B&T is seeking Board approval under the All-Agency General Contract Procurement Guidelines to award a competitively solicited public work contract for Design-Build Services for Flood Mitigation at the Hugh L. Carey Tunnel and Queens Midtown Tunnel to Judlau Contracting, Inc. (Judlau).

Procurements Requiring Majority Vote:

H: Modifications to Personal Service Contracts and Miscellaneous Service Contracts
(Approvals/Staff Summaries required for substantial change orders and change orders that cause original contract to equal or exceed monetary or durational threshold required for Board approval)

- | | | |
|---------------------------------|-----------------------|--------------------------------------|
| 1. WSP Sells/ HNTB, JV | \$2,471,525.00 | <u>Staff Summary Attached</u> |
| Contract No. PSC-14-2957 | | |

2yr Contract- Competitive RFP

B&T is seeking Board Approval in accordance with the All-Agency Service Contract Procurement Guidelines to amend a personal service Contract No. PSC-14-2957 with WSP SELLS | HNTB, JV for additional work to implement Open Road Tolling (ORT) at the Robert F. Kennedy Bridge (RFK Bridge).

- | | | |
|---|---------------------|--------------------------------------|
| 2. Shaw Environmental and Infrastructure Engineering of New York, P.C. | \$700,009.69 | <u>Staff Summary Attached</u> |
| Contract No. PSC-13-2937 | | |

2yr, 8months Contract- Competitive RFP

B&T is seeking Board Approval in accordance with the All-Agency Service Contract Procurement Guidelines to amend Contract No. PSC-13-2937 with Shaw Environmental and Infrastructure Engineering of New York, P.C. (Shaw) to provide additional construction management and inspection services.

Staff Summary

Page 1 of 2

Item Number 1					
Dept & Dept Head Name: Romolo DeSantis, P.E. <i>R. DeSantis</i>					
Division & Division Head Name: Joe Keane, P.E., V.P. <i>Joe Keane</i>					
Board Reviews					
Order	To	Date	Approval	Info	Other
1	President	11/30/16			
2	MTA B&T Committee	12/12/16			
3	MTA Board	12/14/16			
Internal Approvals					
Order	Approval	Order	Approval		
1	Chief Financial Officer <i>[Signature]</i>	4	Executive Vice President		
2	General Counsel <i>[Signature]</i>	5	President <i>[Signature]</i>		
3	Chief Procurement Officer <i>[Signature]</i>				

SUMMARY INFORMATION	
Vendor Name Judlau Contracting, Inc.	Contract Number TUN-MIT-01
Description Design-Build Services for Flood Mitigation at the Hugh L. Carey Tunnel and Queens Midtown Tunnel	
Total Amount Judlau Award - \$64,784,000 Stipends - \$300,000	
Contract Term (including Options, if any) Two (2) years, six (6) months	
Option(s) included in Total Amount? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Renewal? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	
Solicitation Type <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:	
Funding Source <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Other:	

Narrative

I. PURPOSE/RECOMMENDATION

B&T is seeking Board approval under the All-Agency General Contract Procurement Guidelines to award a competitively solicited public work contract for Design-Build Services for Flood Mitigation at the Hugh L. Carey Tunnel and Queens Midtown Tunnel to Judlau Contracting, Inc. (Judlau) for a period of two years, six months at a price of \$64,784,000. In accordance with the MTA Design-Build Best Practice Guidance, in order to enhance competition and defray proposal costs, this solicitation included stipends to be paid to each unsuccessful proposer in the amount of \$100,000 whose proposal met a defined standard. Accordingly, approval is also requested to pay stipends totaling \$300,000.

II. DISCUSSION

In November 2015, the Board authorized B&T to enter into a competitive Request for Proposal (RFP) process for design-build services for Flood Mitigation at the Hugh L. Carey Tunnel (HLCT) and Queen-Midtown Tunnel (QMT). The Work requires the design, construction, operation, and maintenance of a comprehensive flood mitigation program to protect tunnel entrances and plazas at the HLCT, Governors Island Ventilation Building (GIVB) and QMT.

The service requirements were publicly advertised, four firms submitted qualification information and based on a review of their qualifications all four firms were deemed qualified to receive the RFP. All four firms submitted proposals. The design-build proposers are Judlau; Halmar International, LLC; John P. Picone and Tully Construction Co., Inc. The

Staff Summary

proposals were evaluated against established criteria set forth in the RFP, including proposed price, schedule, design-build technical approach, management approach and organizational structure. Evaluations were based on the selection criteria and oral presentations. The committee recommended Judlau as the highest rated firm. The committee's basis for the selection included: (i) innovative design and construction for the GIVB seawall and other permanent mitigation solutions; (ii) emphasis on the utilization of permanent flood mitigation solutions in lieu of deployable (temporary) solutions, which result in reduced life-cycle costs; (iii) a proposed aggressive schedule which reduces substantial completion of the Project by six months and (iv) the agreement that Judlau's proposal is the best overall value and is deemed most advantageous to B&T as compared to the other proposers.

On October 5, 2016, New York State Governor Cuomo announced the implementation of cashless all-electronic Open Road Tolling (ORT) for adoption at all B&T facilities as part of the New York Crossings Project (NYCP). This method of toll collection does not require vehicles to stop. To coordinate with the implementation of ORT, as part of the NYCP B&T is accelerating the substantial completion date of the Superstorm Sandy rehabilitation of the Hugh L. Carey Tunnel (HLCT) and Queens Midtown Tunnel (QMT) from December 11, 2018 to March 31, 2018 and from April 22, 2019 to July 9, 2018, respectively. These measures were MTA Board approved on October 28, 2016 and are presently underway.

The NYCP includes investments for protecting B&T's tunnel facilities. B&T Project TUN-MIT-01 proposes to design and construct permanent and deployable flood protection measures for the HLCT, including the GIVB, and the QMT. The flood protection systems are expected to mitigate the risk of future damage to the tunnels from water intrusion and flooding from a major storm event. The Project includes a milestone date of December 31, 2017 for the design, installation and operation of flood protection barriers at each of the eight tunnel portals in advance of substantial completion of the HLCT and QMT tunnel rehabilitation construction projects. The remaining flood protection measures will be completed by the design-build contractor and will meet or exceed the current level of protection recommended by the Federal Emergency Management Agency.

Judlau submitted a proposal in the amount of \$64,784,000. The Engineer's estimate is \$68,883,170. Negotiations are ongoing and may result in a lower negotiated price. Based on the above, the total amount of this award will not exceed \$64,784,000. The price is 6.0% below the estimate and is considered fair and reasonable.

In connection with a previous contract awarded to the Contractor, Judlau was found to be responsible notwithstanding significant adverse information (SAI) pursuant to the All-Agency Responsibility Guidelines and such responsibility finding was approved by the MTA Chairman/CEO in consultation with the MTA General Counsel on December 16, 2013. No new SAI has been found related to the Contractor and Judlau has been found to be responsible.

III. D/M/WBE INFORMATION

The MTA DDCR has established goals of 15% MBE and 15% WBE for the Contract. Judlau Contracting, Inc. continues to demonstrate good faith efforts while attempting to achieve its MWBE goals.

IV. IMPACT ON FUNDING

B&T Project TUN-MIT-01 proposes to consolidate the scope of work and funding for six MTA Board approved projects into three projects under a single procurement. B&T proposes to consolidate Projects ED010301, ED010302, ED040304 and ED050303 at the Hugh L. Carey, including the GIVB building into Project ED010301 and ED050303. B&T proposes at the QMT to consolidate Projects ED010303 and ED010304 into Project ED010304.

Funding is available in the 2010-2014 Sandy Capital Program under Projects ED010301 (\$31,722,000), ED010304 (\$22,922,000) and ED050303 (\$8,050,000) for a total of (\$62,694,000.00) and in the Operating Budget under Projects HCM-373 and QMM-354 totaling (\$2,090,000). The impact of this proposed action results in a reallocation of funds between four projects in the 2010-2014 Sandy Capital Program.



Staff Summary

V. ALTERNATIVES

There are no recommended alternatives. B&T does not possess the resources required to perform these services.

Schedule H: Modifications to Personal Service Contracts and Miscellaneous Service Contracts

Item Number: **1**

Vendor Name (& Location) WSP SELLS HNTB, JV		Contract Number PSC-14-2957	AWO/Modification 1
Description Feasibility Study and Conceptual Design for Project RK-65B, Reconstruction of Manhattan Plaza of the RFK Bridge and Associated Ramps		Original Amount: \$3,641,416.00	
Contract Term (including Options, if any) December 24, 2014 – December 23, 2016		Prior Modifications: \$0.00	
Option(s) included in Total Amount? <input type="checkbox"/> Yes <input type="checkbox"/> No		Prior Budgetary Increases: \$0.00	
Procurement Type	<input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	Current Amount: \$3,641,416.00	
Solicitation Type	<input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:	This Request: \$2,471,525.00	
Funding Source		% of This Request to Current Amount: 67.9%	
<input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:		% of Modifications (including This Request) to Original Amount: 67.9%	
Requesting Dept/Div & Dept/Div Head Name: VP and Chief Engineer, Joe Keane			

Discussion

B&T is seeking Board Approval in accordance with the All-Agency Guidelines for Procurement of Services to amend a personal service Contract No. PSC-14-2957 with WSP SELLS | HNTB, JV for additional work in the negotiated amount of \$2,471,525 to implement Open Road Tolling (ORT) at the Robert F. Kennedy Bridge (RFK Bridge) and for a 2-year time extension. This Contract was awarded to WSP SELLS | HNTB, JV in December 2014 on a competitive basis in the amount of \$3,641,416 for a duration of two years to conduct a feasibility study and conceptual design for Project RK-65B, Reconstruction of the Manhattan Plaza of the RFK Bridge and Associated Ramps.

As previously announced, B&T intends to implement ORT at all of its toll facilities in an expedited manner. To meet the accelerated schedule for full implementation of ORT, maximize efficiencies, minimize customer inconvenience and ensure safe passage, B&T intends to engage existing consultants and contractors to perform this work. Contract PSC-14-2957 services include design, investigation and testing necessary to determine the feasibility of potential tolling alternatives and include (i) traffic studies; (ii) coordination with other B&T and surrounding regional improvement projects; (iii) structural and geotechnical investigation; (iv) property and jurisdictional issues; (v) environmental issues; (vi) staff relocation/space repurposing; (vii) realignment/ relocation of ramps; (viii) advancing enabling projects to a 40% design level; and (ix) cost estimating. B&T informed the Board at the time that it would return and seek approval for resultant design and associated construction support services.

Under this proposed amendment the scope will be expanded to include design of new ORT gantries including related civil work at RFK Bridge, designs for a new and more technologically advanced Operations Command and Control Center (OCCC) needed to centrally monitor and control existing and new operational functions Authority-wide now to be located at the new Training Building, construction support services and drawings for demolition of the Manhattan Toll Plaza.

WSP SELLS | HNTB, JV proposed a cost of \$3,079,111.22. The negotiated amount of \$2,471,525 is 6.8% less than the Engineer's Estimate of \$2,652,000 and is considered fair and reasonable. On August 24, 2016, B&T provided verbal authorization of \$250,000 to WSP SELLS | HNTB, JV to commence the design work required in order to meet B&T's aggressive schedule.

Funding is available in the 2015-2019 Capital Program under Projects D703/AW65/D03878. (\$1,739,836) and D705/AW66/D03492 (\$731,689), and is being reallocated to establish project D703RK63 in B&T's 2015-2019 Capital Program for this RFK ORT work. Approval for other ORT related costs including system integration and ancillary work will be requested under a separate contract.

This action modifies B&T's 2015-2019 Capital Program, and the proposed modification seeks to add projects (including this one—D703RK63) related to the implementation of ORT at all B&T facilities. The funding for ORT initiatives will be achieved through efficiencies generated from other projects, including from previously planned toll plaza work that will no longer need to be performed because of ORT. No critical state of good repair work is affected as a result of these programmatic modifications.

Schedule H: Modifications to Personal Service Contracts and Miscellaneous Service Contracts

Item Number: 2

Vendor Name (& Location) Shaw Environmental and Infrastructure Engineering of New York, P.C.		Contract Number PSC-13-2937	AWO/Modification 7
Description Construction Management and Inspection Services for Project RK-65R2, TBTA Training Facility at Randall's Island		Original Amount: \$1,500,616.46	
Contract Term (including Options, if any) June 9, 2014 – January 30, 2017		Prior Modifications: \$273,834.00	
Option(s) included in Total Amount? <input type="checkbox"/> Yes <input type="checkbox"/> No		Prior Budgetary Increases: \$0.00	
Procurement Type	<input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	Current Amount: \$1,774,450.46	
Solicitation Type	<input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:	This Request: \$700,009.69	
Funding Source		% of This Request to Current Amount: 39.5%	
<input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:		% of Modifications (including This Request) to Original Amount: 64.9%	
Requesting Dept/Div & Dept/Div Head Name: VP and Chief Engineer, Joe Keane			

Discussion

B&T is seeking Board Approval in accordance with the All-Agency Guidelines for Procurement of Services to amend Contract No. PSC-13-2937 with Shaw Environmental and Infrastructure Engineering of New York, P.C. (Shaw) to provide additional construction management and inspection services in the negotiated amount of \$700,009.69 and for an 11-month time extension. This Contract was awarded to Shaw in June, 2014 on a competitive basis in the amount of \$1,500,616.46 and for a duration of twenty-two months to provide construction management and inspection services for Design-Build Project RK-65R2, TBTA Training Facility at Randall's Island. Under previous amendments services were increased and the contract duration was extended through January 2017 to accommodate changes to the construction project.

As previously announced, B&T desires to implement ORT at all of its toll facilities in an expedited manner. B&T plans to monitor and control these new ORT functions from a new and expanded central Operations Command and Control Center. The Command and Control Center will be installed on the second floor of this Training Facility as a new task under a competitively solicited construction services contract. Contract PSC-13-2937 services include construction management and inspection services for the construction of the TBTA Training Facility and Shaw personnel recently completed management of electrical and mechanical systems commissioning. Under this proposed amendment Shaw's scope will be expanded to include construction management and inspection services for the new Command and Control Center. Shaw's construction management team are intimately familiar with the new building and are still engaged in final closeout and commissioning of the building systems. Shaw's already established team are the best equipped to provide the additional construction management services that will be required for the fast track delivery of the new Control Center. Extending their current contract allows Shaw to leverage their existing knowledge of the building systems and to maintain a continuity of their services is deemed to be the most advantageous means of providing best value construction management services for this project.

Shaw proposed a cost of \$825,791.98 for these services and B&T's estimate is \$746,000. The negotiated amount of \$700,009.69 is deemed to be fair and reasonable based on the favorable comparison to the estimate and the short timeframe in which the work must be completed.

Funding is available in the 2015-2019 Capital Program under Project D705/AW66/D03491.