

NEW MONEY ISSUE – BOOK-ENTRY ONLY

In the opinion of Locke Lord LLP, Bond Counsel, based upon an analysis of existing law and assuming, among other matters, compliance with certain covenants, interest on the 2019 Bonds is excluded from gross income for federal income tax purposes under the Internal Revenue Code of 1986. Interest on the 2019 Bonds will not be included in computing the alternative minimum taxable income of individuals. Under existing law, interest on the 2019 Bonds and any profit made on the sale thereof are exempt from Massachusetts personal income taxes, and the 2019 Bonds are exempt from Massachusetts personal property taxes. Bond Counsel expresses no opinion regarding any other tax consequences related to the ownership or disposition of, or the accrual or receipt of interest on, the 2019 Bonds. See TAX EXEMPTION herein.



\$200,000,000
THE COMMONWEALTH OF MASSACHUSETTS
Commonwealth Transportation Fund Revenue Bonds
(Rail Enhancement & Accelerated Bridge Programs)
2019 Series A

Dated: Date of Delivery

Due: June 1, as shown on the inside cover hereof

The Commonwealth Transportation Fund Revenue Bonds (Rail Enhancement & Accelerated Bridge Programs), 2019 Series A (the “2019 Bonds”) will be issued by means of a book-entry only system evidencing ownership and transfer of the 2019 Bonds on the records of The Depository Trust Company (“DTC”) and its participants. Details of payment of the 2019 Bonds are more fully described in this Official Statement. The 2019 Bonds will bear interest from the date of delivery, and interest will be payable on June 1, 2020 and semiannually thereafter on June 1 and December 1. The 2019 Bonds are subject to redemption prior to maturity as more fully described herein.

The 2019 Bonds are special limited obligations of The Commonwealth of Massachusetts (the “Commonwealth”) payable from and secured solely by a pledge of Pledged Funds, as defined herein, all rights to receive Pledged Funds, and all Funds and Accounts, other than the Rebate Fund, held under the Trust Agreement dated as of December 1, 2010 (as supplemented and amended, the “Trust Agreement”) between the Commonwealth and The Bank of New York Mellon Trust Company, N.A., as trustee (the “Trustee”), as further supplemented by the Tenth Supplemental Trust Agreement between the Commonwealth and the Trustee dated as of November 1, 2019. Pledged Funds are moneys received or to be received by the Commonwealth from certain Motor Fuels Tax revenues, Registry Fees and certain other moneys, all as described herein. **The 2019 Bonds are not general obligations of the Commonwealth and are not secured by the full faith and credit of the Commonwealth. The 2019 Bonds are payable only from Pledged Funds and other moneys available to the owners of the 2019 Bonds under the Trust Agreement.**

The 2019 Bonds are offered when, as and if issued and received by the Underwriters and subject to the unqualified approving opinion as to legality of Locke Lord LLP, Boston, Massachusetts, Bond Counsel. Certain legal matters will be passed upon for the Underwriters by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts. PFM Financial Advisors LLC is acting as municipal advisor to the Commonwealth in connection with the issuance of the 2019 Bonds. Settlement of the issue is expected at DTC in New York, New York, on or about November 21, 2019.

Citigroup

J.P. Morgan
Robert W. Baird & Co.
Morgan Stanley

Goldman Sachs & Co. LLC
UBS

Ramirez & Co., Inc.
Mischler Financial Group, Inc.
Wells Fargo Securities

THE COMMONWEALTH OF MASSACHUSETTS

\$200,000,000
Commonwealth Transportation Fund Revenue Bonds
(Rail Enhancement & Accelerated Bridge Programs)
2019 Series A

Dated: Date of Delivery

Due: June 1, as shown below

\$200,000,000.00, 5.00% Term Bonds Due June 1, 2049 to Yield 2.42%^c - CUSIP* Number: 57604THJ8

^c Priced at stated yield to first optional redemption date of June 1, 2029 at a redemption price of 100%. See "The 2019 Bonds – Redemption" herein.

* CUSIP is a registered trademark of the American Bankers Association. CUSIP data herein are provided by CUSIP Global Services, managed on behalf of The American Bankers Association by S&P Global Market Intelligence. The CUSIP numbers are included solely for the convenience of owners of the 2019 Bonds, and the Commonwealth is not responsible for the selection or the correctness of the CUSIP numbers printed herein. CUSIP numbers assigned to securities may be changed during the term of such securities based on a number of factors, including, but not limited to, the refunding or defeasance of such securities or the use of secondary market financial products.

No dealer, broker, salesperson or other person has been authorized by the Commonwealth or the Underwriters of the 2019 Bonds to give any information or to make any representations, other than those contained in this Official Statement, and if given or made, such other information or representations must not be relied upon as having been authorized by either of the foregoing. This Official Statement does not constitute an offer to sell or a solicitation of any offer to buy nor shall there be any sale of the 2019 Bonds offered hereby by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale. The information set forth herein or included by reference herein has been furnished by the Commonwealth and includes information obtained from other sources which are believed to be reliable, but is not guaranteed as to the accuracy or completeness and is not to be construed as a representation by the original purchasers of the 2019 Bonds or, as to information from other sources, the Commonwealth. The information and expressions of opinion herein or included by reference herein are subject to change without notice and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the Commonwealth, or its agencies, authorities or political subdivisions, since the date hereof, except as expressly set forth herein.

The Underwriters have provided the following sentence for inclusion in this Official Statement: The Underwriters have reviewed the information in this Official Statement in accordance with, and as part of, their respective responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information.

In connection with this offering, the Underwriters may over allot or effect transactions that stabilize or maintain the market price of the 2019 Bonds at levels above those that might otherwise prevail on the open market. Such stabilizing, if commenced, may be discontinued at any time.

This Official Statement contains certain forward-looking statements that are subject to a variety of risks and uncertainties that could cause actual results to differ from the projected results, including without limitation general economic and business conditions, conditions in the financial markets, the financial condition of the Commonwealth and various state agencies and authorities, receipt of federal grants, litigation, arbitration, force majeure events and various other factors that are beyond the control of the Commonwealth and its various agencies and authorities. Because of the inability to predict all factors that may affect future decisions, actions, events or financial circumstances, what actually happens may be different from what is set forth in such forward-looking statements. Forward-looking statements are indicated by use of such words as “may,” “will,” “should,” “intends,” “expects,” “believes,” “anticipates,” “estimates” and others.

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THE COMMONWEALTH OF MASSACHUSETTS



CONSTITUTIONAL OFFICERS

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Karyn E. Polito Lieutenant Governor
William F. Galvin Secretary of the Commonwealth
Maura T. Healey Attorney General
Deborah B. Goldberg Treasurer and Receiver-General
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LEGISLATIVE OFFICERS

Karen E. Spilka President of the Senate
Robert A. DeLeo Speaker of the House

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SUMMARY DESCRIPTION OF 2019 BONDS

Selected information is presented on this page for the convenience of the reader. To make an informed investment decision regarding the 2019 Bonds, a prospective investor should read the entire Official Statement.

Description:	The Commonwealth of Massachusetts Commonwealth Transportation Fund Revenue Bonds (Rail Enhancement & Accelerated Bridge Programs) 2019 Series A (the “2019 Bonds”)
Principal Amount:	\$200,000,000
Denominations:	\$5,000 or integral multiples thereof
Date of Issue:	On or about November 21, 2019
Record Date:	The record date for payment on account of the 2019 Bonds will be the 15th day of the month preceding each Interest Payment Date, or, if such day is not a business day, the next preceding business day
Interest Payments:	June 1 and December 1, beginning June 1, 2020
Maturities:	<i>See inside front cover</i>
Redemption:	The 2019 Bonds are subject to optional redemption at par at the times described herein. The 2019 Bonds are also subject to mandatory redemption from sinking fund installments – <i>See pages 7-8</i>
Form:	Book-entry-only – <i>See pages 35-37</i>
Trustee:	The Bank of New York Mellon Trust Company, N.A.
Security:	The 2019 Bonds are special limited obligations of the Commonwealth and are payable solely from sources specified in the Trust Agreement (“Pledged Funds”). Pledged Funds represent amounts credited to the Commonwealth Transportation Fund, the primary sources of which are the Motor Fuels Tax revenues and Registry Fees. The 2019 Bonds are not general obligations of the Commonwealth – <i>See pages 12-20</i>
Additional Bonds:	Pledged Funds for any 12 consecutive months during the last 18 months must be at least 4.0x maximum aggregate Adjusted Bond Debt Service Requirement, including the Additional Bonds to be issued – <i>See pages 18-19</i>
Authority for Issuance:	The 2019 Bonds are issued under Section 20 of Chapter 29 of the General Laws (“Special Obligation Act”) and certain other bond authorizations pursuant to which bonds may be issued under the Special Obligation Act
Purpose:	Proceeds from the 2019 Bonds will be used to fund costs of certain transportation projects of the Commonwealth – <i>See pages 2-6</i>
Tax Exemption:	Interest on the 2019 Bonds is excluded from gross income for federal income tax purposes. Interest on the 2019 Bonds and any profit made on the sale thereof are exempt from Massachusetts personal income taxes, and the 2019 Bonds are exempt from Massachusetts personal property taxes – <i>See pages 37-39</i>
Legal Opinion:	The 2019 Bonds are offered when, as and if issued and received by the Underwriters and subject to the unqualified approving opinion as to legality of Locke Lord LLP, Bond Counsel – <i>See Appendix C</i>

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OFFICIAL STATEMENT

THE COMMONWEALTH OF MASSACHUSETTS

\$200,000,000

**Commonwealth Transportation Fund Revenue Bonds
(Rail Enhancement & Accelerated Bridge Programs)
2019 Series A**

INTRODUCTION

General

This Official Statement, including the cover page and appendices, provides information in connection with the issuance by The Commonwealth of Massachusetts (the “Commonwealth”) of its \$200,000,000 Commonwealth Transportation Fund Revenue Bonds (Rail Enhancement & Accelerated Bridge Programs) 2019 Series A (the “2019 Bonds”), pursuant to a Trust Agreement dated as of December 1, 2010 (as amended and supplemented from time to time, the “Trust Agreement”) between the Commonwealth and The Bank of New York Mellon Trust Company, N.A., as trustee (the “Trustee”), as further supplemented by the Tenth Supplemental Trust Agreement dated as of November 1, 2019 between the Commonwealth and the Trustee.

The 2019 Bonds are authorized by and issued pursuant to (i) Section 20 of Chapter 29 of the General Laws, as amended from time to time (the “Special Obligation Act”), (ii) Section 2ZZZ of Chapter 29, as amended, (iii) Chapter 233 of the Acts of 2008, as it may be amended from time to time (the “Accelerated Bridge Program Act”) and (iv) certain other special acts of the Commonwealth authorizing the issuance of either general obligation or special obligation bonds for transportation purposes, including, in particular, Section 20 of Chapter 79 of the Acts of 2014 (“Chapter 79”) and are issued pursuant to and secured by the Trust Agreement. The 2019 Bonds are special limited obligations of the Commonwealth. The principal (including sinking fund payments) of, or redemption price of and interest on the 2019 Bonds are payable from and secured solely by a pledge of and lien on Pledged Funds (defined below), all rights to receive Pledged Funds, amounts, securities and any investment earnings with respect thereto in all Funds and Accounts, other than the Rebate Fund, and any amounts payable to the Commonwealth pursuant to a Qualified Hedge Agreement. See *Security and Sources of Payment for the Bonds*.

The 2019 Bonds are being issued to finance certain authorized capital projects of the Commonwealth as further described herein.

Bonds issued under the Special Obligation Act, herein referred to as “special obligation bonds,” including the 2019 Bonds, are not general obligations of the Commonwealth and are not secured by the full faith and credit of the Commonwealth. The 2019 Bonds are being issued on a parity with the Commonwealth Transportation Fund Revenue Bonds and Commonwealth Transportation Fund Revenue Refunding Bonds previously issued under the Trust Agreement (the “Prior CTF Bonds”), which are currently outstanding in the aggregate principal amount of \$2.77 billion. Additional bonds may be issued on a parity basis with the Prior CTF Bonds and the 2019 Bonds (“Additional Bonds”) under the conditions and in the manner provided in the Trust Agreement (the Prior CTF Bonds, the 2019 Bonds and any Additional Bonds are collectively referred to herein as the “Bonds”). Additional Bonds may be issued under Chapter 233 of the Acts of 2008, as amended (the “Accelerated Bridge Program Act”) to fund additional costs of the Accelerated Bridge Program or under the Special Obligation Act to fund any other transportation projects of the Commonwealth for which bonds have been heretofore or are hereafter authorized to be issued thereunder. See *Security and Sources of Payment for the Bonds – Additional Bonds and Debt Service Coverage – Future Issuance of Bonds and Notes*.

Chapter 79 authorized the issuance of approximately \$6.7 billion of bonds of the Commonwealth either as general obligation bonds or special obligation bonds issued under the Special Obligation Act. The purposes of the borrowings would be to fund certain capital expenditures of the Massachusetts Department of Transportation (“MassDOT”) on behalf of the Massachusetts Bay Transportation Authority (“MBTA”) and certain rail improvement projects across the Commonwealth. While planned future issuance as described herein differs slightly due to timing

considerations, the current 5-year capital investment plan of the Commonwealth anticipates the expected aggregate issuance through fiscal year 2024 of up to approximately \$1.85 billion (which amount includes net premium) of these bonds (including the portion of 2019 Bonds applied to this purpose) as special obligation bonds under the Special Obligation Act. Any issuance of Additional Bonds is subject to the requirements of the Trust Agreement for the issuance of Additional Bonds. The 2019 Bonds are being issued for purposes authorized under Chapter 79 and the Accelerated Bridge Program. The Commonwealth has the ability to determine, in its discretion, the amount of proceeds of the 2019 Bonds to be applied to each such purpose. See *The 2019 Bonds – Application of Proceeds*. See *Debt Service Coverage – Future Issuance of Bonds and Notes* and *Security and Sources of Payment for the Bonds - Additional Bonds*.

The 2019 Bonds are the Commonwealth's sixteenth issue of special obligation bonds, and the tenth issue of such bonds under the Trust Agreement. Certain of the prior issues of special obligation bonds are no longer outstanding. With respect to such bonds that remain outstanding, the Commonwealth issued \$215.8 million of such bonds in 2005 (the "1994 Trust Agreement Bonds" currently outstanding in the principal amount of \$80.9 million) pursuant to a Trust Agreement dated as of June 1, 1994 (as amended and restated as of January 1, 2005, and as further amended and supplemented, the "1994 Trust Agreement") between the Commonwealth and U.S. Bank National Association, as successor trustee (the "1994 Trustee"). The outstanding 1994 Trust Agreement Bonds are secured by the Commonwealth's pledge of 6.86¢ per gallon of revenues from the Commonwealth's gasoline tax imposed by Chapter 64A (the "Prior Pledged Funds"). The Bonds are *subordinate* to the outstanding 1994 Trust Agreement Bonds with respect to the lien on the Prior Pledged Funds. The Commonwealth has covenanted in the Trust Agreement not to issue any additional bonds under the 1994 Trust Agreement, except for certain refunding bonds. The final maturity date of the outstanding 1994 Trust Agreement Bonds is June 1, 2022. See *Security and Sources of Payment for the Bonds — Pledged Funds* and *1994 Trust Agreement*.

In July, 2019, the Governor submitted a new transportation bond bill to the Legislature that requested \$18 billion in additional capital authorization to improve the Commonwealth's transportation infrastructure. The proposed bill includes additional authorizations of \$1.25 billion of additional federal highway grant anticipation notes for highway purposes and \$12.22 billion of bonds to be issued as either general obligation bonds or special obligation bonds under the Special Obligation Act for MBTA and other rail enhancement purposes. The bill also permits all or any portion of the federal highway grant anticipation note authorization to be issued as special obligation bonds. The final maturity of bonds authorized under the bill is thirty (30) years from the date of issuance, but not later than June 30, 2059. The bill is pending in the Legislature and is subject to change during the legislative process. It is not known at this time when a final bill will be enacted into law or what the final actual authorizations will be, if any. Any issuance of Additional Bonds is subject to the requirements of the Trust Agreement for the issuance of Additional Bonds. See *Security and Sources of Payment for the Bonds - Additional Bonds* and *Debt Service Coverage – Future Issuance of Bonds and Notes*.

Commonwealth Transportation Fund and Pledged Funds

The Commonwealth currently levies a tax of 24¢ per gallon upon each gallon of gasoline sold or used in the Commonwealth (the "Gasoline Tax"). Under state law, a portion of such Gasoline Tax (other than with respect to aviation fuel) currently equal to 23.964¢ per gallon is deposited in the Commonwealth Transportation Fund (the "Pledged Gasoline Tax"). In addition, the Commonwealth currently levies a tax of 24¢ per gallon upon each gallon of special fuels and a tax of 19.1% of the average price per gallon of liquefied gas sold or used in the Commonwealth (together, the "Special Fuels Tax"), of which 100% is deposited in the Commonwealth Transportation Fund. The Commonwealth also levies a tax of 24¢ per gallon upon each gallon of gasoline and special fuels acquired outside and used within the Commonwealth (the "Motor Carrier Tax"), of which 100% is deposited in the Commonwealth Transportation Fund. The Gasoline Tax (other than with respect to aviation fuel), the Special Fuels Tax and the Motor Carrier Tax are referred to collectively herein as the "Motor Fuels Tax," and the Pledged Gasoline Tax, Special Fuels Tax, and the Motor Carrier Tax are referred to collectively herein as the "Pledged Motor Fuels Tax." The Pledged Motor Fuels Tax receipts are available to be used only for transportation-related purposes, including debt service on special obligation bonds issued under the Special Obligation Act.

Under current law, Pledged Funds represent amounts received or to be received by the Commonwealth from: (i) all moneys received or to be received by the Commonwealth from (a) 17.104¢ per gallon with respect to the Pledged Gasoline Tax, (b) 24¢ per gallon with respect to the Special Fuels Tax (other than liquefied gas) and Motor Carrier

Tax and (c) 19.1% of the average price per gallon (computed to the nearest tenth of one percent) with respect to Special Fuels Tax on liquefied gas; (ii) all Registry Fees (as hereinafter defined) deposited in the Commonwealth Transportation Fund pursuant to Section 34(iii) of Chapter 90 of the Massachusetts General Laws including: (x) motor vehicle registration fees imposed under Chapter 90; (y) motor vehicle license fees imposed under Chapter 90; and (z) miscellaneous fees and other revenues relating to the operation and use of motor vehicle transportation; (iii) all moneys received or to be received by the Trustee from the 1994 Trustee pursuant to the 1994 Trust Agreement subject to the prior lien of the 1994 Trust Agreement, all of the Prior Pledged Funds (6.86¢ per gallon); (iv) refundable tax credits received by the Commonwealth from the United States Treasury equal to a percentage of the taxable interest the Commonwealth pays on Build America Bonds in accordance with Section 54AA of the federal Internal Revenue Code of 1986, as amended (the “Code”), or on Recovery Zone Economic Development Bonds in accordance with Section 1400U-2 of the Code (“Direct Payments”); and (v) to the extent permitted in the Trust Agreement, such Additional Pledged Funds (as hereinafter defined) as the Commonwealth may by a subsequent Supplemental Trust Agreement pledge to the Trustee as security for the bonds issued under the Trust Agreement. See *Pledged Funds*.

Under the Trust Agreement, Additional Pledged Funds may only include revenues required to be expended for transportation purposes by Article 78 of the Articles of Amendment to the Massachusetts Constitution, as amended (“Article 78 Revenues”) or any Federal Highway Reimbursements (as defined in the Trust Agreement). Article 78 Revenues are revenues derived from the registration, operation or use of vehicles on public highways, including Registry Fees, or from fuels used for propelling such vehicles, including the Motor Fuels Tax. See *Commonwealth Transportation System – Financing the Transportation System; Constitutional Limitations*. Currently all Article 78 Revenues (excluding 0.15% of the Gasoline Tax credited to the Inland Fisheries and Game Fund) are credited to the Commonwealth Transportation Fund. The Trust Agreement provides that, to the extent subsequently permitted by law, the Commonwealth may pledge all or any additional Article 78 Revenues or any Federal Highway Reimbursements as Additional Pledged Funds.

Rail Enhancement Program

The Rail Enhancement Program (“REP”) was authorized by Chapter 79, which provides for the issuance of either general obligation bonds or special obligation bonds to fund capital expenditures of MassDOT for the benefit of the MBTA and for other rail improvements in the Commonwealth. Chapter 79 was intended to provide financing for certain significant rail improvement projects in the Commonwealth outside the MBTA’s regular capital program. The 2019 Bonds will be the fifth issuance of special obligation bonds under Chapter 79 and a majority of the proceeds are expected to be applied to REP projects authorized under Chapter 79, although the Commonwealth is permitted to apply any amount of such proceeds to purposes authorized under the Accelerated Bridge Program Act, and may do so with this issuance.

Proceeds from the 2019 Bonds are expected to finance certain significant rail improvement projects in the Commonwealth outside the MBTA’s regular capital program some of which are highlighted below.

Green Line Extension: This project will extend the existing MBTA Green Line by utilizing two distinct branches within the existing railroad right-of-way: a “mainline” branch which will operate along the existing Lowell commuter rail line, beginning at a relocated Lechmere Station in Cambridge and traveling through Somerville to College Avenue in Medford, with a branch line operating within the right-of-way for the existing Fitchburg commuter rail line leading to Union Square in Somerville. Design and construction are underway following the notice to proceed under the contract was issued on December 20, 2017, following the Federal Transit Administration (“FTA”) obligating an initial tranche of the grant funds for the project in accordance with the January, 2015 Full Funding Grant Agreement. The total amount of funding expected from FTA is approximately \$996 million. The Commonwealth’s share of this project is expected to be funded by Bonds. See *Debt Service Coverage – Future Issuance of Bonds and Notes*.

- The Green Line Extension project features:
 - 4.4 miles of new Green Line track and relocation of 4 miles of existing commuter rail track;
 - Relocated Lechmere Station anchoring transit-oriented development in Cambridge;
 - Five new stations in Somerville and one new station in Medford;
 - Roadway and traffic improvements;

- Reconstruction of bridges and construction of viaduct structures;
 - Catenary, signals, communications and power to support the Green Line extension;
 - Extension of the existing Somerville Community Path;
 - 24 new Green Line vehicles; and
 - A new Green Line vehicle storage and maintenance facility.
- **Red Line and Orange Line Improvements Program:** This program involves procurement and replacement of new Red Line and Orange Line vehicles to improve reliability, accessibility and energy efficiency and associated improvements to facilities, track and signal infrastructure to address the state of good repair needs of the MBTA's Red and Orange Lines. New cars will feature increased capacity and additional seating, wider and electrically operated doors, accessible areas in each car, LED lighting, updated HVAC systems and improved communication systems. The program includes the following elements:
 - *New Vehicles:*
 - 252 new Red Line vehicles;
 - 152 new Orange Line vehicles;
 - *Orange Line infrastructure improvements:*
 - Wellington maintenance facility improvements and expansion;
 - Rehabilitation of the existing test track for Orange Line vehicles;
 - Improvement and expansion of tracks 33-38 at Wellington Yard;
 - Wellington Yard upgrades; and
 - Orange Line signal upgrades;
 - *Red Line infrastructure improvements:*
 - Cabot maintenance facility improvements;
 - A new test track;
 - Cabot Yard upgrades; and
 - Codman Yard rebuild.
- **South Coast Rail Program:** This project will offer a reliable transit connection between southeastern Massachusetts and Boston. Riders will be able to take a 1-seat trip – no transfers needed – from Fall River and New Bedford into Boston. Taunton, New Bedford, and Fall River are the only major cities within 50 miles of Boston that do not currently have commuter rail access to Boston. The project will be rolled out in phases:
 - **Phase 1:** Extend the Middleborough/Lakeville Line west, and create the New Bedford and Fall River lines. This phase includes early action construction projects to prepare for Phase 1 main line rail construction projects. The construction projects will include 63 drainage culvert replacements, a railroad grade crossing update and constructing wetlands as mitigation along the right-of-way, and replacing or reconstructing 4 railroad bridges.
 - **Full Build:** Extend the Stoughton Line south to connect more communities to the New Bedford and Fall River lines

Work continues on the South Coast Rail project design. South Coast Rail program costs are expected to be funded with a combination of proceeds of both Commonwealth general and special obligation bonds.

As with all transportation projects of this magnitude, the scope, schedule, cost, financing and final determination to proceed with respect to any of them are subject to change and reconsideration. It should also be noted that the expected receipt of Pledged Funds is not dependent on completion of any of the projects expected to be financed with the proceeds of the 2019 Bonds or any Additional Bonds.

Proceeds of the 2019 Bonds may also be used to fund other rail enhancement projects authorized by Chapter 79 or to fund projects under the Accelerated Bridge Program as described further below.

Accelerated Bridge Program

In 2008, with the Massachusetts Highway Department (“MHD”) and the Department of Conservation and Recreation (“DCR”) having 543 structurally deficient bridges between them, and projections of this number climbing to almost 700 by 2016, the Accelerated Bridge Program Act was passed with a goal of reducing the state’s backlog of structurally deficient bridges below 450 by September 30, 2016. The goal of the program was exceeded with the number of structurally deficient bridges overseen by the former MHD and DCR reduced to 432 as of September 30, 2016, a decline of 20%. As of September 1, 2018, the Accelerated Bridge Program (hereinafter defined) has completed 191 bridge projects, with seven remaining bridge projects in construction. Over the course of the program, well over 283 bridges have been rehabilitated or replaced, with many more improved for safety and preserved for extended lifecycle.

Pursuant to the Accelerated Bridge Program Act, the Commonwealth commenced a program in 2010 to finance the accelerated capital improvement of bridges and related infrastructure (the “Accelerated Bridge Program”). The Accelerated Bridge Program Act authorized the issuance of up to \$1.876 billion in special obligation bonds of the Commonwealth secured by revenues in the Commonwealth Transportation Fund to finance the design, construction, reconstruction, and repair of or improvements to bridges and approaches. The Accelerated Bridge Program Act also authorized the issuance of up to \$1.108 billion of Federal Highway Grant Anticipation Notes (“GANs”) secured by reimbursements received or to be received by the Commonwealth, acting through MassDOT, from the federal government pursuant to the federal-aid highway program and any other monies from time to time deposited in the Federal Highway Grant Anticipation Trust Fund of the Commonwealth for such purposes.

Under the Accelerated Bridge Program Act, the Commonwealth may issue any portion of the GANs authorized therein as special obligation bonds and may issue any portion of the special obligation bonds authorized therein as GANs, provided that the aggregate amount (including net premium) of such special obligation bonds and GANs shall not exceed \$2.984 billion, and provided that the Governor and the Treasurer and Receiver-General (“Treasurer”) determine that issuing such special obligation bonds and GANs in such manner is necessary or is in the best financial interests of the Commonwealth, based on their consideration of: (i) the Commonwealth’s authority under federal law to issue GANs; (ii) generally prevailing financial market conditions; (iii) the impact of each financing approach on the overall capital financing plans and needs of the Commonwealth; (iv) any ratings assigned to outstanding bonds of the Commonwealth and any ratings expected to be assigned by any nationally-recognized credit rating agency to the special obligation bonds or GANs proposed to be issued; and (v) any applicable provisions of state finance law.

To date, the Commonwealth has financed an aggregate amount of \$2.874 billion of projects for the Accelerated Bridge Program, \$1.846 billion (which amount includes net premium) of Prior CTF Bonds and \$1.028 billion (which amount includes net premium) of GANs. The remaining \$110 million of authorized spending will be financed with the 2019 GANs and a portion of the proceeds of the 2019 Bonds, although the Commonwealth has the right to determine, in its discretion, the amount of proceeds applied to such purpose. A portion of future Additional Bonds are expected to be applied to remaining costs of the Accelerated Bridge Program,

The GANs are secured, in part, by a lien on the Pledged Funds *subordinate* to the Bonds. Under certain circumstances described herein, amounts from the Commonwealth Transportation Fund may be made available for payment of debt service on the GANs. However, any such use is subordinate to the payment of the Bonds. See *Security and Sources of Payment for the Bonds – Flow of Pledged Funds – Flow of Funds under the Trust Agreement and Federal Highway Grant Anticipation Notes*.

Purpose and Content of Official Statement

This Official Statement describes the terms and use of proceeds of, and security for, the 2019 Bonds. This introduction is subject in all respects to the additional information contained in this Official Statement, including Appendices A through D. All descriptions of documents contained herein are only summaries and are qualified in their entirety by reference to each such document. All capitalized terms not otherwise defined herein shall have the meanings set forth in *Appendix B - Summary of Certain Provisions of the Trust Agreement*. *Appendix A* is a summary of certain provisions of the Commonwealth Transportation Fund Act and the Special Obligation Act, respectively. *Appendix B* is a summary of certain provisions of the Trust Agreement. *Appendix C* contains the proposed form of

legal opinion of bond counsel with respect to the 2019 Bonds. *Appendix D* contains the proposed form of the Commonwealth's continuing disclosure undertaking to be included in the form of the 2019 Bonds to facilitate compliance by the Underwriters with the requirements of paragraph (b)(5) of Rule 15c2-12 of the Securities and Exchange Commission. See *Continuing Disclosure* and *Availability of Other Information*.

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THE 2019 BONDS

General

The 2019 Bonds will be dated the date of delivery thereof and will initially bear interest from such date payable semiannually on June 1 and December 1 of each year, commencing June 1, 2020 (each an “Interest Payment Date”), until the principal amount is paid. The 2019 Bonds shall mature on June 1 in the years and principal amounts and bear interest at the rates per annum set forth on the inside cover pages of this Official Statement. The Trustee will be the trustee and paying agent for the 2019 Bonds.

Book-Entry Only System. The 2019 Bonds will be issued by means of a book-entry only system, with one bond certificate for each maturity immobilized at The Depository Trust Company, New York, New York (“DTC”). The certificates will not be available for distribution to the public and will evidence ownership of the 2019 Bonds in principal amounts of \$5,000, or integral multiples thereof. Transfers of ownership will be effected on the records of DTC and its Participants (as defined herein) pursuant to rules and procedures established by DTC and its Participants. Interest, principal and premium, if any, due on the 2019 Bonds will be paid in clearinghouse funds to DTC or its nominee as registered owner of the 2019 Bonds. The record date for payments on account of the 2019 Bonds will be the 15th day of the month preceding each Interest Payment Date, or, if such day is not a business day, the next preceding business day, provided that, with respect to overdue interest or interest payable on a redemption date that is not an Interest Payment Date or interest on any overdue amount, the Trustee may establish a special record date not more than 20 days before the date set for payment. As long as the book-entry only system remains in effect, DTC or its nominee will be recognized as the owner of the 2019 Bonds for all purposes, including notices and voting. Neither the Commonwealth nor the Trustee will be responsible or liable for maintaining, supervising or reviewing the records maintained by DTC, its Participants or persons acting through such Participants. See *Book-Entry Only System*.

Redemption

Optional Redemption. The 2019 Bonds will be subject to redemption on and after June 1, 2029 at the option of the Commonwealth from any monies legally available therefor, in whole or in part at any time, by lot, at 100% of the principal amount thereof, plus accrued interest to the redemption date.

Mandatory Sinking Fund Redemption. The 2019 Bonds are also subject to mandatory sinking fund redemption in part by lot, on the dates and in the amounts set forth below, at a redemption price equal to 100% of the principal amount of such 2019 Bonds or portion thereof redeemed, plus accrued interest to the redemption date:

<u>June 1</u>	<u>Amount</u>
2044	\$5,000,000
2045	5,000,000
2046	5,000,000
2047	38,145,000
2048	40,055,000
2049 [†]	106,800,000

[†] Stated maturity.

The Commonwealth is entitled to reduce its mandatory sinking fund redemption obligation in any year with respect to the 2019 Bonds by the principal amount of any such 2019 Bonds previously purchased or optionally redeemed by the Commonwealth.

Notice of Redemption of 2019 Bonds. The Commonwealth shall provide the Trustee with written notice of its election to redeem 2019 Bonds and the Trustee shall give notice of redemption to the owners of the applicable 2019 Bonds not less than 30 days prior to the date fixed for redemption. So long as the book-entry-only system remains in effect for such 2019 Bonds, notices of redemption will be sent by the Trustee only to DTC or its nominee. Any failure

on the part of DTC, any DTC participant or any nominee of a beneficial owner of any such 2019 Bond (having received notice from a DTC participant or otherwise) to notify the beneficial owner so affected, shall not affect the validity of the redemption. A notice of redemption may state (i) that it is conditioned upon the deposit of moneys in an amount equal to the amount necessary to effect the redemption not later than the redemption date, or (ii) that the Commonwealth may rescind such notice at any time prior to the scheduled redemption date if the Commonwealth delivers a notice thereof to the Bondholders. The redemption notice shall be of no effect if such moneys are not so deposited or if the notice is rescinded, and the failure of the Commonwealth to make funds available in whole or in part on or before the redemption date shall not then constitute a default under the Trust Agreement.

On the specified redemption date, all 2019 Bonds called for redemption shall cease to bear interest, provided the Commonwealth has monies on hand to pay such redemption in full.

Selection for Redemption. In the event that less than all of any maturity of any 2019 Bond is to be redeemed, and so long as the book-entry-only system remains in effect for such 2019 Bonds, the particular 2019 Bonds or portion of any such 2019 Bonds of a particular maturity to be redeemed will be selected by DTC by lot. If the book-entry-only system no longer remains in effect for the 2019 Bonds, selection for redemption of less than all of any one maturity of the 2019 Bonds will be made by the Commonwealth by lot in such manner as in its discretion it shall deem appropriate and fair. For purposes of selection by lot within a maturity, each \$5,000 of principal amount of a 2019 Bond will be considered a separate 2019 Bond.

Application of Proceeds

The net proceeds of the sale of the 2019 Bonds will be applied by the Treasurer to fund capital expenditures of the Commonwealth under the Rail Enhancement Program and the Accelerated Bridge Program, or to the reimbursement of the Commonwealth for such expenditures.

SOURCES AND USES OF FUNDS

The estimated sources and uses of funds in connection with the issuance of the 2019 Bonds are as follows:

Sources of Funds	
Principal of the 2019 Bonds	\$200,000,000.00
Net Original Issue Premium / Discount	<u>43,670,000.00</u>
Total:	<u>\$243,670,000.00</u>
Uses of Funds	
Project Costs	\$243,000,408.75
Underwriters' Discount	<u>669,591.25</u>
Total:	<u>\$243,670,000.00</u>

DEBT SERVICE REQUIREMENTS ON THE BONDS

The following table sets forth the annual debt service payable on a fiscal year basis (in thousands).

<u>Fiscal</u> <u>Year</u>	Prior CTF Bonds <u>Total Debt Service</u>	<u>2019 Bonds</u>			Total Outstanding Bonds Debt <u>Service</u>
		<u>Principal</u>	<u>Interest</u>	<u>Debt Service</u>	
2020	\$179,083	-	\$5,278	\$5,278	\$184,361
2021	179,083	-	10,000	10,000	189,083
2022	179,084	-	10,000	10,000	189,084
2023	183,005	-	10,000	10,000	193,005
2024	183,003	-	10,000	10,000	193,003
2025	182,956	-	10,000	10,000	192,956
2026	182,909	-	10,000	10,000	192,909
2027	182,848	-	10,000	10,000	192,848
2028	182,787	-	10,000	10,000	192,787
2029	182,727	-	10,000	10,000	192,727
2030	182,659	-	10,000	10,000	192,659
2031	182,590	-	10,000	10,000	192,590
2032	182,514	-	10,000	10,000	192,514
2033	182,433	-	10,000	10,000	192,433
2034	182,348	-	10,000	10,000	192,348
2035	182,260	-	10,000	10,000	192,260
2036	182,162	-	10,000	10,000	192,162
2037	182,063	-	10,000	10,000	192,063
2038	181,949	-	10,000	10,000	191,949
2039	181,804	-	10,000	10,000	191,804
2040	181,653	-	10,000	10,000	191,653
2041	181,489	-	10,000	10,000	191,489
2042	181,490	-	10,000	10,000	191,490
2043	181,493	-	10,000	10,000	191,493
2044	181,493	\$5,000	10,000	15,000	196,493
2045	181,489	5,000	9,750	14,750	196,239
2046	181,492	5,000	9,500	14,500	195,992
2047	64,750	38,145	9,250	47,395	112,145
2048	64,745	40,055	7,343	47,398	112,143
2049	-	106,800	5,340	112,140	112,140

DEBT SERVICE COVERAGE

The table on the following page shows the projected ratios of Pledged Funds collections (fiscal year 2020 and thereafter are based on the Commonwealth's preliminary revenues in fiscal year 2019, which are unaudited and subject to change, assuming no growth in such revenues in future years) to annual debt service for the Prior CTF Bonds and the 2019 Bonds as well as to annual debt service for the anticipated issuance of approximately \$1.60 billion (which amount includes net premium) of Additional Bonds to be issued in support of the Rail Enhancement Program and remainder of the Accelerated Bridge Program through fiscal year 2024. Under the Trust Agreement, the Commonwealth is not obligated to maintain any debt service coverage ratio, although it has covenanted to maintain the rate of Registry Fees and Motor Fuel Tax such that Pledged Funds would equal at least 400% of the maximum aggregate Adjusted Bond Debt Service Requirement due in the then current or any future fiscal year on the then Outstanding Bonds. See *Commonwealth Covenants*. In order to issue Additional Bonds, however, the Commonwealth will be required to comply with certain debt service coverage tests. See *Security and Sources of Payment for the Bonds – Additional Bonds*. Based on certain assumptions that are subject to change, including the assumptions for Pledged Funds specified in the following table, debt service coverage on all Outstanding Prior CTF Bonds and the 2019 Bonds and the anticipated future issuance of Additional Bonds, assuming the aggregate issuance of approximately \$1.60 billion (which amount includes net premium) of Additional Bonds, is estimated to be no less than 5.1x and debt service coverage on the Prior CTF Bonds and 2019 Bonds is estimated to be no less than 7.1x. All projections and estimates are subject to change. Anticipated future issuance of Additional Bonds assumes the final maturity date of June 30, 2049 which is the current limitation for bonds issued under Chapter 79. The actual debt service coverage will likely vary from the amounts shown as actual circumstances in the future will likely vary from the assumptions used for this Official Statement.

Further, as noted above, 6.86¢ per gallon of the Commonwealth's 24¢ per gallon gasoline tax receipts are subject to a prior pledge of such receipts to secure and pay the outstanding 1994 Trust Agreement Bonds. Currently approximately 1.07¢ per gallon of the Commonwealth's 24¢ per gallon gasoline tax receipts are used annually to pay the outstanding 1994 Trust Agreement Bonds. The final maturity date of the outstanding 1994 Trust Agreement Bonds is June 1, 2022.

Future Issuance of Bonds and Notes. In addition to the 2019 Bonds, the Commonwealth currently expects to issue up to \$1.60 billion (which amount includes net premium) of Additional Bonds by the end of fiscal year 2024 to finance costs of the Accelerated Bridge Program and Rail Enhancement Program. Any issuance of Additional Bonds is subject to compliance with the debt service coverage tests described herein. See *Security and Sources of Payment for the Bonds – Additional Bonds*. The Commonwealth also expects to issue approximately \$64.9 million (which amount includes net premium) of GANs to be issued under the GAN Trust Agreement concurrent with the 2019 Bonds to finance costs of the Accelerated Bridge Program. The actual amount and timing of the issuance of Additional Bonds under the Trust Agreement and additional notes under the GAN Trust Agreement are subject to change. The current 5-year capital investment plan of the Commonwealth anticipates that other capital needs, including projects for rail improvements, repairs to structurally deficient bridges and other transportation infrastructure, will be funded from other sources.

The Commonwealth, to the extent authorized under other bond authorizations heretofore or hereafter enacted and subject to the Special Obligation Act, may issue Additional Bonds for other transportation purposes in addition to the Accelerated Bridge Program and the Rail Enhancement Program. Any such issuance is subject to compliance with the debt service coverage tests described herein. See *Security and Sources of Payment for the Bonds – Additional Bonds*. In order to issue additional federal grant anticipation notes under the GAN Trust Agreement, the Commonwealth will be required to comply with certain debt service coverage tests set forth therein.

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CTF BOND DEBT SERVICE COVERAGE PROJECTION⁽¹⁾⁽⁴⁾
(\$ in thousands)

SFY Ending June 30	1994 Trust Agreement Bonds Total Debt Service	Projected CTF Pledged Funds ⁽²⁾	Prior CTF Bonds Debt Service ⁽³⁾	Debt Service on 2019 Bonds	Prior CTF Bonds and 2019 Bonds Debt Service	Prior CTF Bonds & 2019 Bonds Debt Service Coverage ⁽¹⁾	Excess Pledged Funds	Total Debt Service on Future Bonds ⁽⁴⁾	Total CTF Bonds Debt Service ⁽⁴⁾	Total Debt Service Coverage ⁽¹⁾	Excess Pledged Funds
2020	\$29,822	\$1,372,385	\$179,083	\$5,278	\$184,361	7.4x	\$1,188,025	-	\$184,361	7.4x	\$1,188,025
2021	29,821	1,372,386	179,083	10,000	189,083	7.3x	1,183,303	\$10,208	199,291	6.9x	1,173,095
2022	29,821	1,372,386	179,084	10,000	189,084	7.3x	1,183,302	40,064	229,148	6.0x	1,143,237
2023	-	1,402,207	183,005	10,000	193,005	7.3x	1,209,201	81,590	274,595	5.1x	1,127,612
2024	-	1,402,207	183,003	10,000	193,003	7.3x	1,209,204	83,238	276,241	5.1x	1,125,965
2025	-	1,401,852	182,956	10,000	192,956	7.3x	1,208,895	83,216	276,173	5.1x	1,125,679
2026	-	1,401,468	182,909	10,000	192,909	7.3x	1,208,559	83,187	276,096	5.1x	1,125,372
2027	-	1,401,031	182,848	10,000	192,848	7.3x	1,208,183	83,166	276,014	5.1x	1,125,017
2028	-	1,400,570	182,787	10,000	192,787	7.3x	1,207,783	83,135	275,922	5.1x	1,124,649
2029	-	1,400,083	182,727	10,000	192,727	7.3x	1,207,356	83,096	275,823	5.1x	1,124,260
2030	-	1,399,570	182,659	10,000	192,659	7.3x	1,206,910	83,063	275,722	5.1x	1,123,847
2031	-	1,399,027	182,590	10,000	192,590	7.3x	1,206,437	83,027	275,617	5.1x	1,123,410
2032	-	1,398,444	182,514	10,000	192,514	7.3x	1,205,930	82,989	275,503	5.1x	1,122,941
2033	-	1,397,828	182,433	10,000	192,433	7.3x	1,205,395	82,948	275,381	5.1x	1,122,447
2034	-	1,397,177	182,348	10,000	192,348	7.3x	1,204,830	82,904	275,252	5.1x	1,121,926
2035	-	1,396,490	182,260	10,000	192,260	7.3x	1,204,230	82,859	275,118	5.1x	1,121,371
2036	-	1,395,763	182,162	10,000	192,162	7.3x	1,203,600	82,809	274,971	5.1x	1,120,791
2037	-	1,394,995	182,063	10,000	192,063	7.3x	1,202,932	82,761	274,824	5.1x	1,120,171
2038	-	1,394,118	181,949	10,000	191,949	7.3x	1,202,169	82,700	274,649	5.1x	1,119,469
2039	-	1,393,015	181,804	10,000	191,804	7.3x	1,201,211	82,627	274,431	5.1x	1,118,584
2040	-	1,391,850	181,653	10,000	191,653	7.3x	1,200,197	82,549	274,202	5.1x	1,117,648
2041	-	1,390,619	181,489	10,000	191,489	7.3x	1,199,130	82,471	273,961	5.1x	1,116,658
2042	-	1,390,619	181,490	10,000	191,490	7.3x	1,199,129	82,468	273,959	5.1x	1,116,660
2043	-	1,390,619	181,493	10,000	191,493	7.3x	1,199,126	82,466	273,959	5.1x	1,116,660
2044	-	1,390,619	181,493	15,000	196,493	7.1x	1,194,126	77,465	273,958	5.1x	1,116,661
2045	-	1,390,619	181,489	14,750	196,239	7.1x	1,194,380	77,722	273,961	5.1x	1,116,658
2046	-	1,390,619	181,492	14,500	195,992	7.1x	1,194,627	77,967	273,959	5.1x	1,116,660
2047	-	1,390,619	64,750	47,395	112,145	12.4x	1,278,474	161,814	273,959	5.1x	1,116,661
2048	-	1,390,619	64,745	47,398	112,143	12.4x	1,278,476	161,820	273,962	5.1x	1,116,657
2049	-	1,390,619	-	112,140	112,140	12.4x	1,278,479	161,821	273,961	5.1x	1,116,658

- (1) Estimated debt service coverage for fiscal year 2020 and thereafter is based on the Commonwealth's projected revenues for fiscal year 2019, which are preliminary, unaudited and subject to change, and assuming no growth in such receipts in future years. Debt service projections for Bonds to be issued in fiscal years 2020 through 2024 are estimates based on current program needs and are subject to change.
- (2) Consists of (i) 17.104¢ per gallon of Chapter 64A Gasoline Tax, (ii) 100% of the Special Fuels Tax and Motor Carrier Tax, (iii) Registry Fees expected to be credited to the Commonwealth Transportation Fund pursuant to Section 34(iii) of Chapter 90, (iv) Projected Excess from Prior Pledged Funds ("Projected Excess" represents Prior Pledged Funds of 6.86¢ per gallon of the Chapter 64A Gasoline Tax after payment of debt service on the outstanding 1994 Trust Agreement Bonds) and (v) Direct Payments relating to the 2010 Bonds, which are assumed to be subject to the current 5.9% reduction as a result of sequestration.
- (3) Reflects gross debt service on Prior CTF Bonds.
- (4) Assumes aggregate issuance in fiscal years 2020 through 2024 (not including the 2019 Bonds) of \$1.32 billion in aggregate bond par amount substantially all for the Rail Enhancement Program, raising \$1.6 billion in net bond proceeds (including original issue premium). The final maturity for all issues is limited to 2049 pursuant to current law. Projected Debt Service on future issuance assumes current market rates.

SECURITY AND SOURCES OF PAYMENT FOR THE BONDS

Special Obligations

The 2019 Bonds are special limited obligations of the Commonwealth and are payable solely from the sources specified in the Trust Agreement. The 2019 Bonds are not general obligations of the Commonwealth and are not secured by the full faith and credit of the Commonwealth. The 2019 Bonds are not payable out of any funds of the Commonwealth other than the Pledged Funds and moneys otherwise available for the benefit of the owners of the 2019 Bonds pursuant to the Trust Agreement.

Payments of debt service on the 2019 Bonds are to be made from Pledged Funds held by the Trustee in the Revenue Account, created by the Treasurer under the Trust Agreement as a sub-account of the Commonwealth Transportation Fund. The Commonwealth has covenanted in the Trust Agreement that, so long as any Bonds are Outstanding and unless an appropriation has been made by the Legislature which is sufficient to pay debt service on the Bonds, the Pledged Funds shall not be applied to any other use. See *Flow of Pledged Funds – Flow of Funds under the Trust Agreement*.

The Legislature has previously amended and may in the future amend the Special Obligation Act, the Commonwealth Transportation Fund Act and other statutes that govern any of the Pledged Funds. Any future amendments of the Special Obligation Act, the Commonwealth Transportation Fund Act and other statutes that govern Pledged Funds are subject to the covenant of the Commonwealth that it shall not take any action that would impair the rights and remedies of the owners of the Bonds. The Trust Agreement does not require the Commonwealth to increase the amounts of the Motor Fuels Tax or Registry Fees pledged as Pledged Funds. Under the Trust Agreement, the Commonwealth may change the rates of the Motor Fuels Tax or Registry Fees, in any respect, including lowering such rates, upon the delivery of certain certifications, including a certificate demonstrating that Pledged Funds would equal at least 400% of the maximum aggregate Adjusted Bond Debt Service Requirement due in the then current or any future fiscal year on Bonds Outstanding. See *Commonwealth Covenants*.

The Special Obligation Act provides that the lien of the Trust Agreement on the Pledged Funds will be perfected by filing the Trust Agreement in the records of the Treasurer. The Trust Agreement has been so filed. The Commonwealth has waived its sovereign immunity and consented to be sued on contractual obligations, including the 2019 Bonds and all claims with respect thereto. Although the property of the Commonwealth is generally not subject to attachment or levy to pay a judgment, and the satisfaction of any judgment generally requires legislative appropriation, in accordance with the Special Obligation Act, the Commonwealth has granted a lien on Pledged Funds for the benefit of the owners of the Bonds. Enforcement of a claim for payment of debt service may also be subject to the provisions of federal or Commonwealth statutes, if any, hereafter enacted extending the time for payment or imposing other constraints upon enforcement, insofar as the same may be constitutionally applied. The United States Bankruptcy Code is not applicable to states. Under Massachusetts law, the Bonds have all of the qualities and incidents of negotiable instruments under the Uniform Commercial Code.

Pledged Funds

Pledged Funds represent amounts credited to the Commonwealth Transportation Fund, the primary sources of which are the Motor Fuels Tax revenues and Registry Fees. These sources are described in greater detail below.

Motor Fuels Tax. The Commonwealth's Motor Fuels Tax revenues are derived from the excise imposed on fuel (other than aviation fuel) by the provisions of Chapters 64A, 64E, and 64F of the Massachusetts General Laws.

Chapter 64A currently imposes an excise tax of 24¢ per gallon on gasoline sold in the Commonwealth by distributors and unclassified exporters and importers ("Gasoline Tax"). Under state law, 99.85% of the Gasoline Tax (other than with respect to aviation fuel) (currently 23.964¢ per gallon) is credited to the Commonwealth Transportation Fund (of which, 6.86¢ per gallon is subject to the prior pledge for the benefit of the 1994 Trust Agreement Bonds, see *1994 Trust Agreement* below) and constitute Pledged Funds under the Trust Agreement. Fuel subject to the provisions of Chapter 64A consisting of cellulosic biofuel or a blend of gasoline and cellulosic biofuel is taxable in proportion to the percentage of the fuel content consisting of gasoline, as determined by the

Commonwealth's Department of Energy Resources. All Gasoline Tax imposed with respect to aviation fuel under Chapter 64A is credited to the Commonwealth Transportation Fund and may be used only for airport development projects approved and carried out at airports and landing facilities, and revenue from the tax on aviation fuel is not included in Pledged Funds.

Revenues from the Pledged Gasoline Tax collected by the Commonwealth representing the Prior Pledged Funds (6.86¢ per gallon of the 23.964¢ per gallon of Pledged Gasoline Tax) constitute a portion of the Pledged Funds under the Trust Agreement but the lien thereon is subordinate to the prior lien of the 1994 Trust Agreement. The portion of the Prior Pledged Funds in excess of the amounts necessary to pay debt service on the 1994 Trust Agreement Bonds and to satisfy any other requirements under the 1994 Trust Agreement will be available to pay debt service on the Bonds and to satisfy other requirements under the Trust Agreement. The 1994 Trust Agreement Bonds will mature by June 1, 2022 and the Commonwealth has covenanted under the Trust Agreement not to issue any additional bonds under the 1994 Trust Agreement except, in certain circumstances, refunding bonds. See *Commonwealth Covenants*. In addition, immediately upon the discharge and release of the lien of the 1994 Trust Agreement, all Prior Pledged Funds will be available to pay debt service on the Bonds.

Chapter 64E imposes a tax on all combustible gases and liquids used or sold for use in an internal combustion engine, other than those fuels which are subject to the provisions of Chapter 64A, including diesel fuel and liquefied gases, such as propane gas. Special fuels are currently taxed at a rate per gallon equal to the rate imposed by Chapter 64A, or 24¢ per gallon, except for liquefied gas, which is taxed at a rate of 19.1% of the average price per gallon. All of the Commonwealth's revenues from the Special Fuels Tax imposed under Chapter 64E are credited to the Commonwealth Transportation Fund and constitute Pledged Funds under the Trust Agreement.

Chapter 64F currently imposes a tax on anyone who regularly operates motor vehicles on the highways of the Commonwealth which are propelled by gasoline or special fuels acquired outside the Commonwealth equal to the rate imposed by Chapter 64A, or 24¢ per gallon. All of the Commonwealth's revenues from the Motor Carrier Tax imposed under Chapter 64F are credited to the Commonwealth Transportation Fund and constitute Pledged Funds under the Trust Agreement. See *Commonwealth Motor Fuels Tax*. The Gasoline Tax, the Special Fuels Tax and the Motor Carrier Tax are collectively referred to herein as the "Motor Fuels Tax" and the Pledged Gasoline Tax, Special Fuels Tax and Motor Carrier Tax are collectively referred to herein as "Pledged Motor Fuels Tax".

Registry Fees. The Registry of Motor Vehicles ("RMV"), a division of MassDOT, also imposes various fees related to the use and operation of motor vehicles and trailers. Such fees are subject to approval of the Executive Office for Administration and Finance. Pursuant to Section 34(iii) of Chapter 90 of the General Laws, a portion of such fees (the "Registry Fees") are directed to be deposited in the Commonwealth Transportation Fund and are available to be used for transportation-related purposes, including debt service on special obligation revenue bonds issued under the Special Obligation Act. See *Commonwealth Registry Fees*.

Direct Payments. Under Section 35SS of Chapter 10 of the Massachusetts General Laws ("Section 35SS"), any Direct Payments received by the Commonwealth in connection with Bonds issued as Build America Bonds or Recovery Zone Economic Development Bonds, including the 2010 Bonds, will be credited to the Commonwealth's Build America Bonds Subsidy Trust Fund. Pursuant to Section 35SS, the Treasurer, as trustee of the fund, may credit amounts deposited therein to the appropriate funds or accounts of the Commonwealth in accordance with any applicable trust agreements pursuant to which any bonds were issued and shall make expenditures from the Build America Bonds Subsidy Trust Fund, without further appropriation, to pay debt service related to such bonds. Pursuant to the Trust Agreement, the Treasurer has covenanted to credit any Direct Payments received with respect to the 2010 Bonds to the Non-Motor Fuels Tax Subaccount of the Revenue Account within the Commonwealth Transportation Fund and such Direct Payments constitute Pledged Funds under the Trust Agreement. The United States Department of Treasury has projected that Direct Payments relating to the 2010 Bonds during federal fiscal year 2020 will be reduced by 5.9% as a result of sequestration.

Additional Pledged Funds. In order to issue Additional Bonds, the Commonwealth must comply with certain conditions contained in the Trust Agreement, including certain debt service coverage tests. See *Additional Bonds*. The Commonwealth may pledge certain additional revenues as security for the Bonds ("Additional Pledged Funds") in order to comply with the conditions to issuing Additional Bonds. Under the Trust Agreement, Additional Pledged Funds may only include revenues required to be expended for transportation purposes by Article 78 of the Articles of

Amendment to the Massachusetts Constitution, as amended (previously defined as “Article 78 Revenues”) or any Federal Highway Reimbursements (as defined in the Trust Agreement). Article 78 Revenues are revenues derived from the registration, operation or use of vehicles on public highways, including Registry Fees, or from fuels used for propelling such vehicles, including the Motor Fuels Tax. See *Commonwealth Transportation System – Financing the Transportation System; Constitutional Limitations*. Currently all Article 78 Revenues (excluding 0.15% of the Gasoline Tax credited to the Inland Fisheries and Game Fund) are credited to the Commonwealth Transportation Fund. The Trust Agreement provides that, to the extent subsequently permitted by law, the Commonwealth may pledge all or any additional Article 78 Revenues or any Federal Highway Reimbursements as Additional Pledged Funds.

In the event the Commonwealth pledges Additional Pledged Funds composed of either (a) revenues from sources other than the Motor Fuels Tax or Registry Fees or (b) revenues which have not been collected for 12 consecutive months out of the prior 18 months preceding the issuance of the Additional Bonds, the Trust Agreement requires that the Commonwealth obtain assurances from each rating agency then maintaining a rating on the outstanding Bonds that such pledge will not adversely affect the ratings on the outstanding Bonds (without regard to credit enhancement). See *Additional Bonds*. The Commonwealth is under no obligation to pledge Additional Pledged Funds, and any such pledge will be made for the benefit of the owners of all outstanding Bonds.

Funds and Accounts

In order to administer the deposit of Pledged Funds related to the Bonds, the funds and accounts described below are established and held under the Trust Agreement.

The Trustee shall establish and hold the following funds:

- Debt Service Fund;
- Redemption Fund;
- Bond Related Costs Fund; and
- Rebate Fund (not subject to pledge of the Trust Agreement).

The Treasurer has established the Revenue Account maintained as part of the Commonwealth Transportation Fund, which is to be held by the Trustee. The Treasurer has also established the following subaccounts within the Revenue Account:

- Motor Fuels Tax Subaccount; and
- Non-Motor Fuels Tax Subaccount.

All Pledged Motor Fuel Tax receipts shall be deposited in the Motor Fuels Tax Subaccount. All other Pledged Funds shall be deposited in the Non-Motor Fuels Tax Subaccount.

Collectively, the above-referenced funds and accounts are sometimes hereinafter referred to as the “Funds and Accounts.” The Trust Agreement requires that moneys deposited in the Funds and Accounts be accounted for separately from all other moneys received by the Trustee and shall be held by the Trustee in trust for the owners of the Bonds. The moneys on deposit in the Funds and Accounts may be invested in Permitted Investments as provided for in the Trust Agreement. See *Appendix B - Summary of Certain Provisions of the Trust Agreement* under the headings *Definitions - Permitted Investments and Investments*. On or prior to the delivery of any Subordinated Bonds under the Trust Agreement, the Trustee shall establish the Subordinated Debt Service Fund for such Subordinated Bonds, to be held by the Trustee, and subject to the pledge of the Trust Agreement.

Under the Trust Agreement, the Commonwealth has pledged all of the moneys, securities, credit enhancement, if any, and any investment earnings with respect thereto in all Funds and Accounts, other than the Rebate Fund, to the Trustee for the benefit of the owners of the Bonds. However, because the Revenue Account is a sub-account of the Commonwealth Transportation Fund, moneys on deposit therein may not be expended without

appropriation by the Legislature. The Trust Agreement provides that amounts in the Revenue Account may only be transferred to the foregoing Funds to the extent appropriations with respect to expenditures from such Funds have been made. The Trust Agreement further provides that no amounts may be transferred from the Revenue Account to the Commonwealth free and clear of the lien of the Trust Agreement, to be applied to any lawful purpose, unless a sufficient appropriation for debt service for the then current Fiscal Year has been made and the required monthly deposits to the Funds and Accounts have been made or are otherwise provided for. See *Flow of Pledged Funds and Appendix B – Summary of Certain Provisions of the Trust Agreement – Flow of Funds*. Since the first issuance of special obligation bonds in 1992, the Legislature has never failed to make the required appropriations.

Flow of Pledged Funds

The Pledged Funds must be accounted for and deposited in accordance with the terms of the Commonwealth Transportation Fund Act and the Trust Agreement. Set forth below is a description of the flow of the Pledged Funds under the Commonwealth Transportation Fund Act and the Trust Agreement. For a complete description of the flow of Pledged Funds, see *Appendix B – Summary of Certain Provisions of the Trust Agreement*.

Commonwealth Transportation Fund. The Trust Agreement provides that the Commissioner of Revenue and an Authorized Officer of MassDOT shall deliver to the Trustee within eight business days after the end of each month a certificate stating the amount of Pledged Funds collected by the Commonwealth during such month and, so long as any 1994 Trust Agreement Bonds remain outstanding, indicating the amount of Motor Fuels Tax receipts collected by the Commonwealth representing the Prior Pledged Funds with respect to the 1994 Trust Agreement Bonds. The Trust Agreement further provides that all Pledged Funds received by the Commonwealth during such month (other than the portion thereof representing the Prior Pledged Funds and required to be deposited with the 1994 Trustee pursuant to the 1994 Trust Agreement) shall be paid by the Treasurer to the Trustee within two business days of delivery of such certificate from amounts credited to the Commonwealth Transportation Fund and deposited by the Trustee in the applicable subaccounts of the Revenue Account. Any excess Prior Pledged Funds received from the 1994 Trustee pursuant to the 1994 Trust Agreement shall be deposited in the Motor Fuels Tax Subaccount of the Revenue Account immediately upon receipt thereof by the Trustee. Pledged Funds representing Motor Fuels Tax shall be credited to the Motor Fuels Tax Subaccount of the Revenue Account within the Commonwealth Transportation Fund. All Registry Fees pledged under the Trust Agreement (see *Commonwealth Registry Fees*) shall be credited to the Non-Motor Fuels Tax Subaccount of the Revenue Account within the Commonwealth Transportation Fund. Upon receipt by the Treasurer, all Direct Payments received from the United States Treasury with respect to any Bonds issued as Build America Bonds or Recovery Zone Economic Development Bonds pursuant to the Trust Agreement shall be credited to the Non-Motor Fuels Tax Subaccount of the Revenue Account within the Commonwealth Transportation Fund. See *Direct Payments*.

Appropriated Amount. At the beginning of each fiscal year, after the adoption of the operating budget for the Commonwealth for such fiscal year, the Secretary of Administration and Finance and the Treasurer shall certify to the Trustee the amount appropriated for such fiscal year for payment of the following amounts:

- (i) the Bond Debt Service Requirement for such Fiscal Year;
- (ii) the Bond Related Costs, if any, for such Fiscal Year;
- (iii) the Rebate Fund Requirement, if any, for such Fiscal Year; and
- (iv) if the Secretary of Administration and Finance and the Treasurer have received a certificate from the GAN Trustee under the GAN Trust Agreement that amounts on deposit in any debt service fund under the GAN Trust Agreement are insufficient to pay debt service on any GANs issued thereunder, the amount set forth in such certificate. So long as the Holding Account (as defined in the GAN Trust Agreement) held by the GAN Trustee under the GAN Trust Agreement is deemed to be part of the Commonwealth Transportation Fund, as set forth in the GAN Trust Agreement, then no appropriation shall be required to transfer any requested amount from the Revenue Account established under the Trust Agreement to said account held by the GAN Trustee.

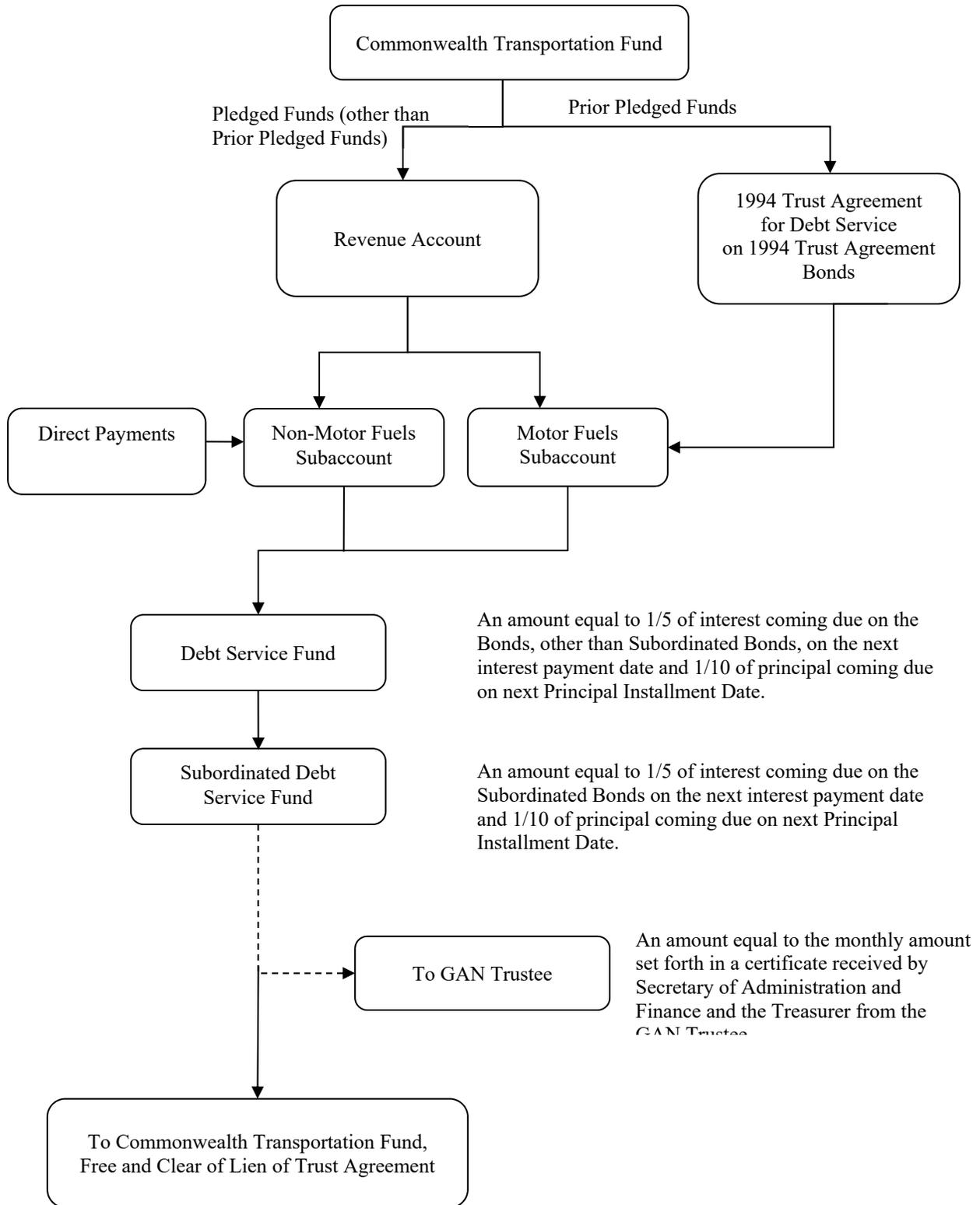
The aggregate amounts appropriated for each such purpose are referred to as an “Appropriated Amount” for such purpose.

Under the Trust Agreement, (a) if the Appropriated Amount is not sufficient to fund debt service on the Bonds in any fiscal year and to make the payments described in clause (iv) above, then all Pledged Funds remaining on deposit in the Revenue Account after the transfers to the Funds and Accounts required by the Trust Agreement must remain on deposit therein until a sufficient appropriation is made, and (b) if the Appropriated Amounts are not sufficient to fund the required deposits to the Bond Related Costs Fund and the Rebate Fund, the amount of Pledged Funds necessary to fund such deposits must remain on deposit in the Revenue Account until sufficient appropriations are made. See *Appendix B – Summary of Certain Provisions of the Trust Agreement – Revenue Account and – Flow of Funds*.

If there is an Appropriated Amount sufficient to pay debt service due on the Bonds in a fiscal year and to make the payments described in clause (iv) above, the balance remaining in the Revenue Account after the deposit of the amounts required by the Trust Agreement (less any amounts which must be held on deposit therein pending appropriation to fund deposits to the Bond Related Costs Fund and the Rebate Fund) may be used to make payments owed by the Commonwealth under a Qualified Hedge Agreement. The balance remaining after any such payments will be transferred by the Trustee to the Treasurer no later than the next business day of each month and may be applied for any purpose permitted by law, including direct expenditures for purposes otherwise permitted for revenues credited to the Commonwealth Transportation Fund. For a discussion of permitted Commonwealth Transportation Fund expenditures, see *Commonwealth Transportation System – Financing the Transportation System*.

Flow of Funds under the Trust Agreement. The following diagram is a summary of the flow of funds under the Trust Agreement. For a complete flow of funds see *Appendix B - Summary of Certain Provisions of the Trust Agreement – Flow of Funds*. The aggregate amount deposited in each fund during a fiscal year shall in no event exceed the Appropriated Amount for such purpose.

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Upon deposit of the amounts described above and so long as there shall be Appropriated Amounts sufficient to pay the amounts required to be deposited in the Debt Service Fund or the Subordinated Debt Service Fund or transferred to the GAN Trustee for the remainder of the then current Fiscal Year (if such appropriations shall be required by the Act or other provisions of law), the balance on deposit in the Revenue Account (less any amounts required to be deposited in the Bond Related Costs Funds or the Rebate Funds for which there are not sufficient Appropriated Amounts) shall be transferred by the Trustee no later than the next business day to the Treasurer free and clear of the lien hereof and may be applied to any purpose permitted by law.

The Trustee is authorized under the Trust Agreement to accept at any time from the Treasurer, in addition to Pledged Funds, any other moneys certified by the Treasurer to be lawfully available for carrying out or satisfying any purpose under the Trust Agreement. The Trustee shall deposit such moneys in such Fund or Account, as the Treasurer may direct, and, provided no Event of Default shall then be occurring under the Trust Agreement and the amounts then held in the Debt Service Fund, the Rebate Fund and the Bond Related Costs Fund are at least equal to the applicable amounts then specified in the Trust Agreement, the Trustee shall transfer such amount as the Treasurer may direct, but not in excess of the amount received from the Treasurer, to the Treasurer, for application as permitted by law, free and clear of the lien of the Trust Agreement.

For a more complete discussion of the flow of Pledged Funds, including the required deposits from the Commonwealth Transportation Fund to the Funds and Accounts, see *Appendix B - Summary of Certain Provisions of the Trust Agreement*.

Additional Bonds

Additional Bonds may be issued upon receipt by the Trustee of certain documents and certifications. See *Appendix B - Summary of Certain Provisions of the Trust Agreement – Additional Bonds*. If the Commonwealth is not pledging any Additional Pledged Funds, then it must demonstrate that the amount of Pledged Funds for any 12 consecutive months during the 18-month period ending with the last full month immediately preceding the issuance of Additional Bonds was not less than 400% of the maximum aggregate Adjusted Bond Debt Service Requirement (as defined in the Trust Agreement, see *Appendix B - Summary of Certain Provisions of the Trust Agreement - Definitions*) due in the then current or any future fiscal year on outstanding Bonds, including the Additional Bonds. If the Commonwealth is pledging Additional Pledged Funds, and the Additional Pledged Funds have been collected by the Commonwealth for at least 12 consecutive months of the 18-month period described in the preceding sentence, the Commonwealth must demonstrate that the amount of Pledged Funds and Additional Pledged Funds, for any 12 consecutive months during such 18-month period was not less than 400% of the maximum aggregate Adjusted Bond Debt Service Requirement during the then current fiscal year or any future fiscal year on all Bonds outstanding, including the Additional Bonds, and must obtain assurances from each rating agency then maintaining a rating on the outstanding Bonds that such pledge will not adversely affect the ratings on the outstanding Bonds (without regard to credit enhancement); and if the Additional Pledged Funds have not been collected by the Commonwealth during at least 12 consecutive months during such 18-month period, the Commonwealth must demonstrate that the amount of Pledged Funds and Additional Pledged Funds projected to be received by the Commonwealth during the first full fiscal year immediately following the issuance of the Additional Bonds will not be less than 400% of the maximum aggregate Adjusted Bond Debt Service Requirement due in the then current or any future fiscal year on Bonds outstanding, including the Additional Bonds, and must obtain assurances from each rating agency then maintaining a rating on the outstanding Bonds that such pledge will not adversely affect the ratings on the outstanding Bonds (without regard to credit enhancement).

Refunding Bonds may be issued at any time to refund in whole or in part any outstanding Bonds, provided that the Treasurer, certifies that either: (a) the Adjusted Bond Debt Service Requirement on any Bonds to be outstanding immediately after the issuance of the Refunding Bonds is not, for each fiscal year during which Bonds are scheduled to be outstanding, greater than the Adjusted Bond Debt Service Requirement by fiscal year on all Bonds outstanding immediately prior to the issuance of the Refunding Bonds, or (b) the net present value of the Adjusted Bond Debt Service Requirement as computed immediately after the issuance of the Refunding Bonds is less than the net present value of the Adjusted Bond Debt Service Requirement immediately prior to the issuance of the Refunding Bonds. If the Commonwealth cannot satisfy either requirement of the preceding sentence, the Commonwealth may nevertheless issue Additional Bonds for refunding purposes by complying with the tests relating to the issuance of Additional Bonds. Additional Bonds may be issued as Fixed Rate Bonds, Variable Rate Bonds or Tender Bonds.

For a more complete description of the requirements under the Trust Agreement for the issuance of Additional Bonds, see *Appendix B – Summary of Certain Provisions of the Trust Agreement – Additional Bonds*.

Subordinated and Other Indebtedness

The Commonwealth may issue bonds, notes or other evidences of indebtedness (other than Additional Bonds) which are payable out of, or secured by a pledge of Pledged Funds, provided that such bonds, notes or evidences of indebtedness are expressly subordinate to the obligations of the Commonwealth under the Trust Agreement, including the Bonds. In addition, the Commonwealth may issue bonds, notes or other evidences of indebtedness (other than Additional Bonds) which are payable out of, or secured by a pledge of an additional portion of the Motor Fuels Tax or other funds meeting the definition of “Additional Pledged Funds” under the Trust Agreement, to the extent such portions of the Motor Fuels Tax, Registry Fees or other funds meeting the definition of “Additional Pledged Funds” do not constitute Pledged Funds. See *Appendix B - Summary of Certain Provisions of the Trust Agreement - Creation of Liens; Other Indebtedness*.

Commonwealth Covenants

Under the Trust Agreement, the Commonwealth has covenanted that it shall not limit or alter the rights vested in the Commonwealth to collect Pledged Funds and to deposit such amounts as provided in the Trust Agreement and that it shall not impair the rights and remedies of the Trustee and the owners of the Bonds under the Trust Agreement with respect to Pledged Funds. The Commonwealth has also covenanted that in any fiscal year and until an appropriation has been made which is sufficient for payment of debt service on the Bonds for such fiscal year and the amount of costs, if any, due in such fiscal year for any credit enhancement or liquidity facility, no Pledged Funds shall be applied to any other use.

The Trust Agreement does permit the Commonwealth to change the rate of the Registry Fees or the Motor Fuels Tax credited to the Commonwealth Transportation Fund, or both, in any respect, including lowering any rates or eliminating any fees or taxes, provided that prior to the effective date of any such change, the Treasurer shall deliver a certificate to the Trustee demonstrating the amount of Pledged Funds received by the Treasurer during any 12 consecutive months of the 18-month period ending with the last full month immediately preceding the effective date of any such change, as adjusted, as set forth in such certificate, to reflect the proposed change in rates to be at least equal to 400% of the maximum aggregate Adjusted Bond Debt Service Requirement due in the then current or any future fiscal year on the then Outstanding Bonds (other than Subordinated Bonds, if any).

The Commonwealth has also covenanted in the Trust Agreement not to issue any additional bonds under the 1994 Trust Agreement, except refunding bonds with debt service requirements less than or equal to the debt service requirements on the refunded bonds in each fiscal year.

The Special Obligation Act provides that, so long as any special obligation bonds remain outstanding and so long as the principal or interest on any such bond is unpaid: (i) the Commonwealth shall not divert any Pledged Funds from the Commonwealth Transportation Fund; and (ii) no Pledged Funds may be applied to any other use until, in any fiscal year of the Commonwealth, an appropriation has been made which is sufficient to pay the principal, including sinking fund payments, of and interest on all the special obligation bonds and to provide for or maintain any reserves, additional security, insurance or other forms of credit enhancement required or provided for in the Trust Agreement, including any Supplemental Trust Agreement, securing the Bonds. See *Appendix A – Summary of Certain Provisions of the Commonwealth Transportation Fund Act and the Special Obligation Act*.

The Commonwealth may amend the Special Obligation Act, and the Trust Agreement provides that any provision of the Special Obligation Act creating a covenant with the owners of Bonds shall be deemed a covenant under the Trust Agreement only to the extent expressly provided for in, and as limited by, the Trust Agreement. Therefore, if otherwise permitted by law, the Commonwealth may utilize amounts credited to the Commonwealth Transportation Fund, other than Pledged Funds, without regard to the terms of the Bonds or the Trust Agreement. Expenditures from the Commonwealth Transportation Fund may, upon appropriation by the Legislature, be made for transportation related expenses of MassDOT, including paying or reimbursing the General Fund for payment of debt service on bonds issued by or otherwise payable pursuant to a lease or other contract assistance agreement by the Commonwealth for transportation purposes. See *Appendix B - Summary of Certain Provisions of the Trust Agreement*.

The covenants set forth in the Trust Agreement are more limited than the covenants contained in the Special Obligation Act. See *Appendix B - Summary of Certain Provisions of the Trust Agreement – Powers as to Bonds and Pledge, – Extension of Payment of Bonds and – Covenants as to Pledged Funds and Commonwealth Transportation Fund*.

Remedies of Owners of Bonds

The Trust Agreement sets forth the Events of Default relating to the Bonds, which include failure to pay debt service when due or failure to perform the covenants, agreements and conditions contained in the Trust Agreement, the limitation or alteration of the rights of the Commonwealth to collect and deposit Pledged Funds and the impairment of the rights and remedies of the owners of the Bonds.

Under the Trust Agreement, the Commonwealth has covenanted that, upon the occurrence of any Event of Default (which Event of Default has not been remedied), and upon demand by the Trustee, it shall pay over to the Trustee, to the extent permitted by law, any Pledged Funds not otherwise held by the Trustee in a Fund or Account. The Trust Agreement provides that upon the occurrence of an Event of Default, the Trustee may proceed either at law or in equity to protect and enforce the rights of the owners of the Bonds under the terms of the Trust Agreement or the laws of the Commonwealth. The Trust Agreement also provides that the owners of a majority in aggregate principal amount of the Bonds then outstanding may direct the time, method and place of any proceeding for any remedy available to the Trustee, unless the Trustee determines that such direction would subject it to personal liability or be unjustly prejudicial to the owners not parties to such direction.

The Trust Agreement provides that neither the Trustee nor the owners of the Bonds shall have any right to accelerate the principal of or interest on the Bonds.

If an Event of Default has occurred, no owner of a Bond shall have any right to institute any suit, action or proceeding in equity or at law to exercise any remedy or otherwise take action to enforce the terms of the Trust Agreement unless the owners of at least 25% in aggregate principal amount of the Bonds then outstanding have requested the Trustee to act, and have afforded the Trustee adequate security or indemnity against the Trustee's costs, expenses and liabilities and the Trustee shall not have complied with such request within a reasonable time.

For a more complete description of the remedies available to the owners of the Bonds, see *Appendix B - Summary of Certain Provisions of the Trust Agreement - Events of Default*.

The remedies available to the Bondowners upon the occurrence of an Event of Default are limited and are in many respects dependent upon judicial actions which are often subject to discretion and delay.

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COMMONWEALTH TRANSPORTATION FUND

The following sets forth certain information regarding the Commonwealth Transportation Fund. This summary does not purport to be complete and, accordingly, is qualified by reference to Section 2ZZZ of Chapter 29. The Legislature has altered and may in the future alter Section 2ZZZ of Chapter 29 and the statutes relating to the Pledged Funds. See *Commonwealth Motor Fuels Tax – Legislation*.

In 2009, the Commonwealth enacted comprehensive transportation reform legislation as Chapter 25 of the Acts of 2009, as amended (the “Transportation Reform Act”) to reorganize its transportation agencies and authorities and to revise certain transportation financing statutes. The Transportation Reform Act created the Commonwealth Transportation Fund pursuant to Section 2ZZZ of Chapter 29 of the General Laws (the “Commonwealth Transportation Fund Act”). Pursuant to the Commonwealth Transportation Fund Act, receipts from the Commonwealth’s Motor Fuels Tax imposed under Chapters 64A, 64E and 64F of the General Laws (excluding 0.15% of the Gasoline Tax credited to the Inland Fisheries and Game Fund) are credited to the Commonwealth Transportation Fund. Prior to the enactment of the Transportation Reform Act, a portion of the receipts from the Commonwealth’s Gasoline Tax imposed under Chapter 64A equal to 10¢ per gallon had been credited to the Infrastructure Fund, a sub-fund of the Highway Fund, a portion of which constituted the Prior Pledged Funds. The Transportation Reform Act moved those Gasoline Tax receipts, including the portion that constitutes the Prior Pledged Funds, to the Commonwealth Transportation Fund from the Highway Fund, but did not affect the security for the 1994 Trust Agreement Bonds. The Highway Fund was not repealed by the Transportation Reform Act, but is no longer an active fund of the Commonwealth. See *Commonwealth Motor Fuels Tax*.

In addition, the Transportation Reform Act provided that a portion of Registry Fees imposed under Chapter 90 of the General Laws and other applicable law shall be deposited in the Commonwealth Transportation Fund as provided in Section 34(iii) of Chapter 90. See *Commonwealth Registry Fees*.

The Transportation Reform Act also directed that a portion of the Commonwealth’s receipts from retail sales and use taxes equal to 0.385% thereof (not including any portion of the taxes that constitute special receipts dedicated to the Convention and Exhibition Center Fund) be credited to the Commonwealth Transportation Fund. These amounts have never constituted Pledged Funds under the Trust Agreement and are no longer deposited to the Commonwealth Transportation Fund, as discussed below.

The Transportation Reform Act amended the Special Obligation Act to provide that the Commonwealth could pledge or assign all or any part of monies credited to the Commonwealth Transportation Fund to the payment of special obligation bonds. The effect of these statutory changes was to increase the sources and total amount of revenue available to be pledged to the Commonwealth’s special obligation bonds. The amendment to the Special Obligation Act enacted as part of the Transportation Reform Act expressly provided that a legislative authorization of special obligation bonds in effect as of July 1, 2009, such as the Accelerated Bridge Program Act, constitutes valid authorization to borrow under the provisions of the Special Obligation Act, as amended.

The Transportation Reform Act created a new entity, the Massachusetts Department of Transportation to own, manage and coordinate the Commonwealth’s transportation systems, including the Divisions of Highways (formerly the MHD and Massachusetts Turnpike Authority), Rail and Transit (bus, subway and commuter rail services), the Registry of Motor Vehicles and Aeronautics.

On July 24, 2013, the Legislature enacted Chapter 46 of the Acts of 2013 (the “Transportation Finance Act”) to provide additional resources for transportation. The Transportation Finance Act increased the Motor Fuels Tax rate by 3¢ per gallon to 24¢ per gallon, effective July 31, 2013, and provided for adjusting the rate annually to reflect increases in the Consumer Price Index (as defined in the Code), effective January 1, 2015. On November 4, 2014, the voters approved an initiative petition that repeals the indexing provision. Accordingly, absent future legislative action, the indexing provision is not in effect.

Effective July 1, 2013, the Transportation Finance Act eliminated the 0.385% allocation of sales and use taxes to the Commonwealth Transportation Fund and provided instead that all sales and uses taxes relating to sales of motor vehicles (net of amounts dedicated to the MBTA and the Massachusetts School Building Authority) would be credited to the Commonwealth Transportation Fund. In addition, the Transportation Finance Act dedicated the revenue

from the existing underground storage delivery fee imposed by Chapter 21J of the Massachusetts General Laws to the Commonwealth Transportation Fund, effective July 1, 2014, and provided that the fee is to be indexed for inflation beginning January 1, 2015. The Transportation Finance Act also mandates specified annual transfers from the General Fund to the Commonwealth Transportation Fund through fiscal year 2020. None of these amounts constitute Pledged Funds under the Trust Agreement.

The Commonwealth Transportation Fund is subject to appropriation and, pursuant to the Commonwealth Transportation Fund Act, shall be used for transportation-related expenses of MassDOT, as successor to the Executive Office of Transportation, including to pay or reimburse the General Fund for debt service on bonds issued by or otherwise payable pursuant to a lease or contract assistance agreement by the Commonwealth for transportation purposes. Appropriations from the Commonwealth Transportation Fund are used to support the operations of MassDOT's Highway, RMV, Aeronautics and Rail and Transit Divisions, including essential operational programs for incident responses, high occupancy vehicle lanes, accident recovery, and snow and ice removal and other transportation-related purposes of the Commonwealth. All uses of Pledged Funds for such purposes are subordinate to the payment of debt service on the Bonds and satisfying other obligations set forth in the Trust Agreement, including, if necessary, payments to the GAN Trustee, as described previously in *Security and Sources of Payment for the Bonds – Flow of Pledged Funds*.

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The Commonwealth Transportation Fund became effective July 1, 2009. Therefore, fiscal year 2010 is the first year for which financial results for the Commonwealth Transportation Fund are available. However, the Commonwealth collected receipts from the Pledged Motor Fuels Tax and Registry Fees for many years prior to fiscal year 2010, and the following table sets forth the amounts of Pledged Motor Fuels Tax receipts and Registry Fee receipts collected in fiscal years 1997 through 2019. The table below does not include Direct Payments related to the 2010 Bonds, which are included in Pledged Funds and are expected to equal \$12.3 million in fiscal year 2019 after the expected 6.2% reduction in subsidy payments during federal fiscal year 2019 by the Department of Treasury as a result of sequestration. Projected revenues for fiscal year 2019 are preliminary, unaudited and subject to change.

**Historical Pro Forma Commonwealth Transportation Fund Pledged Funds
(in thousands)**

Fiscal Year Ending June 30	Pledged Motor Fuels Tax ⁽¹⁾			Total
	Chapter 64A Receipts ⁽²⁾	Chapter 64E and 64F Receipts	Registry Fees ⁽³⁾	
2019 ⁽⁴⁾	\$672,866	\$100,923	\$616,830	\$1,390,619
2018	667,866	99,654	612,780	1,380,300
2017	670,093	97,762	598,683	1,366,538
2016	666,539	98,309	580,426	1,345,274
2015	656,445	97,947	581,686	1,336,078
2014	640,702	89,938	533,194	1,263,834
2013	570,477	79,302	522,199	1,171,978
2012	581,148	79,028	508,608 ⁽⁵⁾	1,168,784
2011	580,031	79,152	496,034 ⁽⁵⁾	1,155,217
2010	576,676	76,369	485,789	1,138,834
2009	578,691	73,462	403,780	1,055,933
2008	595,380	75,560	396,904	1,067,844
2007	594,892	79,545	388,496	1,062,933
2006	589,591	80,785	375,670	1,046,046
2005	599,736	84,382	413,481	1,097,599
2004	600,255	82,659	386,284	1,069,198
2003	593,691	81,255	397,683	1,072,629
2002	585,519	79,904	338,440	1,003,863
2001	576,974	81,547	322,808	981,328
2000	572,209	79,041	300,040	951,290
1999	561,714	73,549	297,658	932,921
1998	546,213	73,822	312,180	932,215
1997	535,040	66,528	313,215	914,783

SOURCES: Fiscal years 1997-2018, Office of the Comptroller of the Commonwealth, audited, and fiscal year 2019, Department of Revenue ("Pledged Motor Fuels Tax") and MassDOT ("Registry Fees"), unaudited.

- (1) Includes all Pledged Motor Fuels Tax collected by the Commonwealth pursuant to Chapters 64A, 64E and 64F of the Massachusetts General Laws and credited to various budgeted funds, *except* Aviation Fuel (defined below). Does not exclude Prior Pledged Funds used to pay 1994 Trust Agreement Bonds.
- (2) Equal to 20.9685¢ per gallon of the 21¢ per gallon Gasoline Tax imposed under Chapter 64A prior to July 31, 2013, and equal to 23.964¢ per gallon of the 24¢ per gallon Gasoline Tax imposed under Chapter 64A after July 31, 2013; prior to the Transportation Reform Act and the establishment of the Commonwealth Transportation Fund effective fiscal year 2010, the Gasoline Tax imposed under Chapter 64A was credited to the Highway Fund (84.85%), the General Fund (15.0%) and to the Inland Fisheries and Game Fund (0.15%).
- (3) Certain prior years have been adjusted to reflect reclassification of RMV revenues. Does not include amounts allocable to the cost of production of license plates, which in fiscal year 2017 was approximately \$3.8 million.
- (4) Fiscal year 2019 revenues are preliminary and subject to change.
- (5) Fiscal years 2011 and 2012 do not include \$1 million and \$2 million, respectively, of the Registry Fees which represented civil motor infraction fees collected in such fiscal years and transferred to the Commonwealth Transportation Fund in fiscal year 2013. See *Commonwealth Registry Fees - Crediting of Receipts*.

COMMONWEALTH MOTOR FUELS TAX

The following is a summary of the Commonwealth's Motor Fuels Tax. This summary does not purport to be complete and, accordingly, is qualified by reference to Chapters 64A, 64E and 64F. The Legislature has altered and may in the future alter Chapters 64A, 64E and 64F. See *Legislation* below.

General

The Commonwealth has imposed a tax on fuel since 1928. Fuel, as defined in Chapter 64A, includes all products commonly or commercially known as gasoline and any liquid prepared, advertised or offered for sale in the Commonwealth and commonly and commercially used as fuel in internal combustion engines. Chapter 64A also imposes a tax on fuel sold for use in non-jet propelled aircraft ("Aviation Fuel"). Tax revenues derived from the sale of Aviation Fuel under Chapter 64A are not included within the definition of Motor Fuels Tax or Pledged Funds. Special fuels, including diesel fuel and liquefied gas, such as propane, are taxed under Chapter 64E ("Special Fuel"). Other fuel taxes also include the Motor Carrier Tax imposed under Chapter 64F on anyone who regularly operates motor vehicles on the highways of the Commonwealth which are propelled by gasoline or special fuels acquired outside the Commonwealth ("Motor Carrier Fuels"). See *Commonwealth Transportation System – Financing the Transportation System*.

Motor Fuels Tax Rates

Under Chapters 64A, 64E (except with respect to liquefied gas) and 64F, the tax rate is 24¢ per gallon. Under Chapter 64E with respect to liquefied gas, the tax rate is 19.1% of the average price per gallon.

Comparison of Gasoline Tax Rates for Selected Northeastern States

The table below lists gasoline tax rates, in cents per gallon, as of October 1, 2019 for selected northeastern states.

	<u>Excise tax</u>	<u>Other taxes and fees</u>	<u>Total</u>
New York	8.05¢	37.36¢	45.41¢
Connecticut	25.00	14.31	39.31
Rhode Island	34.00	1.00	35.00
Vermont	12.10	18.84	30.94
Maine	30.00	0.01	30.01
Massachusetts	24.00	2.54	26.54
New Hampshire	22.20	1.63	23.83

SOURCE: American Petroleum Institute. Totals may not add due to rounding.

Collection Procedure

Anyone qualified to do business in the Commonwealth who produces, refines, manufactures or compounds gasoline or operates a port or pipeline terminal, as well as importers and exporters of gasoline (collectively referred to as "Distributors"), must file Gasoline Tax returns with the Commissioner of Revenue by the twentieth day of each month. Distributors must keep complete and accurate records of all sales of gasoline including the name and address of the purchaser, the place and date of delivery, the gross receipts and number of gallons for each type of gasoline sold, and a complete and accurate record of the number of gallons imported, produced, refined, manufactured, compounded or exported. Purchasers of gasoline pay the Gasoline Tax to a Distributor when they purchase gasoline. Each Distributor is required to pay to the Commissioner of Revenue, simultaneously with the filing of a Gasoline Tax return, the Gasoline Tax on each taxable gallon of gasoline sold by it during the month covered by the return. In fiscal year 2018, there were approximately 94 Distributors and 410 special fuels suppliers who filed tax returns with the Commissioner of Revenue. In fiscal year 2019, approximately 58% of the total annual Gasoline Tax collections came from ten largest payers of the Gasoline Tax, and approximately 41% of the total annual Special Fuels Tax collections

came from ten largest payers of the Special Fuels Tax. In fiscal year 2020, the top ten Gasoline Tax payers are expected to pay approximately 58% to 62% of the total annual Gasoline Tax collections, and the top ten Special Fuels Tax payers are expected to pay approximately 40% to 42% of the total annual Special Fuels Tax collections.

All combustible gas and liquids, other than gasoline, which propel registered motor vehicles, are special fuels. Only licensed suppliers and user-sellers maintain storage facilities of special fuels. Suppliers acquire special fuels on a tax-free basis and collect the tax from user-sellers and users. User-sellers are required to pay the excise on all special fuels acquisitions. Suppliers of special fuels must file Special Fuels Tax returns by the twentieth day of each month.

A motor carrier is any person who uses or operates a qualified motor vehicle for commercial or business purposes on Massachusetts highways and the highways of at least one other International Fuels Tax Agreement (“IFTA”) jurisdiction. IFTA motor carriers must register and file returns with their base-jurisdiction for activity in all IFTA jurisdictions. All such qualified vehicles using Massachusetts highways must have (1) an IFTA license and (2) two IFTA decals. IFTA motor carrier tax licenses are required to file a quarterly return by the last day of the month following the close of the quarter.

Crediting of Receipts

Gasoline Tax receipts under Chapter 64A (not including Aviation Fuel), net of refunds and abatements, are credited to two budgeted funds of the Commonwealth. Fifteen hundredths of one percent (0.15%) of such Gasoline Tax revenues is credited to the Inland Fisheries and Game Fund. The remaining ninety-nine and eighty-five hundredths of one percent (99.85%) (currently 23.964¢ per gallon) of Gasoline Tax receipts is credited to the Commonwealth Transportation Fund to be used for transportation purposes. All Special Fuel Tax receipts under Chapter 64E and all Motor Carrier Tax under Chapter 64F are credited to the Commonwealth Transportation Fund to be used for transportation purposes. Fuel subject to the provisions of Chapter 64A consisting of cellulosic biofuel or a blend of gasoline and cellulosic biofuel is taxable in proportion to the percentage of the fuel content consisting of gasoline, as determined by the Commonwealth’s Department of Energy Resources, and the taxable portion thereof is credited in the same manner as other Motor Fuels Tax revenues.

Refunds and Abatements from Gasoline Tax

Other than (1) sales between licensed Massachusetts Distributors, (2) sales by a licensed Massachusetts Distributor to a licensed distributor of another state whereby the entire quantity purchased is exported out of the Commonwealth, (3) sales to the federal government, (4) sales to foreign embassies, (5) sales to certain transportation authorities, and (6) sales constituting foreign or interstate commerce, except where permitted by the Constitution and laws of the United States, all of which are tax-free sales, all purchases of gasoline within the Commonwealth are subject to the Gasoline Tax. In accordance with Chapter 64A, persons who pay the Gasoline Tax on gasoline which is (a) consumed other than on highways, (b) transferred into another state in which an additional excise tax is paid, (c) consumed on any turnpike constructed by the MassDOT until such turnpike has become part of the state highway system, (d) used in watercraft, and (e) used in qualified buses on authorized routes, may apply for a refund for the amount of Gasoline Tax paid on such gasoline. A person applying for a refund must supply the original invoices for the purchase of such gasoline and attest, by affidavit filed with the Commissioner of Revenue, that the gasoline was consumed for an exempt purpose. Persons engaged in the business of farming may also apply for a refund of the amount of Gasoline Tax paid on gasoline for which they would be entitled to a refund of the federal gasoline tax paid pursuant to Section 6420 of the Code. The Department of Revenue estimates that, on average, less than 0.5% of annual Gasoline Tax receipts are refunded or abated.

Legislation

The Legislature has previously altered and may in the future alter (1) the imposition of the Motor Fuels Tax on various fuels, including its imposition on different or alternative fuels; (2) Motor Fuels Tax rates; (3) the allocation of Motor Fuels Tax receipts between the various Commonwealth operating funds, including the Commonwealth Transportation Fund; and (4) the distribution of Motor Fuels Tax receipts to cities, towns and counties. The authority of the Legislature to make such changes in Motor Fuels Tax, Motor Fuels Tax rates and the allocation and use of Motor Fuels Tax receipts is subject to the requirement of the Massachusetts Constitution that amounts representing

Article 78 Revenues, including Motor Fuels Tax receipts, may only be used for highway or mass transportation purposes including, but not limited to, paying debt service on Commonwealth general obligation highway bonds and any special obligation bonds issued under the Special Obligation Act.

The Legislature's right to make such changes is restricted by the Trust Agreement in which the Commonwealth has covenanted with the owners of the Bonds not to impair, in any way, the rights and remedies of said owners under the Trust Agreement; the Trust Agreement does permit the Commonwealth to lower the rates of the Motor Fuels Tax or any Registry Fees or both, provided that the Treasurer delivers to the Trustee a certificate demonstrating the amount of Pledged Funds received by the Treasurer during any 12 consecutive months of the 18-month period ending with the last full month immediately preceding the effective date of any such change, as adjusted, as set forth in such certificate, to reflect the proposed change in rates, to be at least equal to 400% of the maximum Adjusted Bond Debt Service Requirement due in any fiscal year of the then Outstanding Bonds (other than Subordinated Bonds, if any).

Historical Information Regarding Gasoline Sales and Motor Fuels Tax

The level of Motor Fuels Tax receipts are directly related to the consumption of gasoline and other fuels in the Commonwealth. Future consumption of gasoline may be affected by many factors beyond the control of the Commonwealth including, but not limited to, the level of employment, the price of gasoline, the fuel efficiency of motor vehicles, the use of hybrid motor vehicles, and the availability of alternative fuels. The Commonwealth cannot predict the future impact of these factors or any others that may influence the consumption of gasoline.

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The following tables set forth certain information regarding historical gasoline sales and collections of the Gasoline Tax for the most recent ten fiscal years.

HISTORICAL GASOLINE SALES

<u>Fiscal Year</u>	<u>Average Price of Gasoline⁽¹⁾</u>	<u>Gasoline Consumed (millions of gallons)⁽²⁾</u>	<u>Percentage Change in Gasoline Consumed</u>	<u>Non-Farm Employment (in thousands)⁽³⁾</u>	<u>Percentage Change in Non-Farm Employment</u>
2019 ⁽⁴⁾	\$2.750	2,808	0.75%	3,658	0.72%
2018	2.708	2,787	(0.33)	3,632	1.13
2017	2.347	2,796	0.53	3,592	1.68
2016	2.282	2,781	1.54	3,533	1.91
2015	2.925	2,739	0.24	3,468	2.12
2014	3.613	2,733	0.45	3,395	1.73
2013	3.684	2,721	(1.84)	3,339	1.54
2012	3.652	2,772	0.19	3,287	1.53
2011	3.204	2,766	0.58	3,237	1.02
2010	2.694	2,750	(0.31)	3,204	(1.93)

SOURCES: "Average Price of Gasoline": U.S. Department of Energy, Energy Information Administration; "Non-Farm Employment": U.S. Bureau of Labor Statistics; "Gasoline Consumed": Department of Revenue.

- (1) Reflects the Average Price of Gasoline (\$/gallon) in all of Massachusetts.
- (2) Based on Historical Gasoline Tax Collections pursuant to Chapter 64A, except Aviation Fuel. See *Commonwealth Motor Fuels Tax – Refunds and Abatements from Gasoline Tax*.
- (3) Seasonally adjusted. Calculated as fiscal year average of monthly employment.
- (4) Fiscal year 2019 figures are preliminary and subject to change.

HISTORICAL ANNUAL COLLECTION OF PLEDGED MOTOR FUELS TAXES

<u>Fiscal Year</u>	<u>Gasoline and Special Fuels Tax Rate</u>	<u>Pledged Motor Fuels Tax Receipts (in thousands)⁽¹⁾</u>	<u>Percentage Change in Motor Fuels Tax Receipts</u>
2019 ⁽³⁾	\$ 0.24	\$773,790	0.82%
2018	0.24	767,519	(0.04)
2017	0.24	767,855	0.39
2016	0.24	764,848	1.39
2015	0.24	754,392	3.25
2014	0.24 ⁽²⁾	730,640	12.44
2013	0.21	649,779	(1.57)
2012	0.21	660,176	0.15
2011	0.21	659,183	0.94
2010	0.21	653,045	0.14

SOURCES: "Gasoline and Special Fuels Tax Rate", Department of Revenue; "Pledged Motor Fuels Tax Receipts", fiscal years 2010-2018, Office of the Comptroller and Fiscal Year 2019, Department of Revenue, unaudited.

- (1) Includes all Pledged Motor Fuels Tax collected by the Commonwealth pursuant to Chapters 64A, 64E and 64F of the Massachusetts General Laws and credited to various budgeted funds, *except* Aviation Fuel. See *Commonwealth Motor Fuels Tax – Crediting of Receipts*. Net of refunds and abatements from Gasoline Tax. See *Commonwealth Motor Fuels Tax – Refunds and Abatements from Gasoline Tax*. The table above reflects tax rates of 21¢ per gallon on fuel (other than liquefied gas), 19.1% of the average price per gallon on liquefied gas and 20.9685¢ of the 21¢ per gallon Gasoline Tax in effect prior to July 31, 2013. The table above reflects tax rates of 24¢ per gallon on fuel (other than liquefied gas), 19.1% of the average price per gallon on liquefied gas and 23.964¢ of the 24¢ per gallon Gasoline Tax in effect after July 31, 2013.
- (2) The tax per gallon has been 24¢ effective July 31, 2013.
- (3) Fiscal year 2019 figures are preliminary and subject to change.

**HISTORICAL MONTHLY COLLECTION OF MOTOR FUELS TAXES
MOST RECENT 24 MONTHS ENDING SEPTEMBER 30, 2019**

<u>Month</u>	<u>Gasoline Tax Receipts under Chapter 64A⁽¹⁾⁽²⁾</u>	<u>Special Fuels Tax Receipts under Chapter 64E⁽¹⁾</u>	<u>Motor Carrier Fuels Tax Receipts under Chapter 64F⁽¹⁾</u>	<u>Total</u>
Sep-19	\$59,502,052	\$8,251,079	\$1,005,747	\$68,758,879
Aug-19	59,493,001	7,829,907	391,327	67,714,235
Jul-19	56,623,734	8,011,542	572,659	65,207,934
Jun-19	58,169,696	8,568,416	500,577	67,238,689
May-19	54,082,845	7,763,306	203,832	62,049,984
Apr-19	55,399,148	7,719,148	638,295	63,756,591
Mar-19	49,075,555	6,834,273	417,793	56,327,621
Feb-19	53,770,440	7,662,834	68,927	61,502,201
Jan-19	56,913,913	7,566,464	912,930	65,393,307
Dec-18	55,594,288	8,145,519	482,869	64,222,676
Nov-18	59,081,944	8,742,303	104,658	67,928,905
Oct-18	55,551,522	7,709,338	690,490	63,951,350
Sep-18	60,022,894	8,313,507	986,452	69,322,853
Aug-18	58,886,480	7,829,094	133,673	66,849,247
Jul-18	57,990,779	8,250,165	678,301	66,919,244
Jun-18	56,919,994	8,498,192	573,241	65,991,427
May-18	52,936,138	7,527,905	179,445	60,643,488
Apr-18	54,610,753	7,945,702	666,602	63,223,057
Mar-18	51,970,835	6,307,290	366,638	58,644,763
Feb-18	51,047,215	8,043,044	187,038	59,277,298
Jan-18	56,798,949	7,993,471	787,469	65,579,889
Dec-17	55,888,432	8,101,199	524,062	64,513,693
Nov-17	57,826,611	8,200,186	363,429	66,390,226
Oct-17	55,731,913	7,616,114	490,704	63,838,732

SOURCE: Department of Revenue, unaudited.

- (1) Net of applicable refunds, abatements and adjustments, if any. See *Commonwealth Motor Fuels Tax – Refunds and Abatements from Gasoline Tax*.
- (2) Includes Aviation Fuel receipts. For the period indicated on the table above, 0.04% to 0.12% of total collections of the Gasoline Tax is from Aviation Fuel, and the average over this period is 0.08%.

Projected Collection of Motor Fuels Tax

The Commonwealth does not perform an official forecast of Motor Fuels Tax receipts beyond the current fiscal year. Motor Fuels Tax receipts in fiscal year 2020 are projected to be approximately \$779 million or 0.67% greater than the Motor Fuels Tax receipts for fiscal year 2019. The actual revenues that will be collected by the Commonwealth in fiscal year 2020 and later may vary from historical patterns and any annual projection because of fluctuating economic conditions, technological advances, improving fuel efficiency of motor vehicles, greater use of non-fossil fuel based vehicles, changes in law and other variables affecting revenue growth.

The Commonwealth is part of the multi-state Transportation and Climate Initiative (TCI), which is working to develop a regional program that aims to cap and reduce greenhouse gas emissions from the transportation sector across the Northeast and Mid-Atlantic through a carbon price-based mechanism and invest any proceeds in a cleaner, more resilient, and more equitable low-carbon transportation system. The states participating in TCI's regional policy design process are currently studying options to develop the carbon pricing mechanism. The Commonwealth may develop independent assumptions and produce forecasting models based on publically available information to inform any policy recommendations. However, no policy recommendations have yet been developed and there is no assurance what policies, if any, may ultimately be proposed, implemented by administrative means, or enacted into law in the

Commonwealth. Moreover, the Commonwealth cannot now predict what impact any such future policies would have on the amount of Pledged Funds to be received by the Commonwealth.

COMMONWEALTH REGISTRY FEES

The following is a summary of the Commonwealth’s Registry Fees. This summary does not purport to be complete and, accordingly, is qualified by reference to Chapter 90. The Legislature has altered and may in the future alter Chapter 90. See *Commonwealth Motor Fuels Tax – Legislation*.

General

Registry Fees deposited in the Commonwealth Transportation Fund include: (1) motor vehicle registration fees imposed under Chapter 90 (“Registration Fees”); (2) motor vehicle license fees imposed under Chapter 90 (“License Fees”); and (3) miscellaneous fees and other revenues relating to the operation and use of motor vehicle transportation (“Other Non-Tax Revenues”). The Registration and License Fees are collected by the Registrar of Motor Vehicles (“Registrar”) or authorized agents. Pursuant to Section 3B of Chapter 7 of the Massachusetts General Laws, the Secretary of Administration and Finance, after having conducted a public hearing, determines the amounts to be charged for each fee. Chapter 90 excludes certain vehicles or trailers, such as school buses, emergency vehicles and municipally owned vehicles from payment of Registration Fees. Other than certain minimum fees, most Registration Fees are based on the weight of the registered vehicle. Fees from licenses include driver’s licenses and learner’s permits. Other Non-Tax Revenues include other fees collected by the Registrar under Chapter 90.

Registry Fees

Massachusetts General Laws Chapter 90, Section 33 authorizes the RMV to collect fees as set by that statute or as set or amended by 801 Code of Massachusetts Regulation (“CMR”) 4.02, as issued by the Executive Office for Administration and Finance.

The three primary categories of Registry Fees are license, registration and registry information. License Fees include driver’s license, identification cards, professional driving schools and reinstatement fees. Registration Fees include motor vehicle registration according to types of license plates. Registry information includes fees relating to motor vehicle title, inspection, court records and fees relating to citations.

Registry Fees were not changed from fiscal years 1993 through 2002. A general across the board increase in Registry Fees was implemented in fiscal year 2003. In fiscal year 2009, the Registry Fees schedule was simplified and consolidated with some fee adjustments. On July 1, 2014, a limited number of Registry Fees were increased; Road Tests were increased from \$20 to \$35, Passenger Registration (two-year) was increased from \$50 to \$60, Passenger Registration (one-year) was increased from \$25 to \$30. The following table provides certain information regarding Registry Fees schedules.

Registry Fee Rates

	Fiscal Year 1993-2002	Fiscal Year 2003-2008	Fiscal Year 2009-2019
Passenger Vehicle Registration New and Renewal	1993-1995: \$30 1995-2000: No renewal fee under lifetime registration 2000-2002: \$30	\$36.00	2009-2014: \$50.00 2015-2019: \$60.00
Commercial Vehicle Registration New and Renewal ⁽¹⁾	\$15 per 1,000 lbs of gross vehicle weight (“GVW”) for a 1-year registration	\$15 per 1,000 lbs. of GVW for a 1-year registration	\$20 per 1,000 lbs. of GVW for a 1-year registration
New Certificate of Title	\$50.00	\$50.00	\$75.00
Class D License Renewal	\$33.75	\$40.00	\$50.00

SOURCE: MassDOT

(1) For vehicles over 5,000 lbs.

The following table shows the number of selected RMV transactions for the following categories since fiscal year 2009⁽¹⁾.

Fiscal Year	Vehicle Registration Renewals or Modifications	License Duplicates	License Renewal	New License ⁽²⁾	New Vehicle Registrations	Total
2018	3,267,124	216,538	948,738	160,191	1,299,835	5,892,426
2017	3,021,320	233,338	790,989	152,968	1,302,777	5,501,392
2016	3,206,242	210,267	602,081	158,807	1,315,621	5,493,018
2015	3,208,001	194,490	918,640	207,191	1,250,330	5,778,652
2014	3,097,268	186,499	987,767	231,807	1,204,382	5,707,723
2013	2,644,174	184,318	946,787	230,148	1,123,537	5,128,964
2012	2,552,172	206,378	951,498	224,365	1,175,158	5,109,571
2011	2,643,757	201,258	556,539	222,157	1,079,229	4,702,940
2010	2,640,476	391,682	902,692	213,416	1,119,292	5,267,558
2009	2,685,700	421,102	911,523	227,098	1,083,422	5,328,845

SOURCE: MassDOT

- (1) Amounts are unaudited. Does not include all RMV transactions, such as certificate of title transactions.
(2) New license transactions totals for fiscal years 2009 – 2013 have been restated due to a calculation error when recording new license transactions. Revenue attributable to the transactions has not changed.

The following table sets forth the historical collection of Registry Fees for the most recent ten fiscal years.

HISTORICAL ANNUAL COLLECTION OF REGISTRY FEES

Fiscal Year	Pledged Registry Fee Receipts (in thousands) ⁽¹⁾	Percentage Change in Registry Fee Receipts
2019 ⁽²⁾	\$616,830	0.66%
2018	612,780	2.35
2017	598,683	3.15
2016	580,426	(0.22)
2015	581,686	9.09
2014	533,194	2.11
2013	522,199	2.67
2012	508,608 ⁽³⁾	2.53
2011	496,034 ⁽³⁾	2.11
2010	485,789	20.31

SOURCES: Fiscal years 2010-2018, Office of the Comptroller and fiscal year 2019, MassDOT, unaudited.

- (1) Certain prior years have been adjusted to reflect a reclassification of certain revenues as Pledged Registry Fees. Does not include amounts allocable to the cost of production of license plates, which in fiscal year 2017 was approximately \$4.2 million.
(2) Fiscal year 2019 revenues are preliminary and subject to change.
(3) Fiscal years 2011 and 2012 do not include \$1 million and \$2 million, respectively, of the Registry Fees which represented civil motor infraction fees collected in such fiscal years and transferred to the CTF in fiscal year 2013. See *Crediting of Receipts*.

Collection Procedure

As of October 2019, Registry Fees were collected by 773 employees (full time equivalents) of RMV at the division's administrative headquarters in Quincy, at 30 RMV service center locations, via a telephone center or on-line. Methods of payment include cash, checks, electronic checks, money orders, credit card and debit cards. However, certain locations do not accept cash based on site security. The Title and Registration Division accepts walk-in

customers. The Court Records Unit accepts fees for producing certified records. The Vehicle Safety and Compliance staff accepts payments for inspection station and inspector licenses and renewals. The mail-in registration unit processes registration renewals paid via check or money order. The telephone center also accepts transaction payments via credit card. Customers may make payments for the website transactions via credit card or electronic check.

Security measures are established by MassDOT in connection with the collection of Registry Fees and MassDOT's internal audit department periodically audits service centers and employees for compliance with payment handling policies and procedures. When appropriate, administrative sanctions, such as retraining or termination, and in the cases in which criminal activity may have occurred, the matter is referred to the Massachusetts State Police for investigation.

Third parties also accept fees on behalf of the RMV. Presently, thirty-four (34) Southern New England AAA offices throughout Massachusetts process license renewals and duplicates (excluding CDL), duplicate ID (excluding Liquor IDs), registration renewals and duplicates (under 5,500 pounds), duplicate titles, registration amendments and registration transfer transactions. The appropriate fees are collected at the sites. Participants in the Electronic Vehicle Registration ("EVR") program also collect Registry Fees. These third party sites process certain registration based transactions, including the issuance of new plates and registration decals; the transfer of registration plates between vehicles; the collection of vehicle title information; processing of certain types of registration renewals; and updating customer addresses, if necessary. All third party vendors that collect Registry Fees are required to keep that revenue segregated from their other sources of business revenue.

The RMV is replacing their Automated Licensing and Registration System with a new system called ATLAS. This new system focus is intended to improve both the customer service experience of residents and businesses across the Commonwealth as well as the recording and reporting of the RMV licensing and registration transactions and revenue collections. The replacement is expected to be completed in two releases. Release 1 was implemented on March 26, 2018 and related to all services and transactions associated with the issuance of Driver's License, Mass ID, Real ID, Liquor ID, Disability Placard, School Bus/Pupil Licenses, CMVI Citations, License Suspension and Reinstatements, and Revenue Collection/Management. Release 2 relates to all services and transactions associated with titling and registering vehicles. Release 2 was implemented on November 12, 2019.

Crediting of Receipts

Fees from RMV depository accounts are swept daily by the State Treasury, credited to the RMV appropriate fee accounts and recorded by the State Comptroller's office into the Commonwealth accounting system. An electronic file is transmitted to the Office of the State Comptroller ("OSC") daily for entry in the Commonwealth accounting system. These records allocate funds from the sweep account to various revenue sources including the Commonwealth Transportation Fund. On a monthly basis, these amounts are manually allocated to specific categories, including registration and title fees collected. With the implementation of Release 1 of ATLAS, license fees are now allocated on a daily basis. Refunds are issued through the State Treasury. Refunds are deducted from total Commonwealth Transportation Fund revenues.

Projected Collection of Registry Fees

The Commonwealth does not currently have an official forecast of Registry Fee receipts beyond the current fiscal year. For fiscal year 2019, Registry Fee receipts equaled \$616.8 million or 0.66% more than the Registry Fee receipts for fiscal year 2018. For fiscal year 2020, MassDOT projects that Registry Fee receipts will equal approximately \$625.0 million or 1.3% more than the RMV receipts for fiscal year 2019. Unaudited fiscal year 2020 Registry Fees received through September 2019 equal \$119.4 million. The actual revenues that will be collected by the Commonwealth may vary from the forecast because of fluctuating economic conditions, technological advances, changes in law and other variables affecting revenue growth. Registration and license renewal fees also peak approximately every two to five years. The increase in the registration fee cycle may be attributed to a large conversion of registrations from a perpetually renewed status, i.e. lifetime registrations, to a 2-year renewal status. License renewal fees also fluctuate due to the conversion from a 4-year renewal cycle to a 5-year renewal cycle. Additionally, fluctuations in commercial registration renewal fees may occur due to the conversion of light commercial vehicle registrations (5,000 lbs. and under) from 1-year to 2-year renewal cycles.

1994 TRUST AGREEMENT

The 1994 Trust Agreement Bonds are secured by the Prior Pledged Funds and are currently outstanding in the aggregate principal amount of \$80.9 million and the final maturity date for the 1994 Trust Agreement Bonds is June 1, 2022. Concurrently with the issuance of the 2010 Bonds, the Commonwealth closed the lien on the 1994 Trust Agreement, after which no additional bonds may be issued under such agreement, except for refunding bonds. In the Trust Agreement, the Commonwealth has covenanted not to issue any additional bonds under the 1994 Trust Agreement, except refunding bonds with debt service requirements less than or equal to the debt service requirements on the refunded bonds in each fiscal year.

The 2019 Bonds will be *subordinate* to the outstanding 1994 Trust Agreement Bonds with respect to the lien on the Prior Pledged Funds, which equal 6.86¢ per gallon of revenues from the Commonwealth's gasoline tax imposed by Chapter 64A. The Prior Pledged Funds constitute only a portion of the Pledged Funds. The Bonds are not subordinate to the outstanding 1994 Trust Agreement with respect to the portion of the Pledged Funds that do not constitute Prior Pledged Funds.

To the extent that receipts relating to the Prior Pledged Funds are in excess of the debt service requirements on the 1994 Trust Agreement Bonds in any fiscal year, such amounts will be available under the Trust Agreement. See the table *Debt Service Coverage* for debt service requirements on the 1994 Trust Agreement Bonds, projected Prior Pledged Funds and projected excess amounts.

FEDERAL HIGHWAY GRANT ANTICIPATION NOTES

Under certain circumstances described below, amounts from the Commonwealth Transportation Fund may be made available for payment of debt service on GANs. However, any such payment is subordinate to the payment of the Bonds. See *Security and Sources of Payment for the Bonds – Flow of Pledged Funds – Flow of Funds under the Trust Agreement* above.

GAN Trust Agreement. The GAN Trust Agreement provides that the Commonwealth may incur obligations payable from and secured by a pledge of federal highway reimbursements and a lien on all funds and accounts created under the GAN Trust Agreement. Further, bonds issued under the GAN Trust Agreement have a *subordinate* lien on Pledged Funds, following payment of obligations under the Trust Agreement (i.e., "Net CTF Pledged Funds" as defined in the GAN Trust Agreement). Payment of the 2019 Bonds and any Additional Bonds is senior to payment of any obligations under the GAN Trust Agreement. See *Security and Source of Payment of Bonds – Flow of Pledged Funds*.

COMMONWEALTH TRANSPORTATION SYSTEM

Overview

MassDOT was created in 2009 pursuant to the Transportation Reform Act. While it has an appointed board and is independent of the Commonwealth as a separate body politic, MassDOT is governed by certain state laws, rules and policies applicable to other executive departments of the Commonwealth, including the use of the Commonwealth's central accounting system (MMARS), payroll system and adherence to state finance law. MassDOT's Office of the Secretary houses the central administrative functions of the organization, including the General Counsel, Office of Chief Financial Officer, Information and Technology, Human Resources, Communications, Performance Management and Innovation, Diversity and Civil Rights and Transportation Planning and Enterprise Services.

MassDOT comprises the following four divisions:

- The Highways Division includes the roadways, bridges, and tunnels of the former MHD and the former Massachusetts Turnpike Authority, the Tobin Bridge and certain assets of the Massachusetts DCR. The Highways Division is responsible for the design, construction and maintenance of the Commonwealth's state highways and bridges. The Highway Division also is responsible for overseeing traffic safety,

engineering activities and snow and ice removal to ensure safe road and travel conditions. The Highway Division has six regional districts.

- The Rail & Transit Division is responsible for all transit, freight and intercity rail initiatives and oversees the Regional Transit Authorities (“RTA”) of the Commonwealth.
- The Aeronautics Division has jurisdiction over the Commonwealth’s public use airports, private use landing areas, and seaplane bases, but does not operate such facilities. It is responsible for aircraft registration, airport development and improvements, aviation safety, aircraft accident investigation, navigational aids, and statewide aviation planning. The Division certifies airports and heliports, licenses airport managers, conducts annual airport inspections, and enforces safety and security regulations.
- The RMV is responsible for vehicle operator licensing and vehicle and aircraft registration available both online and at service centers across the Commonwealth. The RMV oversees commercial and non-commercial vehicle inspection stations.

Chapter 46 of the Acts of 2015, which is the Commonwealth’s fiscal year 2016 budget (the “2016 Budget Act”), amended certain provisions governing MassDOT and the MBTA. Effective July 1, 2015, MassDOT is governed by an eleven-member board (the “Board of Directors” or the “Board”) appointed by the Governor with expertise in transportation, finance, engineering and municipal government with temporary oversight by the FMCB, as described in the following paragraph. A representative of a labor organization is also appointed to the Board. The Board oversees the organization, while serving as the governing body of both MassDOT and MBTA. MassDOT is administered by the Secretary of Transportation, appointed by the Governor to serve as the Chief Executive Officer and the Secretary serves as an ex-officio member of the Board. The Enabling Act does not provide for MassDOT to be a debtor under the federal bankruptcy code.

Financing the Transportation System

Massachusetts Bay Transportation Authority Fiscal and Management Control Board. A five-member FMCB to oversee the MBTA was appointed by Governor Baker on July 17, 2015, pursuant to the 2016 Budget Act. The FMCB is within MassDOT and reports to the Secretary of Transportation. The FMCB is afforded all powers, responsibilities and obligations relative to the MBTA that are vested in the MBTA Board of Directors, with certain limited exceptions. The FMCB will continue until June 30, 2020. At the dissolution of the FMCB, the MBTA Board of Directors will resume governance of the MBTA. In addition, the FMCB may (i) establish separate operating and capital budgets each with clearly designated revenue sources and uses and establish policies and procedures to ensure that no funds are commingled between operating and capital budgets; (ii) establish one-year and five-year operating budgets beginning with fiscal year 2017, which are balanced primarily through a combination of internal cost controls and increased own-source revenues and which facilitate the transfer of all MBTA employees from the capital budget to the operating budget; (iii) establish five-year and 20-year capital plans that include a phased program for the complete restoration of the physical assets of the MBTA including its vehicle fleet, a plan to address failings within the existing capital program and funding recommendations to meet the region’s transit needs; (iv) establish a rigorous performance management system and performance metrics and targets that address, among other things, maximizing of own-source revenues, increasing ridership, reducing absenteeism, addressing vacancies and attrition, improving employee morale, achieving procurement and contracting improvements and improving customer focus and orientation; (v) review any contract for the provision of services entered into by the MBTA, including contracts entered into before the establishment of the FMCB, including, but not limited to, commuter rail and paratransit service contracts, and amend those contracts, as necessary, in accordance with their terms; and (vi) establish, increase, or decrease any fare, fee, rate, or charge for any service, license or activity within the scope of the MBTA. The FMCB may: (i) reorganize or consolidate MBTA departments, divisions or entities, in whole or in part, except the Metropolitan Boston Transit Parking Corporation; (ii) establish any new departments, divisions, or entities as it considers necessary; and (iii) transfer the duties, powers, functions and appropriations of a department, division or entity, except the duties, powers, functions and appropriations of the Metropolitan Boston Transit Parking Corporation to another. Any reorganization or consolidation that affects MassDOT shall be approved by the Board.

Constitutional Limitations. Article 78 of the Articles of Amendment to the Massachusetts Constitution, as amended, requires that any fees, duties, excises or license taxes relating to the registration, operation or use of vehicles on public highways, or to fuels used for propelling such vehicles (as previously defined, “Article 78 Revenues”), be expended only for the following purposes: (1) the cost of administration of laws providing for such revenue, (2) the

making of refunds and adjustments relating to such revenue; (3) the payment of highway obligations; (4) the cost of construction, reconstruction, maintenance and repair of public highways, bridges and mass transportation lines; (5) the cost of enforcing state traffic laws; and (6) the cost of other mass transportation purposes. Article 78 Revenues may be expended by the Commonwealth and its counties, cities and towns for these purposes only in such manner as the Legislature may direct.

The Motor Fuels Tax imposed under Chapters 64A, 64E and 64F and the Registry Fees are classified as Article 78 Revenues.

Funding Process. Prior to the Transportation Reform Act, transportation policy, planning and financing were segregated into separate silos of quasi-independent authorities and state agencies. One primary goal of the Transportation Reform Act was to better coordinate the Commonwealth's transportation programs while finding economies of scale and best practices to reduce costs and manage a world class transportation network. Within the new streamlined MassDOT, jurisdiction over the operations and maintenance of the transportation system is shared among state, regional transit agencies and local governments.

The annual operating and capital budgets for transportation are developed through a collaborative process that encompasses many different organizations and individuals. These include:

- **Governor:** Establishes overall policies and spending priorities for MassDOT, including recommending the amount of funds that should be transferred to MassDOT within the annual operating budget. The Governor also determines the amount and timing of any authorized borrowing to fund capital investments. At the request of the Governor, the Treasurer issues bonds to borrow funds for authorized and budgeted capital projects at MassDOT.
- **Legislature:** Appropriates funds through the annual budget consistent with state law and the Massachusetts Constitution for transportation programs and projects. The Legislature also authorizes bond bills, or statutory authorizations to borrow money, to fund the capital budget.
- **MassDOT:** The Secretary of Transportation develops an annual operating and five-year capital budget for the department. MassDOT forecasts, plans and monitors financing for capital improvement projects on the state highway system and publically accessible airports, coordinates with the MBTA and RTAs on bus and rail funding, and works with the Metropolitan Planning Organizations ("MPO") to finance local road projects.
- **MassDOT Board of Directors:** The 11-member MassDOT board, appointed by the Governor, reviews and adopts the annual operating and capital budgets for the department and MBTA. The Board further recommends policy and funding priorities to the Secretary, the Governor and Legislature.
- **MBTA Fiscal and Management Control Board:** The five-member board establishes separate operating and capital budgets, including one and five-year operating budgets and five-year and 20-year capital plans.
- **Metropolitan Planning Organizations & Regional Transit Authorities:** MPOs and RTAs are responsible for planning, coordinating and, in the case of RTAs, operating regional transportation systems. In the Commonwealth, the thirteen MPOs develop transit and roadway reinvestment plans which identify projects for funding in the Statewide Transportation Improvement Program ("STIP").

LITIGATION

No litigation is pending or, to the knowledge of the Attorney General, threatened against or affecting the Commonwealth seeking to restrain or enjoin the issuance, sale or delivery of the 2019 Bonds, or in any way contesting or affecting the validity of the 2019 Bonds or the Trust Agreement, including the pledge of Pledged Funds.

BOOK-ENTRY ONLY SYSTEM

The Depository Trust Company (“DTC”), New York, New York will act as securities depository for the 2019 Bonds. The 2019 Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered 2019 Bond certificate will be issued for each maturity of the 2019 Bonds as set forth on the inside cover page hereof, each in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world’s largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934, as amended. DTC holds and provides asset servicing for over 3.5 million issued of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC’s participants (“Direct Participants”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants”). DTC has a Standard & Poor’s rating of AA+. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of 2019 Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the 2019 Bonds on DTC’s records. The ownership interest of each actual purchaser of each 2019 Bond (the “Beneficial Owner”) is in turn to be recorded on the Direct and Indirect Participants’ records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the 2019 Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of the Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the 2019 Bonds, except in the event that use of the book-entry system for the 2019 Bonds is discontinued.

To facilitate subsequent transfers, all 2019 Bonds deposited by Direct Participants with DTC are registered in the name of DTC’s partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of the 2019 Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the 2019 Bonds; DTC’s records reflect only the identity of the Direct Participants to whose accounts such 2019 Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of 2019 Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the 2019 Bonds, such as redemptions, defaults, and proposed amendments to the 2019 Bond documents. For example, Beneficial Owners of 2019 Bonds may wish to ascertain that the nominee holding the 2019 Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners.

Redemption notices shall be sent to DTC. If less than all of the 2019 Bonds are being redeemed, DTC’s practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the 2019 Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Commonwealth as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the 2019 Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

NEITHER THE UNDERWRITERS NOR THE COMMONWEALTH WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO THE DIRECT PARTICIPANTS, THE INDIRECT PARTICIPANTS OR THE BENEFICIAL OWNERS WITH RESPECT TO THE ACCURACY OF ANY RECORDS MAINTAINED BY DTC OR BY ANY DIRECT OR INDIRECT PARTICIPANT, THE PAYMENT OF OR THE PROVIDING OF NOTICE TO THE DIRECT PARTICIPANTS, THE INDIRECT PARTICIPANTS OR THE BENEFICIAL OWNERS OR WITH RESPECT TO ANY OTHER ACTION TAKEN BY DTC AS BONDOWNER.

The principal of and interest and premium, if any, on the 2019 Bonds will be paid to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC, as registered owner of the 2019 Bonds. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Commonwealth or the Trustee on the payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with municipal securities held for the accounts of customers in bearer form or registered in "street name", and will be the responsibility of such Participant and not of DTC, the Trustee or the Commonwealth, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of the principal of and interest and premium, if any, to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Commonwealth or the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

The Commonwealth cannot give any assurances that Direct Participants or others will distribute payments of principal of and interest on the 2019 Bonds paid to DTC or its nominee, as the registered owner, to the Beneficial Owners, or that they will do so on a timely basis or that DTC will serve and act in a manner described in this document.

Beneficial Owners of the 2019 Bonds will not receive or have the right to receive physical delivery of such 2019 Bonds and will not be or be considered to be the registered owners thereof. So long as Cede & Co. is the registered owner of the 2019 Bonds, as nominee of DTC, references herein to the holders or registered owners of the 2019 Bonds shall mean Cede & Co. and shall not mean the Beneficial Owners of the 2019 Bonds, except as otherwise expressly provided herein.

DTC may discontinue providing its services as depository with respect to the 2019 Bonds at any time by giving reasonable notice to the Commonwealth or the Trustee. Under such circumstances, in the event that a successor depository is not obtained, 2019 Bonds will be delivered and registered as designated by the Beneficial Owners. The Beneficial Owner, upon registration of 2019 Bonds held in the Beneficial Owner's name, will become the Bondowner. 2019 Bond certificates are required to be printed and delivered.

The Commonwealth may decide to discontinue use of the system of book-entry only transfers through DTC (or a successor securities depository). In such event, 2019 Bond certificates will be printed, delivered and registered as designated by the Beneficial Owners.

The information in this section concerning DTC and DTC's book-entry system has been furnished by DTC. Such information is believed to be reliable, but the Commonwealth does not take any responsibility for the accuracy thereof. Neither the Commonwealth nor the Trustee will have any responsibility or obligation to the Direct or Indirect Participants or the Beneficial Owners with respect to the accuracy of any records maintained by DTC or by any Direct or Indirect Participant; the payment of, or the providing of notice to, the Direct or Indirect Participants or the Beneficial Owners; or with respect to any other action taken by DTC as registered owner of the 2019 Bonds.

THE INFORMATION IN THIS SECTION CONCERNING DTC AND DTC'S BOOK-ENTRY-ONLY SYSTEM HAS BEEN OBTAINED FROM SOURCES THAT THE COMMONWEALTH AND THE

UNDERWRITERS BELIEVE TO BE RELIABLE, BUT NEITHER THE COMMONWEALTH NOR THE UNDERWRITERS TAKE RESPONSIBILITY FOR THE ACCURACY THEREOF.

RATINGS

The 2019 Bonds have been assigned ratings of “Aa1” (outlook: Stable), “AA+” (outlook: Stable) and “AAA” (outlook: Stable) by Moody’s Investors Service, Inc. (“Moody’s”), S&P Global Ratings (“Standard & Poor’s”) and Kroll Bond Rating Agency (“KBRA”), respectively.

Such ratings reflect only the respective views of Moody’s, Standard & Poor’s and KBRA, and an explanation of the significance of such ratings may be obtained from the rating agency furnishing the same. There is no assurance that a rating will continue for any given period of time or that a rating will not be revised or withdrawn entirely by any or all of such rating agencies, if, in its or their judgment, circumstances so warrant. Any downward revision or withdrawal of a rating could have an adverse effect on the market prices of the 2019 Bonds.

UNDERWRITING

The 2019 Bonds are being purchased by the Underwriters, for whom Citigroup Global Markets Inc. is acting as Representative. The Underwriters have agreed, subject to certain conditions, to purchase all of the 2019 Bonds from the Commonwealth at a discount from the initial offering prices of the 2019 Bonds equal to 0.334796% (\$669,591.25) of the aggregate principal amount of the 2019 Bonds. The Underwriters may offer and sell the 2019 Bonds to certain dealers and others (including dealers depositing 2019 Bonds into investment trusts) at prices lower than the public offering prices (or yields higher than the offering yields) stated on the inside cover pages hereof. The principal offering prices (or yields) set forth on the inside cover pages hereof may be changed from time to time after the initial offering by the Underwriters. The obligation of the Underwriters to accept delivery of the 2019 Bonds is subject to the terms and conditions set forth in the bond purchase agreement, the approval of legal matters by counsel and other conditions. The Underwriters may over-allot or effect transactions which stabilize or maintain the market price of the 2019 Bonds at levels above that which might otherwise prevail in the open market. Such stabilizing, if commenced, may be discontinued at any time.

In addition, certain of the Underwriters may have entered into distribution agreements with other broker-dealers (that have not been designated by the Commonwealth as Underwriters) for the distribution of the 2019 Bonds at the original issue prices. Such agreements generally provide that the relevant Underwriter will share a portion of its underwriting compensation or selling concession with such broker-dealers.

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage services. Certain of the Underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for the Commonwealth, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the Underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities, which may include credit default swaps) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve securities and instruments of the Commonwealth.

The Underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or public or express independent research views in respect to such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

TAX EXEMPTION

In the opinion of Locke Lord LLP, Bond Counsel, based upon an analysis of existing laws, regulations, rulings, and court decisions, and assuming, among other matters, compliance with certain covenants, interest on the 2019 Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 (the “Code”). Bond Counsel is of the further opinion that interest on the 2019 Bonds will not be included in computing the alternative minimum taxable income of Bondowners who are individuals. Bond Counsel expresses no opinion regarding any other federal tax consequences arising with respect to the ownership or disposition of, or the accrual or receipt of interest on, the 2019 Bonds.

The Code imposes various requirements relating to the exclusion from gross income for federal income tax purposes of interest on obligations such as the 2019 Bonds. Failure to comply with these requirements may result in interest on the 2019 Bonds being included in gross income for federal income tax purposes, possibly from the date of original issuance of the 2019 Bonds. The Commonwealth has covenanted to comply with such requirements to ensure that interest on the 2019 Bonds will not be included in federal gross income. The opinion of Bond Counsel assumes compliance with these covenants.

Bond Counsel is also of the opinion that, under existing law, interest on the 2019 Bonds and any profit made on the sale thereof are exempt from Massachusetts personal income taxes, and the 2019 Bonds are exempt from Massachusetts personal property taxes. Bond Counsel expresses no opinion regarding any other Massachusetts tax consequences arising with respect to the 2019 Bonds. Prospective purchasers of the 2019 Bonds should be aware, however, that the 2019 Bonds are included in the measure of Massachusetts estate and inheritance taxes, and the 2019 Bonds and the interest thereon are included in the measure of certain Massachusetts corporate excise and franchise taxes. Bond Counsel has not opined as to the taxability of the 2019 Bonds or the income therefrom under the laws of any state other than Massachusetts. A copy of the proposed form of opinion of Bond Counsel is set forth in *Appendix C* hereto.

To the extent the issue price of any maturity of the 2019 Bonds is less than the amount to be paid at maturity of such Bonds (excluding amounts stated to be interest and payable at least annually over the term of such Bonds), the difference constitutes “original issue discount,” the accrual of which, to the extent properly allocable to each owner thereof, is treated as interest on the 2019 Bonds which is excluded from gross income for federal income tax purposes and is exempt from Massachusetts personal income taxes. For this purpose, the issue price of a particular maturity of the 2019 Bonds is the reasonably expected initial offering price to the public or the first price at which a substantial amount of such maturity of the 2019 Bonds is sold to the public, as applicable. The original issue discount with respect to any maturity of the 2019 Bonds accrues daily over the term to maturity of such Bonds on the basis of a constant interest rate compounded semiannually (with straight-line interpolations between compounding dates). The accruing original issue discount is added to the adjusted basis of such Bonds to determine taxable gain or loss upon disposition (including sale, redemption, or payment on maturity) of such Bonds. Bondowners should consult their own tax advisors with respect to the tax consequences of ownership of 2019 Bonds with original issue discount, including the treatment of purchasers who do not purchase such Bonds in the original offering to the public at the reasonably expected initial offering price to the public, or, if applicable, the first price at which a substantial amount of such Bonds is sold to the public.

2019 Bonds purchased, whether at original issuance or otherwise, for an amount greater than the stated principal amount to be paid at maturity of such Bonds, or, in some cases, at the earlier redemption date of such Bonds (“Premium Bonds”), will be treated as having amortizable bond premium for federal income tax purposes and Massachusetts personal income tax purposes. No deduction is allowable for the amortizable bond premium in the case of obligations, such as the Premium Bonds, the interest on which is excluded from gross income for federal income tax purposes. However, a Bondowner’s basis in a Premium Bond will be reduced by the amount of amortizable bond premium properly allocable to such Bondowner. Holders of Premium Bonds should consult their own tax advisors with respect to the proper treatment of amortizable bond premium in their particular circumstances.

Prospective Bondowners should be aware that certain requirements and procedures contained or referred to in the relevant documents may be changed and certain actions (including, without limitation, defeasance of the 2019 Bonds) may be taken or omitted under the circumstances and subject to the terms and conditions set forth in such documents. Bond Counsel has not undertaken to determine (or to inform any person) whether any actions taken (or

not taken) or events occurring (or not occurring) after the date of issuance of the 2019 Bonds may adversely affect the value of, or the tax status of interest on, the 2019 Bonds.

Legislation affecting tax-exempt obligations is regularly considered by the United States Congress and may also be considered by the Massachusetts legislature. Court proceedings may also be filed, the outcome of which could modify the tax treatment of obligations such as the 2019 Bonds. There can be no assurance that legislation enacted or proposed, or actions by a court, after the date of issuance of the 2019 Bonds will not have an adverse effect on the tax status of interest on the Bonds or the market value or marketability of the 2019 Bonds. These adverse effects could result, for example, from changes to federal or state income tax rates, changes in the structure of federal or state income taxes (including replacement with another type of tax), or repeal (or reduction in the benefit) of the exclusion of interest on the 2019 Bonds from gross income for federal or state income tax purposes for all or certain taxpayers.

For example, H.R. 1, signed into law on December 22, 2017, reduces the corporate tax rate, modifies individual tax rates, eliminates many deductions, and raises the income threshold above which the individual alternative minimum tax is invoked, among other things. These changes may increase, reduce or otherwise change the financial benefits of owning state and local government bonds. Additionally, Bondowners should be aware that future legislative actions (including federal income tax reform) may retroactively change the treatment of all or a portion of the interest on the 2019 Bonds for federal income tax purposes for all or certain taxpayers. In all such events, the market value of the 2019 Bonds may be affected and the ability of Bondowners to sell their 2019 Bonds in the secondary market may be reduced. The 2019 Bonds are not subject to special mandatory redemption, and the interest rates on the 2019 Bonds are not subject to adjustment, in the event of any such change in the tax treatment of interest on the 2019 Bonds. Prospective Bondowners are urged to consult their own tax advisors with respect to any such legislation, interpretation or development.

Although Bond Counsel is of the opinion that interest on the 2019 Bonds is excluded from gross income for federal income tax purposes and is exempt from Massachusetts personal income taxes, the ownership or disposition of, or the accrual or receipt of interest on, the 2019 Bonds may otherwise affect a Bondowner's federal or state tax liability. Among other possible consequences of ownership or disposition of, or the accrual or receipt of interest on, the 2019 Bonds, the Code requires recipients of certain social security and certain railroad retirement benefits to take into account receipts or accruals of interest on the 2019 Bonds in determining the portion of such benefits that are included in gross income. The nature and extent of these other tax consequences will depend upon the particular tax status of the Bondowner or the Bondowner's other items of income, deduction or exclusion. Bond Counsel expresses no opinion regarding any such other tax consequences, and Bondowners should consult with their own tax advisors with respect to such consequences.

OPINIONS OF COUNSEL

The unqualified approving opinion as to the legality of the 2019 Bonds will be rendered by Locke Lord LLP, Boston, Massachusetts, Bond Counsel to the Treasurer. The proposed form of the opinion of Bond Counsel is attached as *Appendix C*. Certain legal matters will be passed upon for the Underwriters by their counsel, Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts.

CONTINUING DISCLOSURE

In order to assist the Underwriters in complying with paragraph (b)(5) of Rule 15c2-12 of the Securities and Exchange Commission, the Commonwealth will undertake in the 2019 Notes to provide annual reports and notices of certain events. A description of this undertaking is set forth in Appendix D attached hereto. Except as noted below, the Commonwealth has not failed in the last five years to comply with its continuing disclosure undertakings with respect to any of its debt.

The Commonwealth failed to file event notices in June 2017 when the S&P Global Ratings rating on certain insured special obligation bonds payable from the Commonwealth's Convention Center Fund was lowered from AA- to A and in December, 2017 when the insurer asked that the rating on such bonds be withdrawn. The Commonwealth has filed notices of all such rating changes with respect to the bonds that are currently outstanding.

Pursuant to its continuing disclosure undertakings with respect to its general obligation bonds, the Commonwealth filed fiscal 2014 annual financial information on March 27, 2015; however, there was a failure to link the filing to certain CUSIP numbers for Commonwealth general obligation bonds issued from October 29, 2014 through December 31, 2014. In addition, certain annual financial information and audited financial statements of the Commonwealth were not properly linked to certain Commonwealth contract assistance bonds and certain CTF Bonds. Corrective filings have since been posted to EMMA.

In the course of substituting liquidity facilities in connection with certain Commonwealth general obligation variable rate demand bonds, supplements to the respective official statements for such bonds were posted in a timely manner to EMMA setting forth detailed information regarding the substituted liquidity facilities; however, separate event notices were not posted at the time. Event notices of the liquidity substitutions have since been posted.

In the course of reviewing its event notice filings, the Commonwealth discovered that bond call notices were not posted in a timely manner to EMMA in connection with certain advance refunding transactions and that a notice of defeasance was not timely posted to EMMA until approximately three and a half months after the defeasance occurred. The Commonwealth has posted such notices with respect to all Commonwealth bonds that have been advance refunded, where the funds to redeem or pay the bonds remain held in escrow.

The State Treasurer also regularly files information with EMMA beyond the documents required by the Commonwealth's continuing disclosure undertakings, including updated Information Statements. In addition, information of interest to investors may be posted on the Commonwealth's investor website at www.massbondholder.com, on twitter at twitter.com/BuyMassBonds and on the Commonwealth's "Mass. Investor Disclosure" mobile app.

MUNICIPAL ADVISOR

The Commonwealth has retained PFM Financial Advisors LLC ("PFM") to act as municipal advisor with respect to the issuance of the 2019 Bonds. PFM is not obligated to undertake, and has not undertaken, either to make an independent verification of or to assume responsibility for, the accuracy, completeness, or fairness of the information contained in this Official Statement and the appendices hereto. PFM is an independent municipal advisory firm and is not engaged in the business of underwriting, trading or distributing securities.

MISCELLANEOUS

Any provisions of the constitution of the Commonwealth, of all general and special laws and of other documents set forth or referred to in this Official Statement are only summarized, and such summaries do not purport to be complete statements of any of such provisions. Only the actual text of such provisions can be relied upon for completeness and accuracy.

This Official Statement contains certain forward-looking statements that are subject to a variety of risks and uncertainties that could cause actual results to differ from the projected results, including without limitation general economic and business conditions, conditions in the financial markets, the financial condition of the Commonwealth and various state agencies and authorities, receipt of federal grants, litigation, arbitration, force majeure events and various other factors that are beyond the control of the Commonwealth and its various agencies and authorities. Because of the inability to predict all factors that may affect future decisions, actions, events or financial circumstances, what actually happens may be different from what is set forth in such forward-looking statements. Forward-looking statements are indicated by use of such words as "may," "will," "should," "intends," "expects," "believes," "anticipates," "estimates" and others.

All estimates and assumptions in this Official Statement have been made on the best information available and are believed to be reliable, but no representations whatsoever are made that such estimates and assumptions are correct. So far as any statements in this Official Statement involve any matters of opinion, whether or not expressly so stated, they are intended merely as such and not as representations of fact. The various tables may not add due to rounding of figures.

The information, estimates and assumptions and expressions of opinion in this Official Statement are subject to change without notice. Neither the delivery of this Official Statement nor any sale made pursuant to this Official Statement shall, under any circumstances, create any implication that there has been no change in the affairs of the Commonwealth or its agencies, authorities or political subdivisions since the date of this Official Statement, except as expressly stated.

Neither the Commonwealth's independent auditors, nor any other independent accountants, have compiled, examined, or performed any procedures with respect to any prospective financial information contained herein, nor have they expressed any opinion or any other form of assurance on such information or its achievability, and assume no responsibility for, and disclaim any association with, any prospective financial information.

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AVAILABILITY OF OTHER INFORMATION

Questions regarding this Official Statement or requests for additional financial information concerning the Commonwealth should be directed to Susan E. Perez, Deputy Treasurer, Office of the Treasurer and Receiver-General, 1 Center Plaza, Suite 430, Boston, Massachusetts 02108, telephone (617) 367-3900, x. 816, or Mark Attia, Assistant Secretary, Executive Office for Administration and Finance, State House, Room 373, Boston, Massachusetts 02133, telephone (617) 727-2040. Questions regarding legal matters relating to this Official Statement and the Bonds should be directed to Walter J. St. Onge, III, Locke Lord LLP, 111 Huntington Avenue, Boston, Massachusetts 02199, telephone (617) 239-0389.

Information regarding the Commonwealth's capital spending plan is contained in the Information Statement. A copy of the Information Statement has been filed with the MSRB through EMMA. The Commonwealth's Information Statement is not incorporated herein by reference.

THE COMMONWEALTH OF MASSACHUSETTS

By: /s/Deborah B. Goldberg
Deborah B. Goldberg
Treasurer and Receiver-General

By: /s/Michael J. Heffernan
Michael J. Heffernan
Secretary of Administration and Finance

November 14, 2019

**SUMMARY OF CERTAIN PROVISIONS OF THE
COMMONWEALTH TRANSPORTATION FUND ACT AND THE SPECIAL OBLIGATION ACT**

The following is a brief summary of certain provisions of the Special Obligation Act (the “Special Obligation Act”), pursuant to which the 2019 Bonds are being issued, and the Commonwealth Transportation Fund Act (the “Commonwealth Transportation Fund Act” and together with the Special Obligation Act, the “Acts”), pursuant to which the Commonwealth Transportation Fund is established. The Special Obligation Act is codified as Section 2O of Chapter 29 of the General Laws and the Commonwealth Transportation Fund Act is codified as Section 2ZZZ of said Chapter 29. The Acts may be amended after the issuance of the 2019 Bonds, but any such amendment must comply with the covenants of the Commonwealth contained in the Trust Agreement, as described in this Official Statement. Although the Acts contain certain covenants of the Commonwealth, the Trust Agreement provides that any provision of the Acts creating a covenant with the owners of Bonds shall be deemed a covenant under the Trust Agreement only to the extent expressly provided for in, and as limited by, the Trust Agreement. See *Appendix B - Summary of Certain Provisions of the Trust Agreement*. This summary of the Acts does not purport to be complete, and reference is made to the Acts for a full and complete statement of its terms and provisions.

Commonwealth Transportation Fund Act

The Commonwealth Transportation Fund Act establishes the Commonwealth Transportation Fund, which is to be used exclusively for financing transportation-related purposes.

Amounts credited to the Commonwealth Transportation Fund include: all fees received by the registrar of motor vehicles to be deposited in the Commonwealth Transportation Fund pursuant to Section 34(iii) of Chapter 90, all receipts paid to the Commonwealth and directed to be credited to the Commonwealth Transportation Fund pursuant to Chapters 64A, 64E, 64F and any other amounts appropriated into the Commonwealth Transportation Fund. The Commonwealth Transportation Fund is subject to appropriation and shall be used for transportation related expenses of the Massachusetts Department of Transportation or any successor agency or authority, including to pay or reimburse the General Fund for payment of debt service on bonds issued by, or otherwise payable pursuant to a lease or other contract assistance agreement by, the Commonwealth for transportation purposes.

In addition to the revenues listed above, there are credited to the Commonwealth Transportation Fund all monies received by the Commonwealth from (i) the receipts from sales, as defined by Chapter 64H, of motor vehicles imposed under Section 3, 25 and 26 of Chapter 64H, (ii) from the purchase, as defined by Chapter 64H, of motor vehicles imposed under Section 4, 26 and 27 of Chapter 64 I, (iii) beginning in fiscal year 2015, from certain delivery fees with respect to underground storage tanks imposed under Section 2 of Chapter 21J and (iv) in fiscal 2015-2020, transfers made from the General Fund pursuant to the Transportation Finance Act. The amounts collected in (i) and (ii) above are net of amounts dedicated to the Massachusetts School Building Authority and the Massachusetts Bay Transportation Authority.

Pursuant to the Commonwealth Transportation Fund Act, not less than the following amounts shall annually be distributed from the Commonwealth Transportation Fund to the Massachusetts Bay Transportation Authority and regional transit authorities:

- (1) \$160 million to the Massachusetts Bay Transportation Authority or any fund controlled by the authority in each fiscal year; and
- (2) \$15 million to regional transit authorities organized under Chapter 161B or predecessor statutes in each fiscal year.

Special Obligation Act

Bonds issued in accordance with the provisions of the Special Obligation Act are special obligations of the Commonwealth payable solely from moneys credited to the Commonwealth Transportation Fund. Notwithstanding the provisions of any general or special law to the contrary, such special obligation bonds are not general obligations of the Commonwealth. Special obligation bonds may be secured by a trust agreement entered into by the Treasurer,

with the concurrence of the Secretary of Administration and Finance and the Secretary of Transportation, on behalf of the Commonwealth, which trust agreement may pledge or assign all or any part of moneys credited to the Commonwealth Transportation Fund and rights to receive the same, whether existing or coming into existence and whether held or thereafter acquired, and the proceeds thereof. The Treasurer is also authorized, with the concurrence of the Secretary of Administration and Finance and the Secretary of Transportation, to enter into additional security, insurance or other forms of credit enhancement which may be secured on a parity or subordinate basis with the special obligation bonds. The Special Obligation Act provides that a pledge in any such trust agreement or credit enhancement agreement is valid and binding from the time such pledge is made without any physical delivery or further act, and the lien of such pledge is valid and binding as against all parties having claims of any kind in tort, contract or otherwise, irrespective of whether such parties have notice thereof. Any such pledge may be perfected by filing the trust agreement or credit enhancement agreement in the records of the Treasurer, and no filing need be made under the Massachusetts Uniform Commercial Code.

The Special Obligation Act provides that any such trust agreement or credit enhancement agreement may establish provisions defining defaults and establishing remedies and other matters relating to the rights and security of the holders of the special obligation bonds or other secured parties as determined by the Treasurer, including provisions relating to the establishment of reserves, the issuance of additional or refunding bonds, whether or not secured on a parity basis, the application of receipts, moneys or funds pledged pursuant to such agreement, and other matters deemed necessary or desirable by the Treasurer for the security of such special obligation bonds, and may also regulate the custody, investment and application of monies. Any such special obligation bonds are deemed to be investment securities under the Massachusetts Uniform Commercial Code and are made securities in which any public officer, fiduciary, insurance company, financial institution or investment company may properly invest funds and which may be deposited with any public custodian for any purpose for which the deposit of bonds is authorized by law. The Special Obligation Act provides that any such special obligation bonds, their transfer and the income therefrom, including profit on the sale thereof, shall at all times be exempt from taxation by and within the Commonwealth.

In order to increase the marketability of any such special obligation bonds issued by the Commonwealth, and in consideration of the acceptance of payment for any such special obligation bonds, the Commonwealth covenants in the Special Obligation Act with the purchasers and all subsequent holders and transferees of any such special obligation bonds that while any such special obligation bond shall remain outstanding, and so long as the principal of or interest on any such special obligation bond shall remain unpaid: (i) no pledged funds shall be diverted from the Commonwealth Transportation Fund, (ii) in any fiscal year of the Commonwealth, unless and until an appropriation has been made which is sufficient to pay the principal, including sinking fund payments, of and interest on all such special obligation bonds of the Commonwealth and to provide for or maintain any reserves, additional security, insurance or other form of credit enhancement required or provided for in any trust agreement securing any such special obligation bonds, no pledged funds shall be applied to any other use and (iii) so long as such revenues are necessary, as determined by the Treasurer in accordance with any applicable trust agreement or credit enhancement agreement, for the purposes for which they have been pledged, the rates of the fees collected pursuant to Sections 33 and 34 of Chapter 90 of the General Laws and the excises imposed in Chapters 64A, 64E and 64F of the General Laws shall not be reduced below the amount in effect at the time of issuance of any such special obligation bond.

The Trust Agreement provides that any provision of the Special Obligation Act creating a covenant with the owners of the Bonds shall be deemed a covenant under the Trust Agreement only to the extent expressly provided for in and as limited by the Trust Agreement.

SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT

The Trust Agreement contains terms and conditions relating to the issuance and sale of Special Obligation Bonds under it, including various covenants and security provisions, certain of which are summarized below. For purposes of this summary, all references to “Bonds” shall refer to the Special Obligation Bonds. This summary does not purport to be comprehensive or definitive and is subject to all of the provisions of the Trust Agreement, as heretofore supplemented and amended and as further supplemented by the Tenth Supplemental Trust Agreement to which reference is hereby made. Copies of the Trust Agreement, as supplemented and amended, are available from Walter J. St. Onge III, Locke Lord LLP, 111 Huntington Avenue, Boston, Massachusetts 02199, telephone (617) 239-0389, Bond Counsel to the Commonwealth.

Definitions

The following is a summary of certain terms used in the Trust Agreement, in this Appendix B and otherwise used in this Official Statement.

“1994 Trust Agreement” shall mean the Trust Agreement between the Commonwealth and the 1994 Trustee, dated as of June 1, 1994, as amended and restated as of January 1, 2005, and as further amended and supplemented to the date of the Trust Agreement, relating to certain Special Obligation Revenue Bonds issued pursuant to the Act.

“1994 Trust Agreement Bonds” shall mean any outstanding bonds issued pursuant to the 1994 Trust Agreement.

“1994 Trustee” shall mean U.S. Bank National Association, as successor trustee under the 1994 Trust Agreement.

“Act” shall mean, collectively, the provisions of Sections 2O and 2ZZZ of Chapter 29 of the Massachusetts General Laws, as it may be amended from time to time.

“Accreted Value” shall mean with respect to any Bonds that are Capital Appreciation Bonds, an amount equal to the principal amount of such Capital Appreciation Bonds (determined on the basis of the initial principal amount per \$5,000 at maturity thereof) plus the amount assuming compounding (as set forth in the Applicable Supplemental Trust Agreement) of earnings which would be produced on the investment of such initial amount, beginning on the dated date of such Capital Appreciation Bonds and ending at the maturity date thereof, at a yield which, if produced until maturity, will produce \$5,000 at maturity.

“Additional Bonds” shall mean Bonds of the Commonwealth issued pursuant to the Trust Agreement.

“Additional Pledged Funds” shall mean any fees, duties, excises or license taxes which the Commonwealth may impose and collect relating to registration, operation or use of vehicles on public highways, or to fuels use for propelling such vehicles and subject to the restrictions of Article LXXVIII of the Constitution of the Commonwealth or any Federal Highway Reimbursements.

“Adjusted Bond Debt Service Requirement” shall mean, for any period of calculation, the aggregate Bond Debt Service Requirement on Bonds (but not including Subordinated Bonds) Outstanding during such period, taking into account the following adjustments:

- (i) with respect to Variable Rate Bonds, the aggregate Bond Debt Service Requirement based upon an interest rate equal to the average interest rate of the SIFMA Index over the five (5) years immediately prior to the date of calculation, as determined by the Commonwealth; provided, however, if the Commonwealth (1) enters into a Qualified Hedge Agreement requiring the Commonwealth to pay a fixed interest rate or providing for a maximum interest rate on a notional amount, and (2) has made a determination that such Qualified Hedge Agreement was entered into for the purpose of providing substitute interest payments or limiting the potential increase in the interest rate for a particular maturity of

Bonds in a principal amount equal to the notional amount of the Qualified Hedge Agreement, then during the term of such Qualified Hedge Agreement and so long as the Hedge Provider under such Qualified Hedge Agreement is not in default, the interest rate on such Bonds shall be based on the fixed interest rate or maximum interest rate, as the case may be, payable by the Commonwealth under such Qualified Hedge Agreement;

- (ii) with respect to Fixed Rate Bonds, if the Commonwealth (1) enters into a qualified Hedge Agreement requiring the Commonwealth to pay a variable interest rate on a notional amount and (2) has made a determination that such Qualified Hedge Agreement was entered into for the purpose of providing substitute interest payments for a particular maturity of Bonds in a principal amount equal to the notional amount of the Qualified Hedge Agreement, then during the term of such Qualified Hedge Agreement and so long as the Hedge Provider under such Qualified Hedge Agreement is not in default, the interest rate on such Bonds shall be determined as if such Bonds bore interest at the Assumed Hedge Rate;
- (iii) with respect to Tender Bonds, the aggregate Bond Debt Service Requirements thereon shall not include amounts payable upon mandatory or optional tender, as long as such Tender Bonds are secured by a Liquidity Facility, the aggregate Bond Debt Service Requirement shall be deemed to include all periodic Bond Related Costs payable to the provider of any Liquidity Facility, but shall not be deemed to include any Reimbursement Obligation to such provider except to the extent provided in the Applicable Supplemental Trust Agreement;
- (iv) with respect to Bonds that have Credit Enhancement, the aggregate Bond Debt Service Requirements thereon shall be deemed to include all periodic Bond Related Costs and other payments to the provider of the Credit Enhancement, but shall not be based upon the terms of any Reimbursement Obligation to such provider except to the extent and for periods during which Bond Related Costs and other payments are required to be made pursuant to such Reimbursement Obligation due to such provider advancing funds;
- (v) the amount of any principal of any of the Refunded Bonds paid or to be paid from an Escrow Account pursuant to any Supplemental Trust Agreement shall be deducted from the Adjusted Bond Debt Service Requirements for the applicable period; and
- (vi) with respect to Balloon Indebtedness, the aggregate Bond Debt Service Requirement shall be calculated as if the Principal Installments with respect to such Bonds amortized over a period of up to 25 years after the date such Balloon Indebtedness would otherwise be due (but not later than the final maturity date of such Balloon Indebtedness) at an interest rate equal to The *Bond Buyer's* Revenue Bond Index (or, if such index is no longer published, such other substantially comparable index as may be selected by the Commonwealth) as of the most recent date for which such index was published prior to the date of such calculation.

“Advance Refunded Municipal Bonds” shall mean any bonds or other obligations of any state of the United States of America or of any agency, instrumentality or local governmental unit of any such state (i) which are not callable at the option of the obligor or otherwise prior to maturity or as to which irrevocable notice has been given by the obligor to call such bonds or obligations on the date specified in the notice, (ii) which are fully secured as to principal and interest and redemption premium, if any, by a fund consisting only of cash or Government Obligations which is sufficient to pay interest when due, principal of and redemption premium, if any, on such bonds or other obligations described in this definition on the maturity date or dates thereof or on the specified redemption date or dates, as appropriate and (iii) as to which the principal of and interest on the Government Obligations which have been deposited in such fund along with any cash on deposit in such fund is sufficient to pay interest when due, principal of and redemption premium, if any, on the bonds or other obligations described in this definition on the maturity date or dates thereof or on the redemption date or dates specified in the irrevocable notice referred to in subclause (i) above, as appropriate.

“Agency Obligations” shall mean obligations issued or guaranteed by the Federal National Mortgage Association, Government National Mortgage Association, Federal Financing Bank, Federal Intermediate Credit Banks, Federal Farm Credit Bank, Banks for Cooperatives, Federal Land Banks, Federal Farm Credit Banks Funding Corporation, Farm Credit System Financial Assistance Corporation, Federal Home Loan Banks, Farmers Home Administration, Export-Import Bank of the United States, Resolution Funding Corporation, Student Loan Marketing Association, United States Postal Service, Tennessee Valley Authority, Federal Home Loan Mortgage Corporation or any other agency or corporation which has been or may hereafter be created pursuant to an act of Congress as an agency or instrumentality of the United States of America.

“Applicable Supplemental Trust Agreement” shall mean with respect to any Series of Bonds, the Supplemental Trust Agreement authorizing such Series of Bonds.

“Appreciated Value” shall mean with respect to Deferred Income Bonds until the interest commencement date thereon, an amount equal to the principal amount of such Deferred Income Bond (determined on the basis of the initial principal amount per \$5,000 at the interest commencement date thereof) plus the amount, assuming compounding of earnings which would be produced on the investment of such initial amount, beginning on the dated date of such Deferred Income Bond and ending on the interest commencement date, at a yield which, if produced until the interest commencement date, will produce \$5,000 at the interest commencement date.

“Authorized Officer” shall mean the Treasurer or any designee thereof the Secretary or Chief Financial Officer of MassDOT or any designee thereof and any other person authorized by law to perform a duty or sign a document under the Trust Agreement.

“Balloon Indebtedness” shall mean (i) a Series of Bonds with respect to which, upon the issuance thereof, 25% or more of the Principal Installments are due, whether by maturity, mandatory redemption or optional or mandatory tender (and in the case of any Tender Bonds, such Bonds are not secured by a Liquidity Facility) in the same Fiscal Year or (ii) any portion of a Series of Bonds which is so designated by the Commonwealth in the Applicable Supplemental Trust Agreement by providing that such portion shall be deemed to constitute a separate issue of Balloon Indebtedness.

“Bond Authorizations” shall mean such provisions of the laws of the Commonwealth enacted in accordance with the applicable provisions of the Constitution of the Commonwealth authorizing bonds for transportation-related purposes or to refund any Bonds or Transportation Bonds and that may be issued as special obligation bonds under the provisions of the Act.

“Bond Debt Service Requirement” shall mean, for any period of calculation, the aggregate of the interest, principal amount, and Sinking Fund Payments due or to become due other than by reason of redemption at the option of the Commonwealth or the registered owner of any Bonds on all Bonds Outstanding during such period and shall include the scheduled principal and interest portions of the Accreted Value of Capital Appreciation Bonds and the Appreciated Value of Deferred Income Bonds becoming due at maturity or by virtue of Sinking Fund Payments on such Bonds.

“Bond Counsel” shall mean any lawyer or firm of lawyers nationally recognized in the field of municipal finance and selected by the Treasurer.

“Bond Related Costs” shall mean all costs, fees and expenses of the Commonwealth incurred or related to any Liquidity Facility, Credit Enhancement, Reserve Credit Facility, any remarketing or other secondary market transactions, any fees of Bond Counsel, attorneys, financial advisors, Fiduciaries, remarketing agents, rebate consultants, accountants and other advisors retained by the Commonwealth in connection with a Series, and any other fees, charges and expenses that may be lawfully incurred by the Commonwealth to a provider of any Credit Enhancement, Liquidity Facility or Reserve Credit Facility, other than amounts paid as the costs of issuance for a series or to reimburse the provider of any Credit Enhancement, Liquidity Facility or Reserve Credit Facility.

“Bonds” shall mean any of the Bonds of the Commonwealth authenticated and delivered under the Trust Agreement, including Subordinated Bonds unless expressly stated otherwise.

“Build America Bonds” shall have the meaning set forth in Section 54AA of the Code.

“Capital Appreciation Bonds” shall mean any Bonds as to which interest is payable only at the maturity or prior redemption thereof.

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

“Commonwealth Transportation Fund” shall mean the Commonwealth Transportation Fund so designated and established pursuant to the provisions of the Act or any other fund or account of the Commonwealth or any agency thereof created in replacement thereof.

“Credit Enhancement” shall mean any agreement, including, but not limited to a policy of bond insurance, surety bond, irrevocable letter of credit, credit agreement, credit facility or guaranty arrangement with a bank, trust company, insurance company, surety bonding company, pension fund or other financial institution that provides increased credit on or security for any Series (or portion thereof) of Bonds.

“Debt Service Fund Requirement” shall mean, as of any particular date of computation with respect to Bonds other than Subordinated Bonds, (i) any unpaid interest due on such Bonds at or before said date and all unpaid interest due on such Bonds at or before said date and all unpaid interest on such Bonds accrued but not due at said date, (ii) the principal amount of any such Bonds matured and unpaid at or before said date, and (iii) with respect to any Principal Installment of any Bonds not included in (ii) above, but payable on the next succeeding Principal Installment payment date other than by reason of redemption at the option of the Commonwealth or the Holder of any Bonds, that portion of such Principal Installment determined by multiplying such Principal Installment by a fraction, the numerator of which shall be the number of days elapsed from and including the immediately preceding Principal Installment payment date, or if (a) there be no such date with respect to such Bonds, or (b) such preceding Principal Installment payment date is more than one year prior the due date of such Principal Installment, then from a date one year preceding the due date of such Principal Installment or from the date of issuance thereof, whichever date is later, to the date of such calculation and the denominator of which shall be the number of days from and including the immediately preceding Principal Installment payment date, or if (c) there be no such date with respect to such Bonds, or (d) such preceding Principal Installment payment date is more than one year prior to the due date of such Principal Installment, then from a date one year preceding the due date of such Principal Installment or from the date of issuance thereof, whichever date is later, to such Principal Installment payment date.

“Defeasance Obligations” shall mean Government Obligations, Agency Obligations and Advance Refunded Municipal Bonds.

“Direct Payment” means the refundable tax credit paid to the Commonwealth by the federal government equal to a percentage of the taxable interest the Commonwealth pays on any Build America Bonds in accordance with Code § 54AA or any Recovery Zone Economic Development Bonds in accordance with Code § 1400U-2. The actual percentage of the interest expected to be received by the Commonwealth, shall be as set forth in the Applicable Supplemental Trust Agreement.

“Discount Bonds” shall have the meaning given such term in the Trust Agreement.

“Federal Highway Construction Program” shall mean all federally-aided highway construction projects undertaken by the Commonwealth as part of the Commonwealth’s program of transportation development and improvements at any time prior to or after the date of execution of any Supplemental Trust Agreement pledging Federal Highway Reimbursements as Additional Pledged Funds.

“Federal Highway Grant Anticipation Notes” shall mean the Federal Highway Grant Anticipation Notes (Accelerated Bridge Program), 2010 Series A, issued and delivered on December 23, 2010, and any other Federal Highway Grant Anticipation Notes hereafter issued and delivered, in each case, pursuant to the GAN Trust Agreement.

“Federal Highway Reimbursements” shall mean all federal highway construction reimbursements and any other federal highway assistance received from time to time by the Commonwealth with respect to the Federal

Highway Construction Program under or in accordance with Title 23 of the United States Code or any successor program established under federal law.

“Fiduciary” shall mean the Trustee or any Paying Agent.

“Fiscal Year” shall mean the period beginning on July 1 of any calendar year and ending on June 30 of the succeeding calendar year or such other period of twelve consecutive calendar months as may be provided by law as the fiscal year of the Commonwealth.

“GAN Trust Agreement” shall mean the Trust Agreement dated as of December 1, 2010, as amended and supplemented from time to time, between the Commonwealth and the GAN Trustee.

“GAN Trustee” shall mean U.S. Bank National Association, as successor Trustee under the GAN Trust Agreement, and its successors and assigns.

“GANs” shall mean collectively, the Commonwealth’s Federal Highway Grant Anticipation Notes (Accelerated Bridge Program), 2010 Series A, 2013 Series A, 2014 Series A, 2016 Series A, 2017 Series A, 2019 Series A and any additional notes hereafter issued under the GAN Trust Agreement.

“Government Obligations” shall mean direct general obligations of, or obligations the timely payment of principal of and interest on which are unconditionally guaranteed by, the United States of America.

“Hedge Provider” shall mean the counterparty with whom the Commonwealth enters into a Qualified Hedge Agreement.

“Liquidity Facility” shall mean any agreement with a bank, trust company, insurance company, surety bonding company, pension fund or financial institution under which it agrees to purchase Tender Bonds.

“MassDOT” shall mean the Massachusetts Department of Transportation established pursuant to Chapter 6C of the Massachusetts General Laws, and any successors or assigns thereto.

“Motor Fuels Tax” shall mean the excise imposed on fuel (other than aviation fuel) by the provisions of Chapter 64A, 64E and 64F of the Massachusetts General Laws in effect as of the date of issuance of the Bonds.

“Outstanding,” when used with reference to Bonds, shall mean all Bonds authenticated and delivered, as of a particular date, except (i) any Bond cancelled by the Commonwealth or a Fiduciary at or before said date, (ii) any Bond in lieu of or in substitution for which another Bond shall have been authenticated and delivered and (iii) Bonds deemed to have been paid as described under “Defeasance.”

“Paying Agent” shall mean any paying agent or co-paying agent for a series of Bonds.

“Permitted Investments” shall mean and include any of the following, if and to the extent the same are at the time legal for investment of Commonwealth funds:

- (i) Government Obligations;
- (ii) Agency Obligations;
- (iii) Certificates or receipts representing direct ownership of future interest or principal payments on Government Obligations or any obligations of agencies or instrumentalities of the United States of America which are backed by the full faith and credit of the United States, which obligations are held by a custodian in safekeeping on behalf of the holders of such receipts;

- (iv) Direct obligations and fully guaranteed certificates of beneficial interest of the Export-Import Bank of the United States; senior debt obligations of the Federal Home Loan Banks; debentures of the Federal Housing Administration; guaranteed mortgage-backed bonds and guaranteed pass-through obligations of the Government National Mortgage Association; guaranteed Title XI financing of the U.S. Maritime Administration; mortgage-backed securities and senior debt obligations of the Federal National Mortgage Association; obligations of the Student Loan Marketing Association; obligations of the Federal Farm Credit Systems; obligations of the Resolution Trust Corporation and participation certificates and senior debt obligations of the Federal Home Loan Mortgage Corporation or any successor agency to each of the foregoing;
- (v) All other obligations issued or unconditionally guaranteed as to the timely payment of principal and interest by an agency or person controlled or supervised by and acting as an instrumentality of the United States of America pursuant to authority granted by Congress;
- (vi) (a) Interest-bearing time or demand deposits, certificates of deposit, or other similar banking arrangements with any government securities dealer, bank, trust company, savings and loan association, national banking association or other savings institution (including the Trustee), provided that such deposits, certificates, and other arrangements are fully insured by the Federal Deposit Insurance Corporation or the Federal Savings and Loan Insurance Corporation or (b) interest-bearing time or demand deposits or certificates of deposit with any bank, trust company, national banking association or other savings institution (including the Trustee), provided such deposits and certificates are in or with a bank, trust company, national banking association or other savings institution whose long-term unsecured debt is rated in one of the three highest long-term Rating Categories by each Rating Agency then maintaining a rating on any Bonds, and provided further that with respect to (a) and (b), any such obligations are held by the Trustee or a bank, trust company or national banking association other than the issuer of such obligations, unless the issuer is the Trustee;
- (vii) Repurchase agreements collateralized by securities described in subparagraphs (i), (ii), (iii) or (iv) above with any registered broker/dealer or with any commercial bank, provided that (a) a specific written repurchase agreement governs the transaction, (b) the securities are held, free and clear of any lien, by the Trustee or an independent third party acting solely as agent for the Trustee, and such third party is (1) a Federal Reserve Bank, or (2) a bank which is a member of the Federal Deposit Insurance Corporation and which has combined capital, surplus and undivided profits of not less than \$25 million, and the Trustee shall have received written confirmation from such third party that it holds such securities, free and clear of any lien, as agent for the Trustee, (c) the repurchase agreement has a term of thirty days or less, or the Trustee or the third-party custodian will value the collateral securities no less frequently than monthly and will liquidate the collateral securities if any deficiency in the required collateral percentage is not restored within five business days of such valuation, and (d) the fair market value of the collateral securities in relation to the amount of the repurchase obligation, including principal and interest, is equal to at least 102%;
- (viii) Money market funds rated in the highest short-term Rating Category by each Rating Agency then maintaining a rating on any Bonds;
- (ix) Commercial paper rated in the highest short-term Rating Category by each Rating Agency then maintaining a rating on any Bonds;
- (x) Advanced-Refunded Municipal Bonds;

- (xi) Short-term or long-term obligations of any state of the United States of America that are rated in the three highest rating categories by each Rating Agency then maintaining a rating on any Bonds Outstanding;
- (xii) investment contracts with banks or other financial institutions whose long-term unsecured debt or claims-paying ability is rated in one of the three highest Rating Categories by each Rating Agency then maintaining a rating on any of the Bonds Outstanding, but in no event lower than the Rating Category designated by such Rating Agency for the Bonds.

“Pledged Funds” shall mean and include the following:

- (i) all moneys received or to be received by the Commonwealth from the portion of the Motor Fuels Tax equal to fourteen and one thousand and eighty-five ten-thousandths cents (\$0.141085) per gallon with respect to the excise tax imposed on fuel (other than aviation fuel) by the provisions of Chapter 64A*, equal to twenty-one cents (\$0.21) per gallon with respect to the excise tax imposed on fuel (other than liquefied gas) by the provisions of Chapters 64E and 64F, and equal to 19.1 percent of the average price per gallon (computed to the nearest tenth of one percent) with respect to the excise tax imposed on liquefied gas;
- (ii) all Registry Fees;
- (iii) all moneys received or to be received by the Trustee from the 1994 Trust Agreement;
- (iv) subject in all respects to the prior lien of the 1994 Trust Agreement, all moneys received or to be received by the Commonwealth from that portion of the Motor Fuels Tax imposed pursuant to Chapter 64A (other than aviation fuel) equal to six and eighty-six hundredths cents (\$0.0686) per gallon, together with any other amounts now constituting “Pledged Funds” within the meaning of the 1994 Trust Agreement;
- (v) Direct Payments received by the Commonwealth with respect to Build America Bonds and Recovery Zone Economic Development Bonds; and
- (vi) to the extent permitted by the Trust Agreement, such Additional Pledged Funds as the Commonwealth may by a subsequent Supplemental Trust Agreement pledge to the Trustee as security for the Bonds. (*See third paragraph under “The Pledge”*)

“Principal Installment” shall mean (i) the principal amount of Outstanding Bonds of a Series which mature on a single future date, reduced by the aggregate principal amount of such Outstanding Bonds which would at or before said future date be retired by reason of the payment when due and application of Sinking Fund Payments payable at or before said future date for the retirement of such Outstanding Bonds, plus (ii) the amount of any Sinking Fund Payment payable on said future date for the retirement of any Outstanding Bonds of said Series.

“Qualified Hedge Agreement” shall mean an interest rate exchange, cap, floor or collar agreement between the Commonwealth and a Hedge Provider based upon a notional amount where (a) the Hedge Provider, or the person who guarantees the obligation of the Hedge Provider to make any payments due to the Commonwealth, has unsecured long-term obligations rated, or (b) the hedge agreement itself is rated, in each case as of the date the hedge agreement is entered into, by each Rating Agency then maintaining a rating on the Bonds Outstanding in a Rating Category, with respect to each such Rating Agency, at least equal to “A,” but in no event lower than the Rating Category designated by such Rating Agency for the Bonds Outstanding subject to such hedge agreement.

* Fuel subject to the provisions of Chapter 64A consisting of cellulosic biofuel or a blend of motor fuels and cellulosic biofuel is taxable in proportion to the percentage of the fuel content consisting of motor fuels, as determined by the Commonwealth’s Department of Energy Resources.

“Rating Agency” shall mean Moody’s Investors Service, Inc. and S & P Global Ratings, a division of Standard & Poor’s Financial Services LLC, and their respective successors or assigns.

“Rating Categories” shall mean rating categories as published by a Rating Agency in its written compilations of ratings and any written supplement or amendment thereto and any such Rating Category shall be determined on the generic rating without regard to any modifiers and, unless otherwise specified in the Trust Agreement or an Applicable Supplemental Trust Agreement, shall be long term ratings.

“Recovery Zone Economic Development Bonds” shall have the meaning set forth in Section 1400U-2 of the Code and the Trust Agreement.

“Registry Fees” shall mean the moneys deposited in the Commonwealth Transportation Fund pursuant to Section 34(iii) of Chapter 90.

“SIFMA Index” shall mean, on any day, the index currently known as the Securities Industry and Financial Markets Association (SIFMA) Municipal Swap Index as of the most recent date for which such index was published by Municipal Market Data, Inc., any successor to such index, or, if such index is no longer published by Municipal Market Data, Inc. or its successor, any other reasonably comparable index selected by the Commonwealth.

“Sinking Fund Payment” shall mean the amount of money required by any Supplemental Trust Agreement to be paid by the Commonwealth on a single future date for the retirement of any Outstanding Bonds of said Series which mature after said future date, but does not include any amount payable by the Commonwealth by reason of the redemption of Bonds at the election of the Commonwealth

“Subordinated Bonds” shall mean any bonds, notes or other evidences of indebtedness issued on a subordinate basis pursuant to the Trust Agreement.

“Subordinated Debt Service Fund Requirement” shall mean, as of any particular date of computation, the amount of money obtained by aggregating the several sums, computed with respect to Subordinated Bonds Outstanding, of (i) any unpaid interest due on such Subordinated Bonds at or before said date and all unpaid interest on such Subordinated Bonds accrued but not due at said date, (ii) the principal amount of any such Subordinated Bonds matured and unpaid at or before said date, and (iii) with respect to any Principal Installment of any Subordinated Bonds not included in (ii) above, but payable on the next succeeding Principal Installment payment date other than by reason of redemption at the option of the Commonwealth or the Holder of any Subordinated Bonds, that portion of such Principal Installment determined by multiplying such Principal Installment by a fraction, the numerator of which shall be the number of days elapsed from and including the immediately preceding Principal Installment payment date, or if (a) there be no such date with respect to such Subordinated Bonds or (b) such preceding Principal Installment payment date is more than one year prior to the due date of such Principal Installment, then from a date one year preceding the due date of such Principal Installment or from the date of issuance thereof, whichever date is later, to the date of such calculation and the denominator of which shall be the number of days from and including the immediately preceding Principal Installment payment date, or if (c) there be no such date with respect to such Subordinated Bonds or (d) such preceding Principal Installment payment date is more than one year prior to the due date of such Principal Installment, then from a date one year preceding the due date of such Principal Installment or from the date of issuance thereof, whichever date is later, to such Principal Installment payment date.

“Tax Exempt Bonds” shall mean any Bonds accompanied by a Bond Counsel’s opinion upon the original issuance thereof that the interest on such Bonds is not includable in the gross income of the holder thereof for Federal income tax purposes.

“Third Supplemental Trust Agreement” shall mean the Third Supplemental Trust Agreement dated as of November 1, 2013, between the Commonwealth and the Trustee.

“Transportation Bonds” shall mean bonds issued from time to time by the Commonwealth pursuant to the Act, other than Bonds issued under the Trust Agreement.

The Pledge

There are pledged for the payment of principal and Redemption Price of and interest on the Bonds other than the Subordinated Bonds (i) the Pledged Funds and all rights to receive the same, whether existing or coming into existence and whether held or thereafter acquired and including any proceeds thereof, (ii) all moneys, securities and any investment earnings with respect thereto, in all Funds and Accounts established by or pursuant to the Trust Agreement other than the Rebate Fund, and the Subordinated Debt Service Fund, and (iii) any amounts payable to the Commonwealth by a Hedge Provider pursuant to a Qualified Hedge Agreement. The full faith and credit of the Commonwealth has not been pledged to the payment of the Bonds.

The Commonwealth may in any Supplemental Trust Agreement pledge additional portions of the Motor Fuels Tax, Registry Fees or any Additional Pledged Funds or portions thereof which the Commonwealth may lawfully pledge to the payment of amounts due under the Trust Agreement. From and after the date of such Supplemental Trust Agreement such amounts shall be deemed part of the Pledged Funds under the Trust Agreement. No amounts may be pledged which are subject to any other lien or pledge unless such lien or pledge is made expressly subordinate to the pledge created under the Trust Agreement. (Section 501)

Pursuant to the Third Supplemental Trust Agreement, the Commonwealth pledged as “Additional Pledged Funds”: (i) all moneys received or to be received by the Commonwealth from the portion of the Motor Fuels Tax (A) equal to two and nine thousand nine hundred and fifty-five ten-thousandths cents (\$0.029955) per gallon with respect to the excise tax imposed on fuel (other than aviation fuel) by the provisions of Chapter 64A, (B) equal to three cents (\$0.03) per gallon with respect to the excise tax imposed on fuel (other than liquefied gas) by the provisions of Chapters 64E and 64F and (C) allocable to any adjustment in rate resulting from an increase in the Consumer Price Index (as defined in 26 U.S.C. 1) as provided in the definition of “tax per gallon” in Section 1 of Chapter 64A, provided that amounts described in clause (C) shall not constitute Additional Pledged Funds if Initiative Petition Number 13-15, as certified by the Attorney General of the Commonwealth on September 4, 2013, shall become law.

As a result of the passage of the Initiative Petition at the November 4, 2014 statewide general election, the Consumer Price Index adjustment provision will not take effect and the amounts described in clause (C) shall not constitute Additional Pledged Funds.

Trust Agreement to Constitute Contract

The Trust Agreement constitutes a contract between the Commonwealth and the registered owners from time to time of the Bonds, and the pledge made therein and the covenants and agreements therein set forth to be performed by or on behalf of the Commonwealth shall be for the equal benefit, protection and security of the registered owners of any and all of the Bonds, all or which, regardless of the time or times of their issue or maturity, shall be of equal rank without preference, priority or distinction of any of the Bonds over any other thereof, except as otherwise expressly provided in or permitted by the Trust Agreement (Section 202).

Authorization of Bonds

The Commonwealth is authorized to issue one or more series of Bonds under the Trust Agreement, which Bonds may be issued without limitation as to amount except as provided in the Trust Agreement with respect to Additional Bonds or as limited by law. The Bonds may be issued as Fixed Rate Bonds, Variable Rate Bonds, Tender Bonds, Capital Appreciation Bonds, Deferred Income Bonds, Discount Bonds, Build America Bonds or Recovery Zone Economic Development Bonds or any combination thereof.

The Commonwealth may issue Bonds (“Variable Rate Bonds”) which provide for a variable, adjustable, convertible or other similar rates of interest, not fixed as to percentage at the date of issue for the term thereof. Any Variable Rate Bonds shall bear a ceiling (the “Variable Rate Ceiling”) on the interest payable thereunder.

The Commonwealth may provide that any Series of Bonds may include an option exercisable by the registered owners thereof to have such Bonds (“Tender Bonds”) either repurchased or redeemed prior to the maturity thereof. Any Tender Bonds may be secured by a Liquidity Facility providing for the repurchase or payment of any

tender price of Tender Bonds which have not been remarketed upon tender of such Bonds and any accrued and unpaid interest due on such Bonds upon the tender date thereof. The provider of any such Liquidity Facility shall have a rating on its short term obligations within the highest Rating Category from each Rating Agency then maintaining a rating on the Bonds Outstanding.

The Commonwealth may issue Bonds (“Discount Bonds”) which either bear a zero stated rate of interest or bear a stated rate of interest such that such Bonds are sold at a price less than the aggregate principal amount thereof in order to provide such yield thereon as deemed appropriate and desirable thereon by the Commonwealth. The Commonwealth may provide for the determination of the “principal amount” and “interest” payable on such Bonds.

The Commonwealth may issue Bonds (“Build America Bonds” or “Recovery Zone Economic Development Bonds,” as specified by the Commonwealth at the time of issuance thereof) that provide for a Direct Payment to be received by the Commonwealth from the federal government with respect to a portion of the interest payable on such Bonds. The Applicable Supplemental Trust Agreement shall authorize the Treasurer to make any elections, certifications, representations, agreements, modifications or amendments required with respect to any such Bonds, including, without limitation, to the extent permitted or authorized by law, the allocation to the Revenue Account of any Direct Payment received by the Commonwealth from the federal government with respect to a portion of the interest payable on such Bonds. (Section 203)

Additional Bonds

One or more Series of Additional Bonds may be issued for the purpose of (i) paying all or a portion of the cost of any Project including the refunding of any Transportation Bonds, 1994 Trust Agreement Bonds or any Bonds, (ii) the making of deposits in the Debt Service Fund or the Subordinated Debt Service Fund, as applicable, (iii) the payment of the Costs of Issuance of such Bonds, (iv) the payment of the principal of and interest and premium, if any, on notes issued in anticipation of such Bonds or (v) any combination of the foregoing.

Additional Bonds may be issued only upon the delivery, among other items, of the following:

- (i) A Bond Counsel’s opinion with respect to the validity of the Additional Bonds and the enforceability of the pledge under the Trust Agreement;
- (ii) The documents and moneys, if any, required by the Applicable Supplemental Trust Agreement;
- (iii) A certificate of an Authorized Officer stating that, as to the delivery of such Additional Bonds, no Event of Default will have happened or will then be continuing;
- (iv) A certificate or certificates of the Commissioner of Revenue or the Comptroller setting forth the amount of Pledged Funds received by the Commonwealth for each month for the 18-month period ending with the last full month immediately preceding the issuance of the Additional Bonds;
- (v) One of the following certificates as determined by the Treasurer:
 - (A) A certificate of an Authorized Officer showing that the amount of Pledged Funds received by the Treasurer during any 12 consecutive months out of such 18-month period referred to in subparagraph (iv) above was not less than 400% of the maximum aggregate Adjusted Bond Debt Service Requirement due in the then current or any future Fiscal Year on Bonds Outstanding including the proposed Additional Bonds, or
 - (B) if the Commonwealth shall pledge an additional portion of the Motor Fuels Tax, Registry Fees or any other Additional Pledged Funds which amounts shall have been collected by the Commonwealth for at least 12 consecutive months of the 18-month period described in subparagraph (iv) above, (x) a certificate of the Comptroller and/or the

Commissioner of Revenue showing Pledged Funds for 18 consecutive months immediately preceding the month in which the Additional Bonds are issued, calculated on the basis that Pledged Funds shall include such Additional Pledged Funds for such period, and (y) a certificate of an Authorized Officer showing that the Pledged Funds calculated as provided in subparagraph (iv) above for any 12 consecutive months during the 18-month period described in (x) above shall be not less than 400% of the maximum aggregate Adjusted Bond Debt Service Requirement during the then current Fiscal Year or any future Fiscal Year on all Bonds Outstanding including the proposed Additional Bonds, or

(C) if the Commonwealth shall pledge an additional portion of the Motor Fuels Tax, Registry Fees or any other Additional Pledged Funds, which Additional Pledged Amounts have not been collected by the Commonwealth during at least 12 consecutive months of the 18-month period described in subparagraph (iv) above, a certificate of an Authorized Officer showing that the amount of any Pledged Funds projected to be received by the Commonwealth after giving effect to any such Additional Pledged Funds during the first full Fiscal Year immediately succeeding the issuance of the proposed Additional Bonds will not be less than 400% of the maximum aggregate Adjusted Bond Debt Service Requirement due in the then current or in any future Fiscal Year on Bonds Outstanding including the proposed Additional Bonds;

- (vi) If the Commonwealth shall deliver a certificate described in (v)(B) above, which shall include as a basis for calculation of Pledged Funds any Additional Pledged Funds, other than an additional portion of the Motor Fuels Tax, Registry Fees or a certificate pursuant to (v)(C) above, confirmation from each Rating Agency maintaining a rating on Bonds Outstanding that the issuance of such Additional Bonds shall not adversely affect their rating in effect on Bonds Outstanding;
- (vii) If Additional Bonds are to be issued as Tender Bonds, a fully executed copy of the Liquidity Facility for the Bonds, if any; and
- (viii) If applicable, a certificate of an Authorized Officer setting forth the interest rate (the "Assumed Hedge Rate") that such Authorized Officer reasonably determines will be the average interest rate that will be payable for the next succeeding twelve consecutive months on the notional amount under any Qualified Hedge Agreement. (Section 206)

Refunding Bonds

One or more Series of Refunding Bonds may be issued for the purpose of refunding all or any part of the Bonds of one or more Series Outstanding upon delivery, among other items, of the following:

- (i) An opinion of Bond Counsel as described above under "Additional Bonds;"
- (ii) A certificate of an Authorized Officer setting forth the Adjusted Bond Debt Service Requirement for each Fiscal Year in which Bonds are or will be Outstanding (a) computed immediately prior to the delivery of such Refunding Bonds and (b) computed immediately after the delivery of such Refunding Bonds, and showing either that (x) the Adjusted Bond Debt Service Requirement in each Fiscal Year in which Bonds will be Outstanding as computed in (b) of this paragraph will not be greater than the Adjusted Bond Debt Service Requirement in each such Fiscal Year as computed (a) of this paragraph or (y) the net present value of the Adjusted Bond Debt Service Requirement as computed in paragraph (b) of this paragraph is less than the net present value of the Adjusted Bond Debt Service Requirement as computed in paragraph (a) of this paragraph; provided that, in lieu of such certificate, the Comptroller or Commissioner of Revenue and an Authorized Officer may deliver to the Trustee certificates satisfying the conditions described under "Additional Bonds;" and

- (iii) An amount of money or Defeasance Obligations sufficient to effect payment at maturity or redemption of the Bonds to be refunded. (Section 207)

Bond Anticipation Notes

The Commonwealth may, to the extent authorized by law, issue notes (and renewals thereof) in anticipation of a Series of Bonds. The proceeds of such notes or such Series of Bonds may be pledged for the payment of the principal of and interest on such notes. The Commonwealth may also pledge the Pledged Funds to the payment of such notes. Prior to the issuance of any such notes, the Treasurer shall certify to the Trustee that he reasonably expects that all applicable requirements pertaining to the issuance of the Series of Bonds in anticipation of which such notes are to be issued can be satisfied. (Section 208)

Creation of Liens; Other Indebtedness

The Commonwealth may not issue any bonds, notes or other evidences of indebtedness, other than the Bonds, secured by a pledge of or other lien on the Pledged Funds or any other moneys, securities and funds held or set aside by the Commonwealth or by the Fiduciaries under the Trust Agreement, and shall not otherwise create or cause to be created any lien or charge on such Pledged Funds, moneys, securities and funds. The Trust Agreement permits the issuance of other indebtedness (and renewals thereof), including bond anticipation notes, secured by a subordinate lien on Pledged Funds, and other indebtedness secured by a lien on that portion of the Motor Fuels Tax, Registry Fees or any other amounts not included as Pledged Funds. (Section 209)

Credit Enhancement/Liquidity Facilities

The Commonwealth may obtain or cause to be obtained Credit Enhancement or a Liquidity Facility providing for payment of all or a portion of the principal, premium, or interest due or to become due on such Bonds or providing for the purchase of such Bonds or a portion thereof. In connection therewith the Commonwealth may agree with the issuer of such Credit Enhancement or Liquidity Facility to reimburse such issuer directly for amounts paid under the terms of such Credit Enhancement or Liquidity Facility, together with interest thereon. Such reimbursement obligation may be subject to a lien on Pledged Funds on a parity with the lien for the related Series of Bonds created under the Trust Agreement. A reimbursement obligation relating to a Liquidity Facility securing Variable Rate Bonds may be subject to a lien on Pledged Funds only to the extent that it is subordinate to the lien created under the Trust Agreement. (Section 210)

Qualified Hedge Agreements

The Commonwealth may from time to time enter into Qualified Hedge Agreements with a Hedge Provider with respect to all or a portion of the Bonds of any Series Outstanding. The obligations of the Commonwealth thereunder may be secured by a pledge of the Pledged Funds; provided, however, that such security shall be expressly subordinate to the security for the Bonds Outstanding.

Any amounts paid to the Commonwealth pursuant to a Qualified Hedge Agreement shall be deposited in the Revenue Account. Any amounts payable by the Commonwealth under a Qualified Hedge Agreement may be payable from the Infrastructure Fund from amounts after funding of amounts in the various Funds and Accounts under the Trust Agreement. Upon the issuance of any Additional Bonds or Refunding Bonds, the Authorized Officer shall set an interest rate (the "Assumed Hedge Rate") which the Authorized Officer reasonably determines will be the average interest rate which will be payable for the next succeeding twelve consecutive months on the notional amount under any Qualified Hedge Agreement establishing a variable interest rate for Fixed Rate Bonds. (Section 211)

Establishment of Funds and Accounts

The following funds and accounts shall be established and shall be held by the Trustee:

- (i) Redemption Fund;

- (ii) Debt Service Fund;
- (iii) Bond Related Costs Funds; and
- (iv) Rebate Fund.

Such funds, except the Rebate Fund, are subject to the pledge created under the Trust Agreement.

The Treasurer shall establish a Revenue Account to be maintained as part of the Commonwealth Transportation Fund that is to be held by the Treasurer so long as Bonds shall remain Outstanding. Such Account shall be deposited with the Trustee and shall be subject to the pledge created under the Trust Agreement. The Treasurer shall establish the following subaccounts within the Revenue Account:

- (i) Motor Fuels Tax Subaccount; and
- (ii) Non-Motor Fuels Tax Subaccount.

All Pledged Funds constituting Motor Fuels Tax receipts shall be deposited in the Motor Fuels Tax Subaccount. All other Pledged Funds shall be deposited in the Non-Motor Fuels Tax Subaccount. (Section 502)

Bond Proceeds

The Treasurer shall apply the proceeds of any Bonds to the payment of the costs of issuance of the related Series of Bonds, to the extent permitted by law, to pay the cost of Projects for which such Bonds have been issued or to pay notes issued in anticipation of such Bonds. Any balance remaining after payment of such amounts shall be paid by the Treasurer to the Trustee and deposited in the Redemption Fund and applied to the redemption of Bonds of the related Series. (Section 503)

Revenue Account

The Commissioner of Revenue and an Authorized Officer of MassDOT shall deliver to the Trustee within eight business days after the end of the month, commencing with the end of the month in which the Bonds are issued, a certificate stating the amount of Pledged Funds collected by the Commonwealth during such month and, so long as any 1994 Trust Agreement Bonds remain outstanding, indicating the amount of Motor Fuels Tax receipts collected by the Commonwealth as part of such amount of Pledged Funds representing with respect to the 1994 Trust Agreement Bonds, that portion of the Motor Fuels Tax composed of six and eighty-six hundredths cents (\$0.0686) of the excise on gasoline imposed by the provisions of Chapter 64A (other than aviation fuel). All Pledged Funds (other than any portion thereof required to be deposited with the 1994 Trustee pursuant to the 1994 Trust Agreement) shall be paid by the Treasurer to the Trustee within the two business days thereafter from amounts credited to the Commonwealth Transportation Fund, and deposited by the Trustee in the applicable subaccounts of the Revenue Account and applied as set forth below.

Immediately upon receipt thereof, the Trustee shall deposit in the Motor Fuels Tax Subaccount of the Revenue Account any Pledged Funds received from the 1994 Trustee pursuant to the 1994 Trust Agreement, to be applied as set forth below under the heading "Flow of Funds." The Trustee shall further deposit in the Revenue Account any funds transferred to the Revenue Account pursuant to a Supplemental Trust Agreement including, without limitation, any Direct Payment.

So long as the Act shall require that the expenditure of amounts in the Commonwealth Transportation Fund are subject to appropriation for the purposes described below, at the beginning of each Fiscal Year after the adoption of the operating budget for the Commonwealth for such Fiscal Year, the Secretary of Administration and Finance and the Treasurer shall certify to the Trustee the amount appropriated for such Fiscal Year for payment of the following amounts:

- (i) the Bond Debt Service Requirement for such Fiscal Year;

- (ii) the Bond Related Costs, if any, for such Fiscal Year; and
- (iii) the Rebate Fund Requirement, if any, for such Fiscal Year.

If amounts are appropriated for such purpose as an aggregate sum, such sum shall be allocated in the order set forth above for the amounts set forth above and such certificate shall set forth such allocation. To the extent additional amounts are appropriated during a Fiscal Year for any such purpose, the officials described above shall also certify to the Trustee the amount of any such supplemental appropriation. The aggregate amounts appropriated for each such purpose as provided in the Trust Agreement shall be referred to as an "Appropriated Amount" for such purpose. (Section 504)

Flow of Funds

Immediately following the deposit by the Treasurer with the Trustee described in the first two paragraphs under the heading "Revenue Account" above, but no later than the second business day following such deposit with the Trustee, the Trustee shall transfer from amounts available in the Revenue Account to the following Funds and in the following order:

- (i) To the Debt Service Fund, an amount equal to the sum of (a) one-fifth (1/5th) of the interest coming due on the Bonds, other than Subordinated Bonds, on the next interest payment date and (b) one-tenth (1/10th) of the Principal Installment coming due on the next Principal Installment payment date (which is not later than one year from the date of deposit); provided that the aggregate amount on deposit in the Debt Service Fund on any date shall be at least equal to the Debt Service Fund Requirement calculated as of such date; provided further that as long as the aggregate amount on deposit in the Debt Service Fund as of any date is at least equal to the aggregate Debt Service Fund Requirement calculated as of each remaining interest payment date and Principal Installment payment date, as the case may be, in the then current Fiscal Year, no additional monthly deposits are required to be made during the remainder of such Fiscal Year; and provided, further, that the aggregate amount deposited therein during a Fiscal Year shall not exceed the Appropriated Amount during such Fiscal Year for such purpose unless the Treasurer shall certify to the Trustee that deposits of such amounts shall not then be subject to appropriation;
- (ii) To the Bond Related Costs Fund, at such times and in such amounts, if any, as determined by the Treasurer or otherwise set forth in an Applicable Supplemental Trust Agreement as necessary to pay Bond Related Costs relating to the Bonds other than the Subordinated Bonds; provided, however, that the aggregate amount deposited therein during a Fiscal Year shall not exceed the Appropriated Amount during such Fiscal Year unless the Treasurer shall certify to the Trustee that deposits of such amounts shall not then be subject to appropriation;
- (iii) To the Rebate Fund, the amount of the Rebate Fund Requirement relating to the Bonds other than the Subordinated Bonds, if any, determined in accordance with an Applicable Supplemental Trust Agreement; provided, however, that the aggregate amount deposited therein during a Fiscal Year shall not exceed the Appropriated Amount during such Fiscal Year unless the Treasurer shall certify to the Trustee that deposits of such amounts shall not then be subject to appropriation;
- (iv) To the Subordinated Debt Service Fund, an amount equal to the sum of (a) one-fifth (1/5th) of the interest coming due on the Subordinated Bonds on the next interest payment date and (b) one-tenth (1/10th) of the Principal Installment coming due on the next Principal Installment payment date (which is not later than one year from the date of deposit); provided that the aggregate amount on deposit in the Subordinated Debt Service Fund on any date shall be at least equal to the Subordinated Debt Service Fund Requirement calculated as of such date; provided further that as long as the aggregate amount on deposit in the Subordinated Debt Service Fund as of any date is at least equal to the aggregate

Subordinated Debt Service Fund Requirement calculated as of each remaining interest payment date and Principal Installment payment date, as the case may be, in the then current Fiscal Year, no additional monthly deposits are required to be made during the remainder of such Fiscal Year; and provided, further, that the aggregate amount deposited therein during a Fiscal Year shall not exceed the Appropriated Amount during such Fiscal Year for such purpose unless the Treasurer shall certify to the Trustee that deposits of such amounts shall not then be subject to appropriation;

- (v) To the Bond Related Costs Fund, at such times and in such amounts, if any, as determined by the Treasurer or otherwise set forth in an Applicable Supplemental Trust Agreement as necessary to pay Bond Related Costs relating to the Bonds; provided, however, that the aggregate amount deposited therein during a Fiscal Year shall not exceed the Appropriated Amount during such Fiscal Year unless the Treasurer shall certify to the Trustee that deposits of such amounts shall not then be subject to appropriation;
- (vi) To the Rebate Fund, the amount of the Rebate Fund Requirement relating to the Bonds, if any, determined in accordance with an Applicable Supplemental Trust Agreement; provided, however, that the aggregate amount deposited therein during a Fiscal Year shall not exceed the Appropriated Amount during such Fiscal Year unless the Treasurer shall certify to the Trustee that deposits of such amounts shall not then be subject to appropriation; and
- (vii) To the Federal Grant Anticipation Note Trustee an amount equal to the monthly amount set forth in the certificate received by the Secretary of Administration and Finance and the Treasurer in accordance with subparagraph (v) under the heading "Revenue Account" above; provided, however, that unless the amount to be transferred to the Federal Grant Anticipation Note Trustee is to be deposited into an account that is deemed to be part of the Commonwealth Transportation Fund, the aggregate amount transferred to the Federal Grant Anticipation Note Trustee during a Fiscal Year shall not exceed the Appropriated Amount during such Fiscal Year.

Upon deposit of the amounts described above and so long as there shall be Appropriated Amounts sufficient to pay the amounts required to be deposited as set forth in subparagraph (i), (iv), (vii) and (viii) above for the remainder of the then current Fiscal Year (if such appropriations shall be required by the Act or other provisions of law), the balance on deposit in the Revenue Account (less any amounts required to be deposited pursuant to subparagraphs (ii), (iii), (v) and (vi) above for which Appropriated Amounts are insufficient) shall be immediately transferred by the Trustee, but no later than the next business day following such deposit, to the Treasurer free and clear of the lien granted under the Trust Agreement and may be thereupon applied to any purpose permitted by law.

The Trustee is authorized to accept at any time from the Treasurer, in addition to Pledged Funds, any other moneys certified by the Treasurer to be lawfully available for carrying out or satisfying any purpose under the Trust Agreement. The Trustee shall deposit such moneys in such Fund or Account, as the Treasurer may direct, and, provided no Event of Default shall then be occurring under the Trust Agreement and the amounts then held in the Debt Service Fund, the Rebate Fund and the Bond Related Costs Fund are at least equal to the applicable amounts then specified in the Trust Agreement, the Trustee shall transfer such amount as the Treasurer may direct, but not in excess of the amount received from the Treasurer, to the Treasurer, for application as permitted by law, free and clear of the lien of the Trust Agreement. (Section 504)

Debt Service Fund

The provisions of the Trust Agreement relating to the Debt Service Fund shall apply only to Bonds, and not to Subordinated Bonds. None of the funds on deposit in the Debt Service Fund shall be applied to payment of principal of, Redemption Price or interest on the Subordinated Bonds. The Trustee shall pay out of the Debt Service Fund to the respective Paying Agents for any Bonds (i) the amount required for the interest and Principal Installments payable on the interest payment date and (ii) the amount required for the payment of interest and Redemption Price on the Bonds then to be redeemed. Amounts accumulated in the Debt Service Fund with respect to any Sinking Fund Payment

(together with amounts accumulated therein with respect to interest on the Bonds for which such Sinking Fund Payment was established) may be applied prior to the 45th day preceding the due date of such Sinking Fund Payment, to (i) the purchase of Bonds of the Series and maturity for which such Sinking Fund Payment was established, at prices not exceeding the applicable sinking fund Redemption Price plus interest on such Bonds to the first date on which such Bonds could be redeemed (or in the case of a Sinking Fund Payment due on the maturity date, the principal amount thereof plus interest to such date), such purchases to be made in such manner as the Treasurer shall arrange, or (ii) the redemption of such Bonds then redeemable by their terms. The applicable Redemption Price or principal amount (in the case of maturing Bonds) of any Bonds so purchased or redeemed shall be deemed to constitute part of the Debt Service Fund until such Sinking Fund Payment date for the purpose of calculating the amount of such Fund.

In satisfaction, in whole or in part, of any amount required to be paid into the Debt Service Fund which is attributable to a Sinking Fund Payment, there may be delivered on behalf of the Commonwealth to the Trustee Bonds of the Series and maturity entitled to such payment. All Bonds so delivered to the Trustee in satisfaction of a Sinking Fund Payment shall reduce the amount thereof by the amount of the aggregate of the sinking fund Redemption Prices of such Bonds. (Section 505)

Subordinated Debt Service Fund

The Trustee shall pay out of the Subordinated Debt Service Fund to the respective Paying Agents for any Subordinated Bonds (i) the amount required for the interest and Principal Installments payable on each interest payment date and (ii) the amount required for the payment of interest and Redemption Price on the Subordinated Bonds then to be redeemed. Amounts accumulated in the Subordinated Debt Service Fund with respect to any Sinking Fund Payment (together with amounts accumulated therein with respect to interest on Subordinated Bonds for which such Sinking Fund Payment was established) may be applied prior to the 45th day preceding the due date of such Sinking Fund Payment, to (i) the purchase of the Subordinated Bonds of the Series and maturity for which such Sinking Fund Payment was established, at prices not exceeding the applicable sinking fund Redemption Price plus interest on such Subordinated Bonds to the first date on which such Subordinated Bonds could be redeemed (or in the case of a Sinking Fund Payment due on the maturity date, the principal amount thereof plus interest to such date), such purchases to be made in such manner as the Treasurer shall arrange, or (ii) the redemption of such Subordinated Bonds then redeemable by their terms. The applicable Redemption Price or principal amount (in the case of maturing Subordinated Bonds) of any Subordinated Bonds so purchased or redeemed shall be deemed to constitute part of the Subordinated Debt Service Fund until such Sinking Fund Payment date for the purpose of calculating the amount of such Fund.

In satisfaction, in whole or in part, of any amount required to be paid into the Subordinated Debt Service Fund, there may be delivered on behalf of the Commonwealth to the Trustee Subordinated Bonds of the Series and maturity entitled to such payment. All Subordinated Bonds so delivered to the Trustee in satisfaction of a Sinking Fund Payment shall reduce the amount thereof by the amount of the aggregate of the sinking fund Redemption Prices of such Subordinated Bonds. (Section 505A)

Redemption Fund

The Commonwealth may deposit in the Redemption Fund any moneys, including Pledged Funds, not otherwise required by the Trust Agreement to be deposited or applied. If at any time the amount on deposit and available therefor in the Debt Service Fund or the Subordinated Debt Service Fund, as applicable, is insufficient to pay the principal and Redemption Price of and interest on the Bonds or the Subordinated Bonds, as applicable, then due, the Trustee shall withdraw from the Redemption Fund and deposit in the Debt Service Fund or the Subordinated Debt Service Fund, as applicable, the amount necessary to meet the deficiency (other than amounts held therein for the redemption of Bonds or Subordinated Bonds, as applicable, for which a notice of redemption shall have been given). Subject to the foregoing, amounts in each account in the Redemption Fund may be applied by the Commonwealth to the redemption of Bonds or Subordinated Bonds, as applicable, at prices not exceeding the applicable Redemption Prices (plus accrued interest) had such Bonds or Subordinated Bonds, as applicable, been redeemed (or, if not then subject to redemption, at the applicable Redemption Prices when next subject to redemption), such purchase to be paid for by the Trustee at such times and in such manner as arranged and directed by an Authorized Officer. (Section 506)

Bond Related Costs Fund

The amount on deposit and available in the Bond Related Costs Fund shall be applied by the Trustee to the payment of Bond Related Costs at the times and in the amounts as directed from time to time by an Authorized Officer.

If at any time the amount on deposit and available therefor in the Debt Service Fund or the Subordinated Debt Service Fund, as applicable, is insufficient to pay the principal and Redemption Price of and interest on the Bonds or the Subordinated Bonds, as applicable, then due, the Trustee shall withdraw from the Bond Related Costs Fund, after withdrawal of amounts described above, and deposit in the Debt Service Fund or the Subordinated Debt Service Fund, as applicable, the amount necessary to meet such deficiency; provided, however, that the aggregate of such amount deposited therein shall not in any Fiscal Year, together with all other amounts deposit therein during such Fiscal Year, exceed the Appropriated Amount for the purpose of paying the principal and Redemption Price of and interest due on the Bonds Outstanding or the Subordinated Bonds Outstanding, as applicable, during such Fiscal Year. Subject to the foregoing provisions, if there is a deficiency in both the Debt Service Fund and the Subordinated Debt Service Fund as described in this paragraph, amounts withdrawn from the Bond Related Costs Fund shall be applied first to the deficiency in the Debt Service Fund, and once the deficiency in the Debt Service Fund is satisfied, second to the deficiency in the Subordinated Debt Service Fund.

Upon the certification of an Authorized Officer and all Fiduciaries that all Bond Related Costs have been paid, any balance in the Bond Related Costs Fund shall be paid by the Trustee to the Treasurer free and clear of the lien created under the Trust Agreement and such amounts shall be applied to any purpose permitted by law. (Section 507)

Investments

Except as otherwise provided in the Trust Agreement or subsection 2 below, money held for the credit of any Fund or Account under the Trust Agreement shall, to the fullest extent practicable, be invested, either alone or jointly with moneys in any other Fund or Account, by or at the written direction of an Authorized Officer in Permitted Investments which shall mature or be redeemable at the option of the holder thereof, on such dates and in such amounts as may be necessary to provide moneys to meet the payments required to be made from such Funds and Accounts; provided that if moneys in two or more funds or accounts are commingled for purposes of investments, the Trustee shall maintain appropriate records of the Permitted Investments or portions thereof which it makes and which are held for the credit of such Fund or Account. Except as otherwise provided in a Supplemental Trust Agreement, amounts on deposit in the Debt Service Fund or the Subordinated Debt Service Fund, may be invested only in Permitted Investments of the type described in subparagraphs (i), (ii), (iii), (iv), (vi), (vii), (viii), (ix) or (xi) of the definition of Permitted Investments. Except as otherwise provided in a Supplemental Trust Agreement, Permitted Investments purchased as an investment of moneys in any Fund or Account shall be deemed at all times to be a part of such Fund or Account and all income thereon shall accrue to and be deposited in such Fund or Account and all losses from investment shall be charged against such Fund or Account. Any income from Permitted Investments may be transferred to the Rebate Fund to the extent required by an Applicable Supplemental Trust Agreement.

In computing the amount in any Fund or Account for any purpose, Permitted Investments shall be valued at market value. Unless otherwise provided in the Trust Agreement, Permitted Investments in any fund or account under the Trust Agreement shall be valued at least once in each Fiscal Year on the last day thereof. (Section 508)

Powers as to Bonds and Pledge

The Commonwealth represents in the Trust Agreement that it is duly authorized under the Act and all applicable laws to create and issue Bonds thereunder and to enter into the Trust Agreement and to pledge the Pledged Funds and other moneys, securities and funds purported to be pledged by the Trust Agreement in the manner and to the extent therein provided. The Commonwealth covenants that the Pledged Funds and other moneys, securities and funds so pledged are and will be free and clear of any pledge, lien, charge or encumbrance thereon with respect thereto prior to, or of equal rank with, the pledge created by the Trust Agreement except to the extent expressly permitted thereby. The Commonwealth agrees at all times, to the extent permitted by law, to defend, preserve and protect the pledge of the Pledged Funds and other moneys, securities and funds pledged under the Trust Agreement and all the

rights of the Bondholders under the Trust Agreement against all claims and demands of all persons whomsoever. (Section 601)

Extension of Payment of Bonds

The Commonwealth agrees not to directly or indirectly extent or asset to the extension of the maturity of any of the Bonds or the time of payment of claims for interest by the purchaser or funding of such Bonds or claims for interest or by any other arrangement and in case the maturity of any of the Bonds or the time for payment of claims for interest shall be extended, such Bonds or claims for interest shall not be entitled in case of any default under the Trust Agreement to the benefit of the Trust Agreement or to any payment out of any assets of the Commonwealth or the funds (except funds held in trust for the payment of particular Bonds or claims for interest pursuant to the Trust Agreement) held by the Fiduciaries, except subject to the prior payment of the principal of all Bonds issued and Outstanding the maturity of which has not been extended and of such portion of the accrued interest on the Bonds as shall not be represented by such extended claims for interest. The Commonwealth may issue Refunding Bonds and such issuance shall not be deemed to constitute an extension of maturity of Bonds. (Section 602)

Covenant as to Pledged Funds and Commonwealth Transportation Fund

So long as any Bonds are Outstanding, the Commonwealth may change the rate of the Registry Fees or the Motor Fuels Tax credited to the Commonwealth Transportation Fund, or both, in any respect, provided that prior to the effective date of any such change, the Treasurer shall deliver a certificate to the Trustee demonstrating the amount of Pledged Funds received by the Treasurer during any twelve (12) consecutive months of the eighteen (18) month period ending with the last full month immediately preceding the effective date of any such change, as adjusted, as set forth in such certificate, to reflect the proposed change in rates, to be at least equal to four hundred percent (400%) of the maximum aggregate Adjusted Bond Debt Service Requirement due in the then current or any future Fiscal Year on the Bonds Outstanding (other than Subordinated Bonds). In addition, the Commonwealth shall not limit or alter the rights vested in the Commonwealth to collect the Pledged Funds and to deposit such amounts as provided in the Trust Agreement and shall not impair the rights and remedies of the Trustee and Bondholders under the Trust Agreement and under the Act with respect to the Pledged Funds. Without limiting the generality of the foregoing, the Commonwealth agrees not to issue any additional bonds under the 1994 Trust Agreement except refunding bonds with debt service requirements less than or equal to the debt service requirements on the refunded bonds in each Fiscal Year. In any Fiscal Year and until an appropriation has been made which is sufficient for payment of the amount of the Bond Debt Service Requirement for such Fiscal Year and the amount of costs, if any, due in such Fiscal Year for any Credit Enhancement or Liquidity Facility, no Pledged Funds shall be applied to any other use. Any provisions of the Act creating covenants with Bondholders shall be deemed a covenant with the Bondholders under the Trust Agreement only to the extent expressly provided in the Trust Agreement and as limited thereby.

As soon as practicable after the end of each Fiscal Year, but not later than the last business day of August following the end of such Fiscal Year, an Authorized Officer shall deliver to the Trustee a certificate, based upon an accounting by the Comptroller or the Commissioner of Revenue setting forth the amount of Pledged Funds (by category) for such Fiscal Year, the Adjusted Bond Debt Service Requirement for all Bonds Outstanding, other than Subordinated Bonds, during such Fiscal Year and the Adjusted Bond Debt Service Requirement for all Subordinated Bonds Outstanding during such Fiscal Year.

No provisions of the Trust Agreement shall prohibit the Commonwealth from applying amounts credited to the Commonwealth Transportation Fund, other than any Pledged Funds, calculated as of any date after the date of the Trust Agreement, for any purposes permitted by law. (Section 603)

Accounts and Report

As soon as it shall become available, the Treasurer shall file for each Fiscal Year during which Bonds shall be Outstanding with the Trustee the Comprehensive Annual Financial Report of the Commonwealth prepared by the Comptroller, including a report on the financial statements contained therein by an independent public accountant or firm of accountants. The Trustee shall have no duty to review such Annual Financial Report or financial statements, is not deemed to have notice of the content of such or a default based on such content and does not have a duty to verify the accuracy of such Annual Financial Report or financial statements. (Section 604)

Tax Covenants; Rebate Fund

The Commonwealth shall take, or require to be taken, such action as may from time to time be required to assure the continued exclusion from the federal gross income of holders of any Series of Tax Exempt Bonds. The Commonwealth shall not permit the investment or application of the proceeds of any Series of Tax Exempt Bonds, including any funds considered proceeds within the meaning of Section 148 of the Code, to be used to acquire any investment property the acquisition of which, would cause such indebtedness to be “arbitrage bonds” within the meaning of said Section 148. The Commonwealth shall establish within the Rebate Fund a separate account within the Rebate Fund for such Series and may provide in the Applicable Supplemental Trust Agreement for the deposits of amounts therein to pay “rebate” on the investment of amounts under the Trust Agreement in accordance with Section 148(f) of the Code. Funds on deposit in the Rebate Fund shall be applied as set forth in the Applicable Supplemental Trust Agreement. The Rebate Fund and the amounts on deposit therein shall not be deemed Pledged Funds under the Trust Agreement. (Section 605)

Events of Default

One or more of the following events shall constitute an Event of Default under the Trust Agreement:

- (i) if default shall be made in the payment of the principal or Redemption Price of any Bond when due, whether at maturity or by call for mandatory redemption or redemption at the option of the Commonwealth or any registered owner, or otherwise, or in the payment of any Sinking Fund Payment when due; or
- (ii) if default shall be made in the payment of any installment of interest on any Bond when due; or
- (iii) if default shall be made by the Commonwealth in the performance or observance of the covenants, agreements and conditions on its part described under the first paragraph of “Covenant as to Pledged Funds and Commonwealth Transportation Fund” above; or
- (iv) if default shall be made by the Commonwealth in the performance or observance of any other of the covenants, agreements or conditions on its part provided in the Trust Agreement or in the Bonds and such default shall continue for a period of 30 days after written notice thereof shall be given to the Commonwealth by the Trustee or given to the Commonwealth and the Trustee by the registered owners of a majority in principal amount of the Bonds Outstanding; provided that if such default cannot be remedied within such 30-day period, it shall not constitute an Event of Default under the Trust Agreement if corrective action is instituted by the Commonwealth within such period and diligently pursued until the default is remedied. (Section 701)

Application of Revenues and Other Moneys after Default

During the continuance of an Event of Default, the Trustee shall apply the moneys, securities and funds held by the Trustee, including any Pledged Funds and the income therefrom, as follows and in the following order;

- (i) to the payment of the reasonable and proper charges and expenses of the Fiduciaries and of any counsel selected by a Fiduciary;
- (ii) to the payment of the interest and principal amount or Redemption Price then due on the Bonds other than the Subordinated Bonds, as follows:
 - (a) unless the principal amount of all of the Bonds other than the Subordinated Bonds shall have become due and payable,

First: To the payment to the persons entitled thereto to all installments of interest then due in the order of the maturity of such installments maturity, and, if the amount available shall not be sufficient to pay in full all installments maturing on the same date, then to the payment thereof ratably, according to the amounts due thereon, to the persons entitled thereto, without any discrimination or preference; and

Second: To the payment to the persons entitled thereto of the unpaid principal amount or Redemption Price of any Bonds other than the Subordinated Bonds which shall become due, whether at maturity or by call for redemption, in the order of their due dates, and, if the amount available shall not be sufficient to pay in full all the Bonds other than the Subordinated Bonds due on any date, then to the payment thereof ratably, according to the amounts of principal or Redemption Price due on such date, to the persons entitled thereto, without any discrimination or preference; and

- (b) if the principal of all the Bonds other than the Subordinated Bonds shall have become due and payable, to the payment of the principal amount and interest then due and unpaid upon the Bonds other than the Subordinated Bonds without preference or priority of principal over interest or of interest over principal, or of any installment of interest over any other installment of interest, or of any Bond over any other Bond, ratably, according to the amounts due respectively for principal amount and interest, to the persons entitled thereto, without any discrimination or preference;

- (iii) to the payment of the interest and principal amount or Redemption Price then due on Subordinated Bonds, as follows:

- (a) unless the principal amount of all Subordinated Bonds shall have become due and payable,

First: To the payment to the persons entitled thereto to all installments of interest then due in the order of the maturity of such installments maturity, and, if the amount available shall not be sufficient to pay in full all installments maturing on the same date, then to the payment thereof ratably, according to the amounts due thereon, to the persons entitled thereto, without any discrimination or preference; and

Second: To the payment to the persons entitled thereto of the unpaid principal amount or Redemption Price of any Subordinated Bonds which shall become due, whether at maturity or by call for redemption, in the order of their due dates, and, if the amount available shall not be sufficient to pay in full all Subordinated Bonds due on any date, then to the payment thereof ratably, according to the amounts of principal or Redemption Price due on such date, to the persons entitled thereto, without any discrimination or preference; and

- (b) if the principal of all Subordinated Bonds shall have become due and payable, to the payment of the principal amount and interest then due and unpaid upon Subordinated Bonds without preference or priority of principal over interest or of interest over principal, or of any installment of interest over any other installment of interest, or of any Subordinated Bond over any other Subordinated Bond, ratably, according to the amounts due respectively for principal amount and interest, to the persons entitled thereto, without any discrimination or preference; and

- (iv) To the payment of any person entitled to the payment of any Bond Related Cost ratably in accordance with the amount of such Bond Related Costs.

The proceeds of any Credit Enhancement or Liquidity Facility shall be applied by the Trustee in the manner provided in the Supplemental Trust Agreement authorizing such Credit Enhancement or Liquidity Facility. (Section 702)

Proceedings Brought by Trustee

If an Event of Default shall happen and shall not have been remedied, then and in every such case, the Trustee may proceed to protect and enforce its rights and the rights of the registered owners of the Bonds under the Trust Agreement by a suit or suits in equity or at law. The registered owners of a majority in principal amount of the Bonds Outstanding may direct the time, method and place of conducting any proceeding for any remedy available to the Trustee, provided that the Trustee shall have the right to decline to follow any such direction if the Trustee in good faith shall determine that the action or proceeding so directed would involve the Trustee in personal liability or be unjustly prejudicial to the Bondholders not parties to such direction.

Regardless of the happening of an Event of Default, the Trustee shall have power to, but unless requested in writing by the registered owners of a majority in principal amount of the Bonds then Outstanding and furnished with reasonable security and indemnity, shall be under no obligation to, institute and maintain such suits and proceedings as it may deem necessary or expedient to prevent any impairment of the security under the Trust Agreement, or necessary or expedient to preserve or protect its interest and the interests of the Bondholders.

Nothing contained in the Trust Agreement is intended to preclude the Trustee upon the occurrence of an Event of Default thereunder from asserting any and all remedies it may have at law or equity with respect to the Pledged Funds and other amounts held as security thereunder, including asserting any rights it may have as Trustee thereunder as a secured party with respect to all security granted thereunder notwithstanding any requirements contained in the Trust Agreement with respect to Appropriated Amounts. (Section 703)

Restriction on Bondholders' Action

No registered owner of any Bond shall have any right to institute any suit, action or proceeding at law or in equity for the enforcement of any provision of the Trust Agreement or for any remedy under the Trust Agreement, unless such registered owner shall have previously given to the Trustee written notice of the happening of any Event of Default and the registered owners of at least 25% in principal amount of Bonds then Outstanding shall have filed a written request with the Trustee, and shall have offered it reasonable opportunity, to exercise the powers granted in the Trust Agreement in its own name, and unless such registered owners shall have offered to the Trustee adequate security and indemnity against the costs, expenses and liabilities to be incurred thereby, and the Trustee shall have refused to comply with such request within a reasonable time. So long as the Policy shall be in full force and effect (and the Insurer shall not be insolvent or in default under the Policy), the Insurer shall be deemed to be the sole owner of the 2010 Series A Bonds for the purpose of exercising any voting right or privilege or giving any consent or direction or taking any other action that the owners of the 2010 Series A Bonds are entitled to take in respect of defaults and remedies. (Section 704)

No Right of Acceleration

Neither the Bondholders nor the Trustee shall have any right to accelerate the payment of principal or interest due on any Bonds Outstanding upon the occurrence of any Event of Default. (Section 707)

Responsibility of Fiduciaries

The duties and obligations of the Fiduciaries shall be determined by the express provisions of the Trust Agreement. No Fiduciary shall be under any responsibility or duty with respect to the issuance of the Bonds for value or the application of the proceeds thereof or the application of any moneys paid to the Commonwealth or any other Fiduciary. No Fiduciary shall bear any responsibility for the use of Bond proceeds (or other payments) paid out in

accordance with the Trust Agreement. No Fiduciary shall be under any obligation or duty to perform any act which would involve it in expense or liability or to institute or defend any suit in respect thereof, unless properly indemnified. No Fiduciary shall be under any obligation to advance, risk or expend its own funds or moneys. No Fiduciary shall be liable in connection with the performance of its duties under the Trust Agreement except for its own negligence or bad faith nor shall any Fiduciary be liable for any action taken or omitted by it in good faith and believed by it to be authorized or within the discretion or rights or powers conferred upon it by the Trust Agreement. (Section 803)

Compensation

The Commonwealth shall pay to each Fiduciary from time to time reasonable compensation for all services rendered under the Trust Agreement, including reasonable expenses, charges, counsel fees and other disbursements, and each Fiduciary shall have a lien therefor on any and all funds at any time held by it thereunder. Amounts unpaid more than 30 days after they are billed to the Treasurer shall bear interest at the "base rate" of the Trustee in effect from time to time. The Commonwealth shall indemnify and save each Fiduciary harmless against any liabilities which it may incur in the exercise and performance of its powers and duties thereunder, and which are not due to its negligence or bad faith. (Section 805)

Resignation of Trustee

The Trustee may at any time resign and be discharged of the duties and obligations created by the Trust Agreement by giving not less than 60 days' written notice to the Treasurer and giving not less than 30 days' written notice to each Bondholder and Paying Agent specifying the date when such resignation shall take effect, and such resignation shall take effect upon the day specified in such notice provided a successor shall have been appointed, unless previously a successor shall have been appointed by the Treasurer or the Bondholders as provided in the Trust Agreement, in which event such resignation shall take effect immediately on the appointment of such successor. (Section 807)

Removal of Trustee

The Trustee may be removed at any time by an instrument or concurrent instruments in writing, filed with the Trustee, and signed by the registered owners of a majority in principal amount of the Bonds then Outstanding or their attorneys-in-fact duly authorized, excluding any Bonds held by or for the account of the Commonwealth. Except during the existence of an Event of Default, the Treasurer may remove the Trustee at any time for cause or upon not less than 90 days' prior written notice to the Trustee for such other reason as shall be determined in the sole discretion of the Treasurer. (Section 808)

Appointment of Successor Trustee

In case at any time the Trustee shall resign or shall be removed or shall become incapable of acting, or shall be adjudged a bankruptcy or insolvent, or if a receiver, liquidator or conservator of the Trustee, or of its property, shall be appointed, or if any public officer shall take charge or control of the Trustee, or of its property or affairs, a successor may be appointed by the registered owners of a majority in principal amount of the Bonds then excluding any Bonds held by or on the account of the Commonwealth. Pending such appointment, the Treasurer by a written instrument signed by an Authorized Officer and delivered to the predecessor Trustee shall forthwith appoint a Trustee to fill such vacancy until a trustee shall be appointed by the Bondholders. Any Trustee appointed in succession to the Trustee shall be a bank or trust company organized under the laws of the Commonwealth, or a national banking association doing business and having its principal place of business in the Commonwealth, having a capital and surplus aggregating at least \$50,000,000, if there be such a bank or trust company or national banking association willing and able to accept the office on reasonable and customary terms and authorized by law to perform all duties imposed upon it by the Trust Agreement. (Section 809)

Supplemental Trust Agreement Effective upon Filing

The Commonwealth and the Trustee may at any time and from time to time enter into supplements or amendments to the Trust Agreement for any one or more of the following purposes:

- (i) to cure any ambiguity, inconsistency or formal defect or omission in the Trust Agreement;
- (ii) to close the Trust Agreement against, or provide limitations and restrictions contained in the Trust Agreement on, the original issuance of Bonds;
- (iii) to add to the covenants and agreements of the Commonwealth contained in the Trust Agreement other covenants and agreements thereafter to be observed for the purpose of further securing the Bonds;
- (iv) to surrender any right, power or privilege reserved to or conferred upon the Commonwealth by the Trust Agreement;
- (v) to authorize Bonds of a Series and, in connection therewith, specify and determine any matters and things relative to such Bonds not contrary to or inconsistent with the Trust Agreement;
- (vi) to authorize any Credit Enhancement or Liquidity Facility;
- (vii) to exercise any provision in the Trust Agreement or to make such determinations thereunder as expressly provided therein to be exercised or determined in a Supplemental Trust Agreement;
- (viii) to confirm, as further assurance, any pledge under and the subjection to any lien or pledge created or to be created by the Trust Agreement of the Pledged Funds; and
- (ix) for any other purpose, provided that such Supplemental Trust Agreement does not prejudice in any material respect the right of the registered owner of any Bond Outstanding at the date such Supplemental Trust Agreement becomes effective. (Section 901)

Powers of Amendment

Any modification or amendment of the Bonds or of the Trust Agreement may be made by a Supplemental Trust Agreement, with the written consent (i) of the registered owners of at least a majority in the principal amount of all Bonds Outstanding at the time such consent is given, or (ii) in case less than all of the several Series of Bonds then Outstanding are affected by the modification or amendment, of the registered owners of at least a majority in principal amount of the Bonds of each Series so affected and Outstanding at the time such consent is given, and (iii) in case the modification or amendment changes the amount or date of any Sinking Fund Payment, of 100% of the registered owners of the Bonds of the particular Series and maturity entitled to such Sinking Fund Payment Outstanding at the time such consent is given; provided, however, that, if such modification or amendment will, by its terms, not take effect so long as any Bonds of any specified like Series and maturity remain Outstanding, the vote or consent of the registered owners of such Bonds shall not be required and such Bonds shall not be deemed to be Outstanding for the purpose of any calculation of Outstanding Bonds; and provided, further, that no such modification or amendment shall permit a change in the terms of redemption or maturity of the principal amount of any Outstanding Bond or of any installment of interest thereon or a reduction in the principal amount or the Redemption Price thereof or the rate of interest thereon or the method for determining such rate or terms of any Credit Enhancement or Liquidity Facility relating to a Bond without the consent of the registered owner of such Bond, or shall change or modify any of the rights or obligations of any Fiduciary without its written assent thereto, or shall reduce the percentages of the principal amount of Bonds the consent of which is required to effect any such modification or amendment. (Section 1002)

Defeasance

If the Commonwealth shall pay or cause to be paid, or there shall otherwise be paid, to the registered owners of the Bonds then Outstanding, the principal amount and interest and Redemption Price, if any, to become due thereon, at the times and in the manner stipulated therein and in the Trust Agreement then the pledge of any Pledged Funds or

other moneys and securities pledged by the Trust Agreement and all other rights granted by the Trust Agreement shall be discharged and satisfied.

Bonds or interest installments for the payment or redemption of which moneys shall be held by the Fiduciaries, whether at or prior to the maturity or the redemption date of such Bonds, shall be deemed to have been paid if (i) in case any of said Bonds are to be redeemed on any date prior to their maturity, an Authorized Officer shall have given to the Trustee irrevocable instructions to provide notice of redemption on said date of such Bonds, (ii) there shall have been deposited with the Trustee either moneys in an amount which shall be sufficient, or Defeasance Obligations not subject to redemption or otherwise called for redemption for which amounts have been placed in escrow, in each case the principal of and interest on which when due will provide moneys which, together with any other deposited amounts, shall be sufficient, as certified by a firm of independent public accountants, to pay when due the principal amount or Redemption Price, if applicable, and interest due and to become due on said Bonds on and prior to the redemption date or maturity date thereof, as the case may be. Any cash received from the principal or interest payments on such Defeasance Obligations deposited with the Trustee, if not then needed for such purpose, may, to the extent practicable, be reinvested in Defeasance Obligations or, in lieu of such reinvestment at the time of receipt, the Commonwealth may direct the Trustee to enter into one or more forward purchase agreements providing for the purchase of Defeasance Obligations at future dates, as provided in the Trust Agreement.

For purposes of determining whether Variable Rate Bonds shall be deemed to have been paid prior to the maturity or redemption date thereof, as the case may be, by the deposit of moneys, or Defeasance Obligations and moneys, if any, the interest to come due on such Variable Rate Bonds on or prior to the maturity date or redemption date thereof, as the case may be, shall be calculated at the Variable Rate Ceiling in effect with respect to such Bonds.

Tender Bonds shall be deemed to have been paid only if, in addition to satisfying the requirements described above, there shall have been deposited with the Trustee moneys in an amount which shall be sufficient to pay when due the maximum amount of principal of and premium, if any, and interest on such Bonds which could become payable to the registered owners of such Bonds upon the exercise of any options provided to the registered owners of such Bonds; provided, however, that if, at the time a deposit is made with the Trustee pursuant to the provisions above, the options originally exercisable by the registered owners of Tender Bonds are no longer exercisable, such Bonds shall not be considered Tender Bonds. (Section 1101)

Unclaimed Funds

Any moneys held by the Fiduciary in trust for the payment and discharge of any Bonds which remain unclaimed for three years after the date when such bonds have become due and payable, either at their stated maturity dates or by call for earlier redemption, if such moneys were held by the Fiduciary at such date, or for three years after the date of deposit of such moneys if deposited with the Fiduciary after the said date when such Bonds become due and payable, shall be paid to the Commonwealth as its absolute property and free from trust, and the Fiduciary shall thereupon be released and discharged with respect thereto and the Bondholders shall look only to the Commonwealth for the payment of such Bonds. (Section 1101)

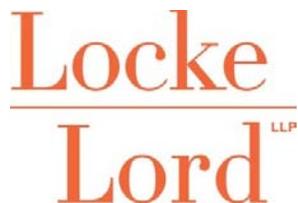
No Recourse on the Bonds

No recourse shall be had for the payment of the principal or Redemption Price of or the interest on the Bonds or for any claim based thereon or on the Trust Agreement against any official, agent, representative or employee of the Commonwealth or any person executing the Bonds. No official, agent, representative or employee of the Commonwealth shall be held personally liable to any purchaser or holder of any Bond under or upon such Bond, or under or upon the Trust Agreement or any Supplemental Trust Agreement relating to Bonds, or, to the extent permitted by law, because of the sale or issuance or attempted sale or issuance of Bonds, or because of any act or omission in connection with the investment or management of the Pledged Funds, funds or moneys of the Commonwealth, or otherwise in connection with the management of its affairs, excepting solely for things willfully done or omitted to be done with an intent to defraud. (Section 1303).

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PROPOSED FORM OF OPINION OF BOND COUNSEL

Upon delivery of the 2019 Bonds described below, Bond Counsel proposes to deliver an opinion substantially in the following form:



111 Huntington Avenue
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November 21, 2019

The Honorable Deborah B. Goldberg
Treasurer and Receiver-General
The Commonwealth of Massachusetts
State House - Room 227
Boston, Massachusetts 02133

The Commonwealth of Massachusetts
\$200,000,000
Commonwealth Transportation Fund
Revenue Bonds
(Rail Enhancement & Accelerated Bridge Programs)
2019 Series A
Dated: Date of Delivery

We have acted as bond counsel to The Commonwealth of Massachusetts (the "Commonwealth") in connection with the issuance by the Commonwealth of the above-referenced bonds (the "2019 Bonds"). In such capacity, we have examined the law and such certified proceedings and other papers as we have deemed necessary to render this opinion, including Section 20 of Chapter 29 of the Massachusetts General Laws, as amended (the "Act"), and other applicable statutes. We have also examined the Trust Agreement dated as of December 1, 2010, between the Commonwealth and The Bank of New York Mellon Trust Company, N.A., as trustee (the "Trustee"), as heretofore supplemented and amended (the "Trust Agreement") and as further supplemented by the Tenth Supplemental Trust Agreement dated as of November 1, 2019 (the "Tenth Supplemental Trust Agreement" and, collectively with the Trust Agreement, the "Agreement") between the Commonwealth and the Trustee. Capitalized terms not otherwise defined herein are used herein as defined in the Agreement.

The 2019 Bonds are issued pursuant to the Agreement. Bonds issued under the Agreement, including the 2019 Bonds, are payable from and secured by a pledge of Pledged Funds.

As to questions of fact material to our opinion, we have relied upon representations and covenants of the Commonwealth contained in the certified proceedings and other certifications of public officials and others furnished to us, without undertaking to verify the same by independent investigation.

Based on our examination, we are of the opinion, under existing law, as follows:

1. The Commonwealth has the right and power under the Act to enter into the Tenth Supplemental Trust Agreement, and it has been duly and lawfully executed on behalf of the Commonwealth by the Treasurer and Receiver-General of the Commonwealth, with the concurrence of the Secretary of the Executive Office for Administration and Finance of the Commonwealth and the Secretary of the Massachusetts Department of Transportation.

2. The Agreement has been duly authorized, executed and delivered by the Commonwealth, is in full force and effect and constitutes the valid and binding obligation of the Commonwealth enforceable upon the Commonwealth in accordance with its terms. No other authorization for the Agreement is required.

3. Pursuant to the Act, the Agreement creates the valid pledge that it purports to create of the Pledged Funds, rights, moneys, securities, credit facilities and funds held under the Agreement, in the manner and to the extent provided in the Agreement, for the security of the 2019 Bonds on a parity with other Bonds issued under the Agreement.

4. The 2019 Bonds have been duly authorized, executed and delivered by the Commonwealth and are valid and binding special obligations of the Commonwealth, enforceable in accordance with the terms thereof and the terms of the Agreement and are entitled to the benefits of the Act, as provided under the Trust Agreement, and of the Agreement. The 2019 Bonds are not general obligations of the Commonwealth, and the full faith and credit of the Commonwealth are not pledged to the payment thereof. The 2019 Bonds are payable solely from the sources provided therefor in the Agreement.

5. Interest on the 2019 Bonds is excluded from the gross income of the owners of the 2019 Bonds for federal income tax purposes. In addition, interest on the 2019 Bonds is not a specific preference item for purposes of the federal individual alternative minimum taxes. In rendering the opinions set forth in this paragraph, we have assumed compliance by the Commonwealth with all requirements of the Internal Revenue Code of 1986 that must be satisfied subsequent to the issuance of the 2019 Bonds in order that interest thereon be, and continue to be, excluded from gross income for federal income tax purposes. The Commonwealth has covenanted to comply with all such requirements. Failure by the Commonwealth to comply with certain of such requirements may cause interest on the 2019 Bonds to become included in gross income for federal income tax purposes retroactive to the date of issuance of the 2019 Bonds. We express no opinion regarding any other federal tax consequences arising with respect to the 2019 Bonds.

6. Interest on the 2019 Bonds and any profit made on the sale thereof are exempt from Massachusetts personal income taxes and the 2019 Bonds are exempt from Massachusetts personal property taxes. We express no opinion regarding any other Massachusetts tax consequences arising with respect to the 2019 Bonds or any tax consequences arising with respect to the 2019 Bonds under the laws of any state other than Massachusetts.

This opinion is expressed as of the date hereof, and we neither assume nor undertake any obligation to update, revise, supplement or restate this opinion to reflect any action taken or omitted, or any facts or circumstances or changes in law or in the interpretation thereof, that may hereafter arise or occur, or for any other reason.

The rights of the holders of the 2019 Bonds and the enforceability of the 2019 Bonds may be subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting creditors' rights heretofore or hereafter enacted to the extent constitutionally applicable, and their enforcement may also be subject to the exercise of judicial discretion in appropriate cases.

LOCKE LORD LLP

CONTINUING DISCLOSURE UNDERTAKING

Commonwealth of Massachusetts

Commonwealth Transportation Fund Revenue Bonds
(Rail Enhancement & Accelerated Bridge Programs), 2019 Series A

Continuing Disclosure Undertaking

On behalf of the Commonwealth, the Treasurer and Receiver-General of the Commonwealth hereby undertakes for the benefit of the owners of the 2019 Bonds to provide the Municipal Securities Rulemaking Board (the “MSRB”) through its Electronic Municipal Market Access (“EMMA”) system pursuant to the requirements of Rule 15c2-12 of the Securities and Exchange Commission (the “Rule”), no later than 270 days after the end of each fiscal year of the Commonwealth, (i) the annual financial information described below relating to such fiscal year, together with audited financial statements of the Commonwealth for such fiscal year if audited financial statements are then available, provided, however, that if audited financial statements of the Commonwealth are not then available, such audited financial statements shall be delivered to EMMA when they become available (but in no event later than 350 days after the end of such fiscal year) or (ii) notice of the Commonwealth’s failure, if any, to provide any such information. The annual financial information to be provided as aforesaid shall include financial information and operating data, in each case updated through the last day of such fiscal year unless otherwise noted, relating to the following information contained in the Commonwealth’s Official Statement dated November 14, 2019 (the “Official Statement”) relating to the Commonwealth Transportation Fund Revenue Bonds (Rail Enhancement & Accelerated Bridge Programs), 2019 Series A, and in each case substantially in the same level of detail as is found in the referenced section of the Official Statement:

Financial Information and Operating Data Category	Reference to Official Statement for Level of Detail
1. Summary presentation of actual gasoline sales on a ten-year comparative basis, concluding with the prior fiscal year.	COMMONWEALTH MOTOR FUELS TAX – Historical Information Regarding Gasoline Sales and Motor Fuels Tax
2. Summary presentation of actual Pledged Motor Fuels Tax receipts on a ten-year comparative basis, concluding with the prior fiscal year.	COMMONWEALTH MOTOR FUELS TAX – Historical Information Regarding Gasoline Sales and Motor Fuels Tax
3. Summary presentation of actual monthly Motor Fuels Tax receipts for the two most recently completed fiscal years.	COMMONWEALTH MOTOR FUELS TAX – Historical Information Regarding Gasoline Sales and Motor Fuels Tax
4. Summary presentation of actual RMV transactions on a ten-year comparative basis, concluding with the prior fiscal year.	COMMONWEALTH REGISTRY FEES – Registry Fees
5. Summary presentation of Registry Fee receipts on a ten-year comparative basis, concluding with the prior fiscal year.	COMMONWEALTH REGISTRY FEES – Registry Fees
6. Summary presentation of actual Commonwealth Transportation Fund revenues on a ten-year comparative basis, concluding with the prior fiscal year.	COMMONWEALTH TRANSPORTATION FUND

Any or all of the items listed above may be included by reference to other documents, including official statements pertaining to debt issued by the Commonwealth, which have been submitted to the EMMA. The Commonwealth’s annual financial statements for each fiscal year shall consist of (i) combined financial statements prepared in accordance with a basis of accounting that demonstrates compliance with the General Laws and other

applicable state finance laws, if any, in effect from time to time and (ii) general purpose financial statements prepared in accordance with generally accepted accounting principles in effect from time to time. Such financial statements shall be audited by a firm of certified public accountants appointed by the Commonwealth.

On behalf of the Commonwealth, the Treasurer and Receiver-General of the Commonwealth hereby further undertakes for the benefit of the owners of the 2019 Bonds to provide in a timely manner, not in excess of ten (10) business days after the occurrence of the event, to the EMMA notice of any of the following events with respect to the 2019 Bonds (numbered in accordance with the provisions of the Rule):

- (i) principal and interest payment delinquencies;
- (ii) non-payment related defaults, if material;
- (iii) unscheduled draws on debt service reserves reflecting financial difficulties;
- (iv) unscheduled draws on credit enhancements reflecting financial difficulties;
- (v) substitution of credit or liquidity providers, or their failure to perform;
- (vi) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determination of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the 2019 Bonds, or other material events affecting the tax status of the 2019 Bonds;
- (vii) modifications to rights of security holders, if material;
- (viii) bond calls, if material, and tender offers;
- (ix) defeasances;
- (x) release, substitution or sale of property securing repayment of the 2019 Bonds, if material;
- (xi) rating changes;
- (xii) bankruptcy, insolvency, receivership or similar event of the Commonwealth*;
- (xiii) the consummation of a merger, consolidation, or acquisition involving the Commonwealth or the sale of all or substantially all of the assets of the Commonwealth, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;
- (xiv) appointment of a successor or additional trustee or the change of name of a trustee, if material;
- (xv) incurrence of a financial obligation of the Commonwealth, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a financial obligation[†] of the Commonwealth, any of which affect security holders, if material; and
- (xvi) default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a financial obligation of the Commonwealth, any of which reflect financial difficulties.

* As noted in the Rule, this event is considered to occur when any of the following occur: (i) the appointment of a receiver, fiscal agent or similar officer for the Commonwealth in a proceeding under the U.S. Bankruptcy Code or in any proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the Commonwealth, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or (ii) the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the Commonwealth.

[†] As noted in the Rule, the term “financial obligation” means (i) a debt obligation, (ii) a derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation or (iii) a guaranty of an instrument described in (i) or (ii). The term does not include municipal securities as to which a final official statement has been provided to the MSRB consistent with the Rule.

Nothing herein shall preclude the Commonwealth from disseminating any information in addition to that required hereunder. If the Commonwealth disseminates any such additional information, nothing herein shall obligate the Commonwealth to update such information or include it in any future materials disseminated.

To the extent permitted by law, the foregoing provisions of this 2019 Bond related to the above-described undertakings to provide information shall be enforceable against the Commonwealth in accordance with the terms thereof by any owner of a 2019 Bond, including any beneficial owner acting as a third-party beneficiary (upon proof of its status as a beneficial owner reasonably satisfactory to the Treasurer and Receiver-General). To the extent permitted by law, any such owner shall have the right, for the equal benefit and protection of all owners of 2019 Bonds, by mandamus or other suit or proceeding at law or in equity, to enforce its rights against the Commonwealth and to compel the Commonwealth and any of its officers, agents or employees to perform and carry out their duties under the foregoing provisions as aforesaid. The failure to comply with the above-described undertakings shall not constitute an Event of Default under the Trust Agreement, and the sole remedy in connection with such undertakings shall be limited to an action to compel specific performance of the obligations of the Commonwealth in connection with such undertakings and shall not include any rights to monetary damages. The Commonwealth's obligations in respect of such undertakings shall terminate if no 2019 Bonds remain outstanding (without regard to an economic defeasance) or if the provisions of the Rule concerning continuing disclosure are no longer effective, whichever occurs first. The provisions of this 2019 Bond relating to such undertakings may be amended by the Treasurer and Receiver-General of the Commonwealth, without the consent of; or notice to, any owners of the 2019 Bonds, (a) to comply with or conform to the provisions of the Rule or any amendments thereto or authoritative interpretations thereof by the Securities and Exchange Commission or its staff (whether required or optional), (b) to add a dissemination agent for the information required to be provided by such undertakings and to make any necessary or desirable provisions with respect thereto, (c) to add to the covenants of the Commonwealth for the benefit of the owners of 2019 Bonds, (d) to modify the contents, presentation and format of the annual financial information from time to time as a result of a change in circumstances that arises from a change in legal requirements, or (e) to otherwise modify the undertakings in a manner consistent with the provisions of the Rule concerning continuing disclosure; provided, however, that in the case of any amendment pursuant to clause (d) or (e), (i) the undertaking, as amended, would have complied with the requirements of the Rule at the time of the offering of the 2019 Bonds, after taking into account any amendments or authoritative interpretations of the Rule, as well as any change in circumstances, and (ii) the amendment does not materially impair the interests of the owners of the 2019 Bonds, as determined either by a party unaffiliated with the Commonwealth (such as Commonwealth disclosure counsel or Commonwealth bond counsel) or by the vote or consent of owners of a majority in outstanding principal amount of the 2019 Bonds affected thereby at or prior to the time of such amendment.

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