Massachusetts Bay Transportation Authority

2022 Bond Issuance

March 2022

Agenda

- Seek authorization to issue $457.3 million of MBTA bonds
  - A portion of which (approximately $100 million) will be executed in the Spring of 2022.
  - The remaining portion will be executed as needed to fund ongoing capital program needs in Fiscal Year 2023.
- Seek authorization to execute:
  - A tax-exempt refunding and a small taxable restructuring on the Assessment lien, as well as, new money sufficient to attain majority; and
  - Modernize the Assessment trust agreement.

New Money Sales Tax Issuance
(to be issued part now and part later in the year)

Prospective New Money Issuance

- Approximately a quarter of the funding for the Authority's estimated $9.2 billion capital program comes from annual revenue bond debt issuances. These issuances seek to maximize funding for the CIP, while still preserving debt service coverage ratios at levels that will **unlikely impact the Authority's bond rating** and, at the same time, maintain **manageable annual debt service** within the operating budget
- MBTA management plans capital project funding on a five-year pro forma (FY23-FY27) using the following pattern: $590 million annual debt issuance from FY23-FY25 and $500 million annual debt issuance from FY26-FY27

  Each year, MBTA own source capital (consisting of bonds and federal loans) is assumed to be funded by:
  - 75% MBTA Revenue Bonds and
  - 25% loans from federal USDOT Railroad Rehabilitation & Improvement Financing (RRIF) and Transportation Infrastructure Finance and Innovation Act (TIFIA) programs or other non-public, low-cost sources of funding

CIP MBTA Funding Sources

- $590 million for 3 years (FY23-25) → $442.5 million (revenue bonds) and $147.5 million (other)
- $500 million for next 7 years (FY26-FY32) → $375.0 million (revenue bonds) and $125.0 million (other)

FY22 New Money Issuance

$590 million → $457.3 million (revenue bonds) and $132.7 million Quincy Bus Facility TIFIA Loan

Overview of MBTA Liens

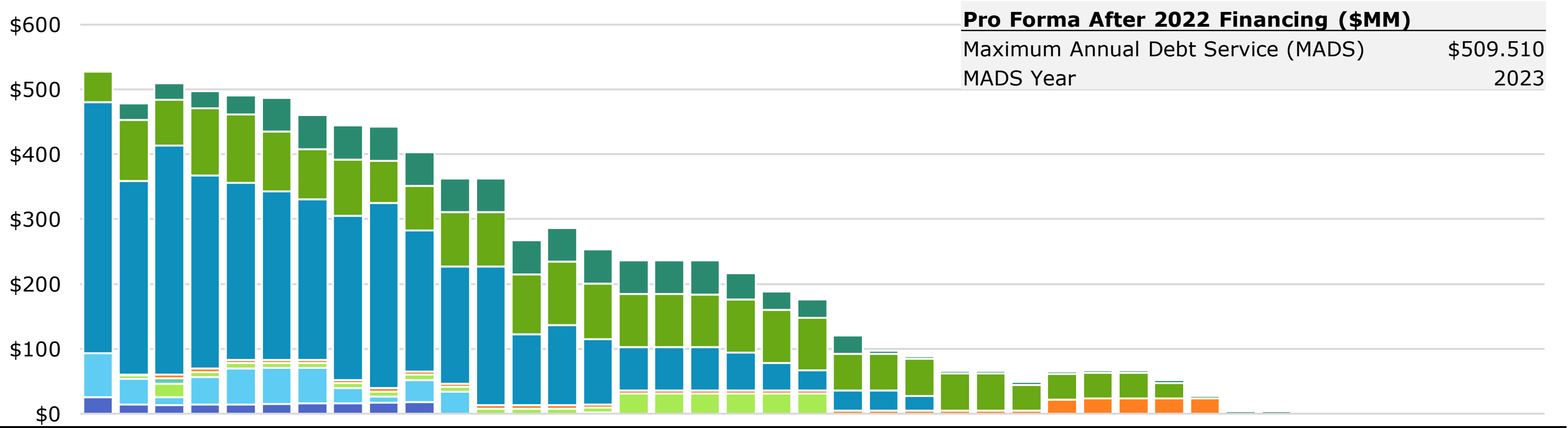
Summary of Outstanding Debt 2/23/2022	Principal ($ in 000's)
Senior Sales Tax	$2,719,680
Subordinated Sales Tax (Bonds and BANs)	$1,257,635
Subordinated Sales Tax (RRIF Loans Only)	$839,542
Assessment Bonds	$533,015
Prior Obligations	$121,165
Total	**$5,471,037**

The top chart shows existing debt service after the 2022 assessment refunding ($231.5M Refunding + $100M New Money).

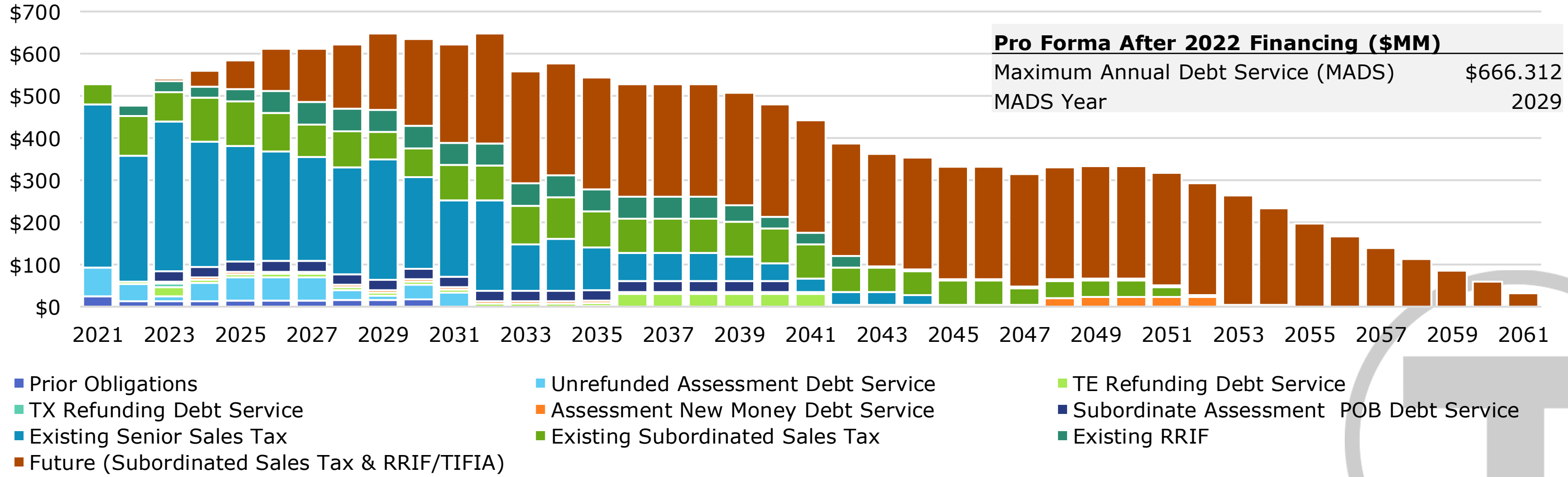
The bottom chart shows debt service with annual issuances of $590 million a year for three years, and $500 million thereafter.

* Senior Sales Tax Debt Service is net of estimated Debt Service Reserve Fund Draws and Earnings. Subordinated Sales Tax Debt Service includes interest on outstanding BANs. Unrefunded Assessment Debt Service reflects anticipated defeasance of certain 2006 Series A bonds to maturity with Debt Service Reserve Fund Releases and Forward Delivery Agreement termination payments

Aggregate MBTA Debt Service After 2022 Assessment Refunding and New Money by Budget Year
$231.5M Refunding + $100M New Money($MM)*



Aggregate MBTA Debt Service with 10 Years of Future Issuances (Assume Level D/S and No Shaping) by Budget Year ($MM)
$590M->$500M



Assessment Bond Call Option

History and Overview of the Assessment Credit

Assessment Bonds are secured by absolute and unconditional assessments imposed by state law on 176 cities and towns located in the Authority's service area

Sound Security with Statutory Floor and Local Aid Intercept

- Assessment obligations are supported by the general obligation pledge of all 176 cities and towns
- Statutory floor ensures assessments of at least $136 million, with annual inflation increases up to 2.5%
- FY2021 Assessments were $177.86 million, translating into approximately 1.8% annual growth since 2006
- Assessments are automatically deducted from participants' monthly local aid payments, with all cities and towns receiving substantially more local aid than owed in charges and assessments

High Quality Pool of Participants

- Top three participants include Boston (Aaa/AAA/AAA), Cambridge (Aaa/AAA/AAA), and Newton (Aaa/AAA/NR) which accounted for 62% of FY2021 assessments
- Boston contributed 52.5% of total pledged assessments in FY2021, which accounted for only 20% of its total local state aid
- Assessments are allocated by population, providing stability in the distribution among the participants

Cross-Collateralization and Statutory Non-Impairment

- Residual Sales Tax Revenues cross-collateralize the credit, providing additional revenue enhancement
- Residual Sales Tax Revenues totaled approximately $800 million in FY2021
- The Enabling Act provides a statutory lien on Assessment and Sales Tax Revenues, non-impairment covenants for the benefit of bondholders, and other protective provisions

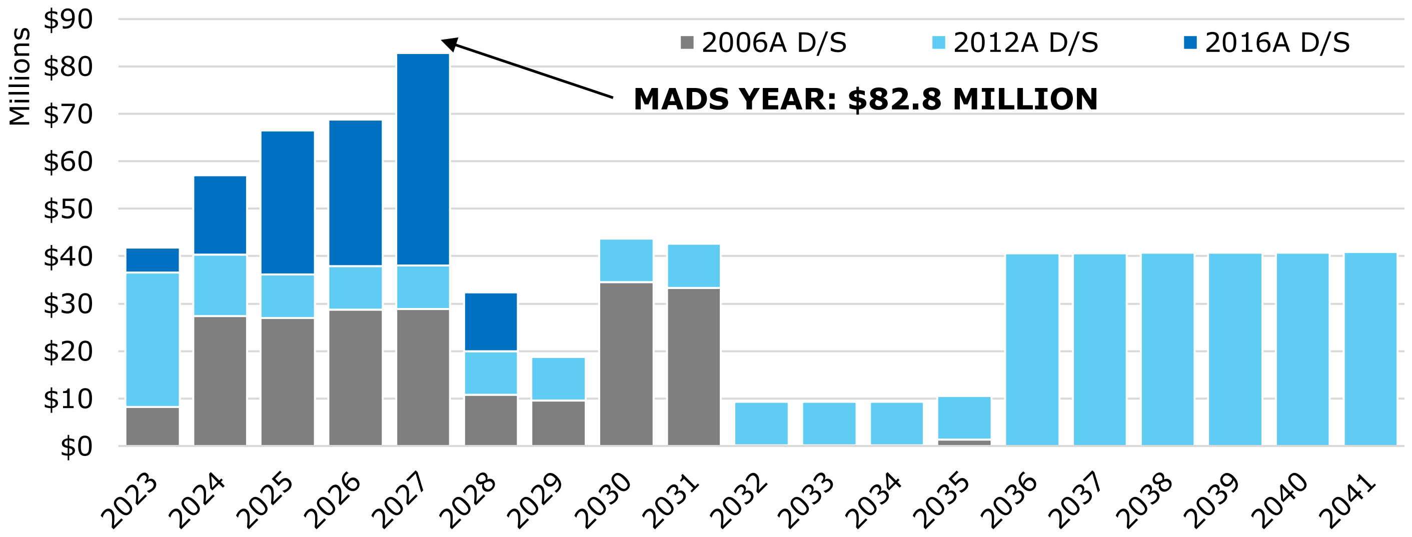
Refund and Call 2012A Assessment Bonds to Maximize Debt Service Savings

- The Authority currently has $533 million of outstanding Assessment Bonds
- The 2012A series is the largest of the three series that are on the assessment lien (principal outstanding: $252M). The bonds become tax-exempt refundable on or after April 1, with estimated NPV Savings of about $41 million.
- The refundable 2012A bonds represent about 43% of bondholders on the assessment credit, giving us a unique opportunity to modernize the trust agreement, securing the bonds.
- By issuing a tranche of new money on the assessment lien, we can achieve majority of new bond holders who will have “deemed consent” to changes that will modernize the trust agreement, free up reserves, and expand the capacity of the assessment lien.
- Therefore, we are proposing to refund $231.5 million in assessment debt for the refunding and, to achieve majority, a smaller amount of $100 million new money also on the assessment lien. Finally, to ensure majority consent to the amendments, we propose a small amount of taxable refunding as a cash defeasance of other assessment bonds.

Maximum Annual Debt Service (MADS)

Opportunity to Reshape Assessment Debt Service

Outstanding Debt Service (Budgetary, 7/1 Basis)



MADS Coverage Calculation

$136M (assessment floor)/$82.8M (2027 debt service) = 1.64x

Coverage with Residual Sales Tax (BRA)

$136M (assessment floor) + $807M* (FY21 residual sales tax)/$82.8M (2027 debt service) =11.39x

Rating analysts and investors look at the **Maximum Annual Debt Service (MADS**) as a metric of credit quality and the capacity of new issuance implied by this coverage ratio. The current MADS of $82.8 million falls in 2027 is currently constraining capacity for additional issuance on this lien.

*The assessment lien is cross-collateralized, meaning if the Authority is unable to pay bondholders with assessment revenue, bondholders have the first right to residual sales tax. This cross-collateralization strengthens the credit in the eyes of rating agencies and investors.

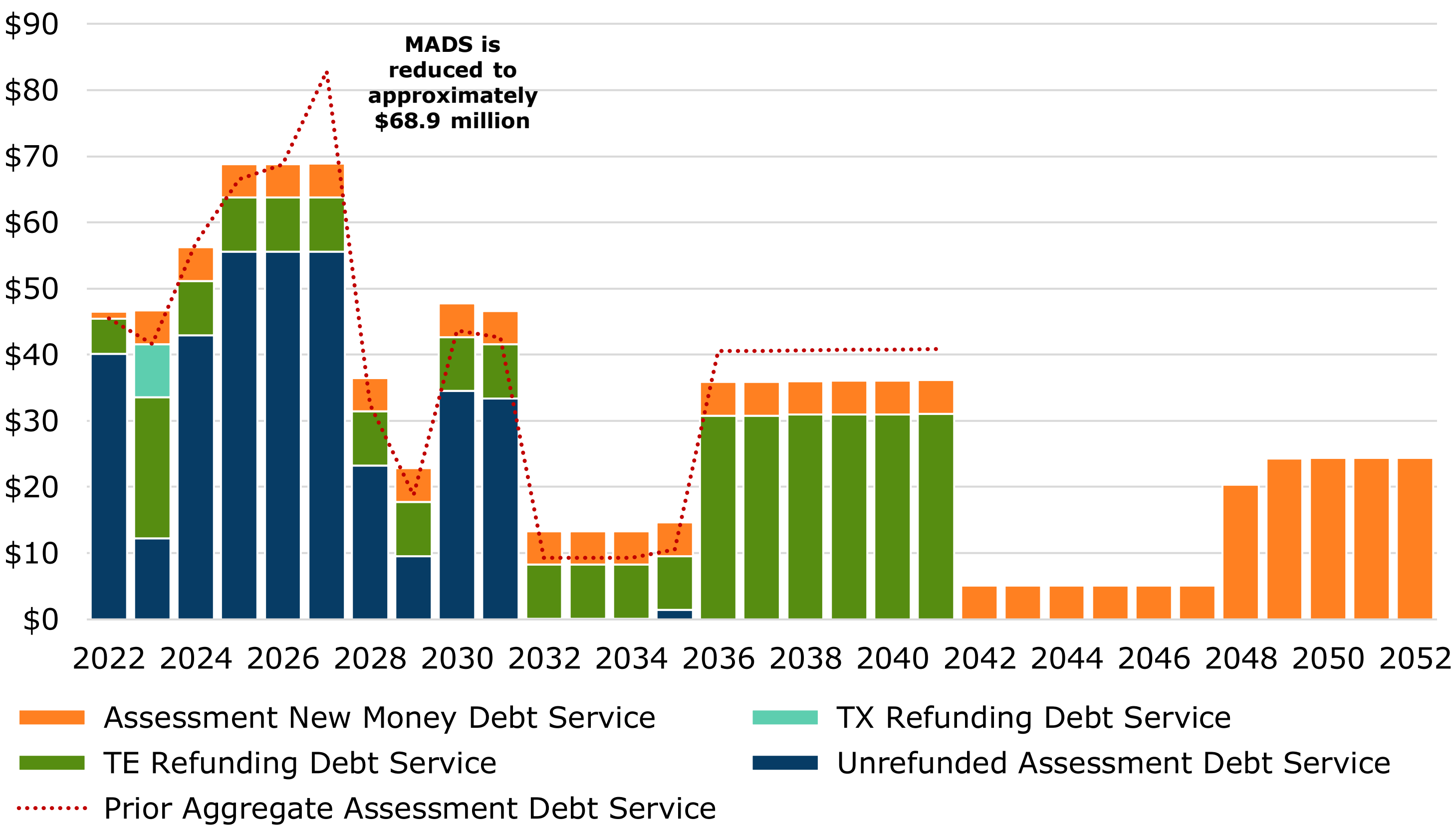
Increasing Capacity

Increasing Capacity by Improving Coverage Calculation

MADS Coverage Prior to and Post Series 2022 Issuance(3)	Prior to Series 2022 Bonds	Post Series 2022 Issuance
Assessment Floor Amount[1]	1.64x	**N.A.**
FY21 Assessments[2]	N.A.	**2.58x**
Assessment Floor Amount and Residual Sales Taxes	11.39x	**N.A.**
FY21 Assessments and Residual Sales Taxes	N.A.	**14.30x**

- Improve capacity on the assessment lien by reducing MADS to approximately $68.9 million in 2025-2027, from $82.8 million in 2027, which causes an improvement in coverage to 2.58x (prior FY revenues test) from 1.64x (floor amount test)

Assessment Debt Service After 2022 Financing by Budget Year

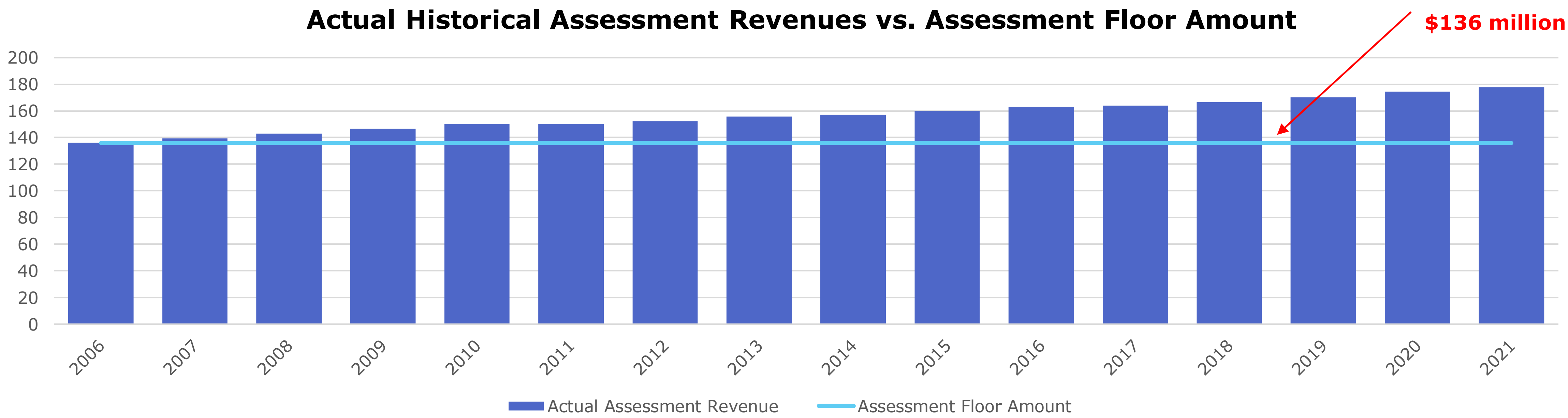


1) Based on Assessment Floor amount of $136,026,868
2) Based on 2021 Assessment revenues of $177,860,534
3) Calculated on a budget basis

Additional Bonds Test (ABT)

Revising the Additional Bonds Test (ABT)

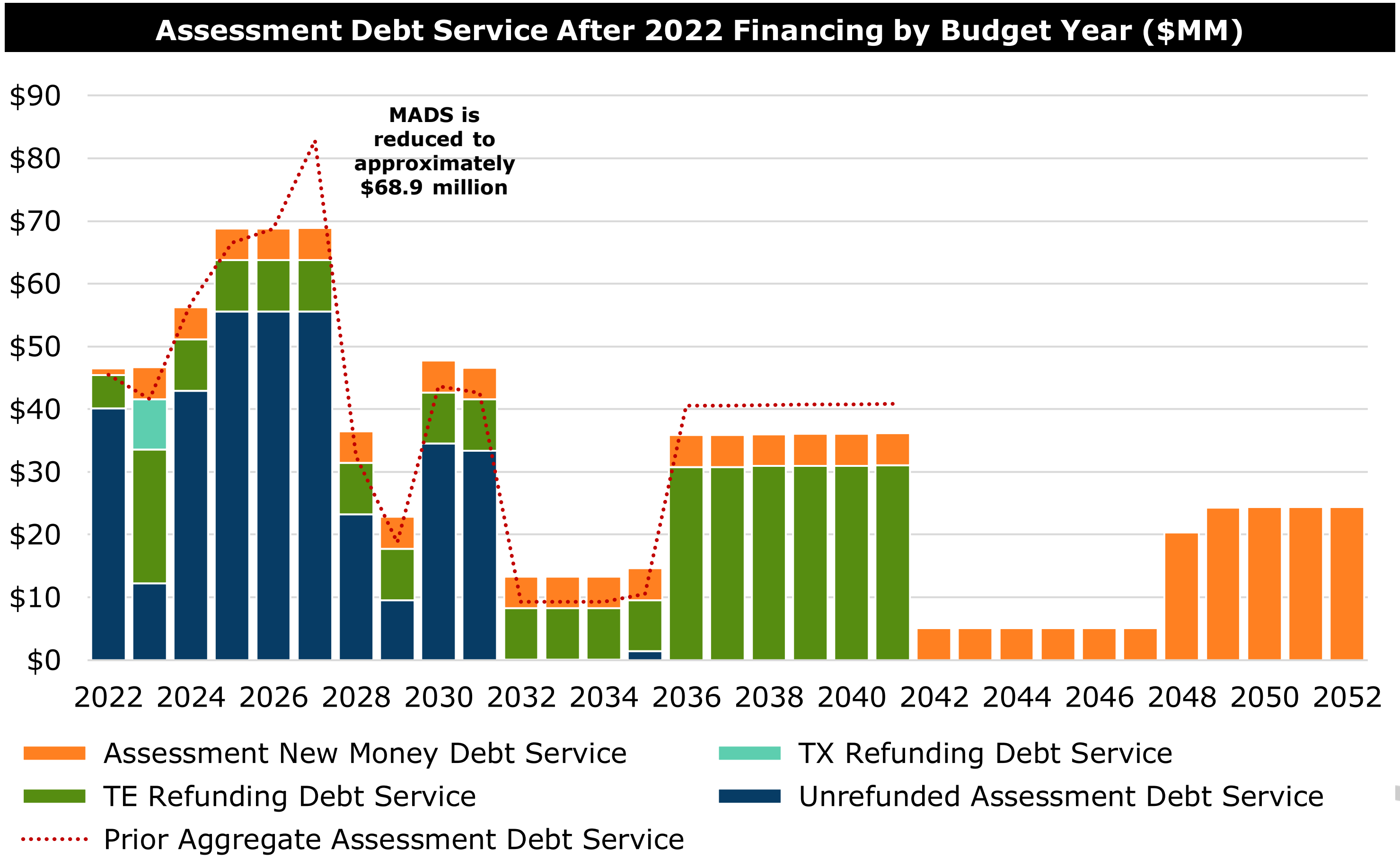
- The Additional Bonds Test (ABT) is a covenant with bondholders to protect against dilution.
- The current ABT for the Assessment lien was created in 2000 and the revenue amount used in the calculation has remained at $136 million since 2006 (following forward funding which provided a five year reduction in assessments).
- By reaching 50% consent, we can make changes to the indenture including updating the ABT Test to use prior fiscal year assessment revenue. This will result in increased debt capacity for the lien.
- FY21 Assessment Revenues were $177.8 million, 30% higher than current Assessment Floor Amount.



Plan of Finance

2022 Plan of Finance - Overview

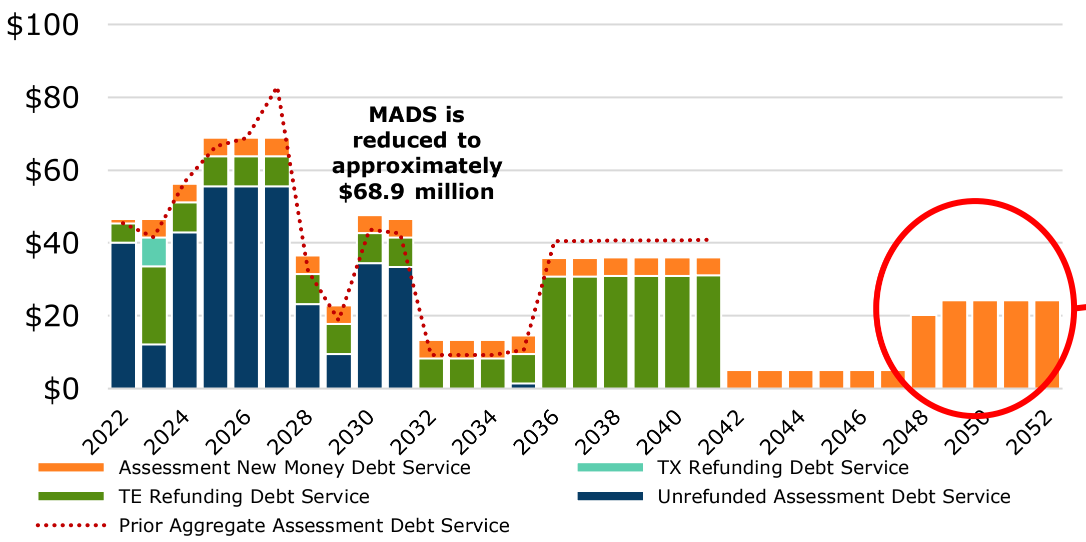
- The 2022 Plan of Finance includes:
  - Current refunding of $231.5M 2012A bonds for savings (NPV savings: ~$41 million)
  - Taxable refunding and/or defeasing certain 2006A and or 2016A maturities in order to achieve targeted debt service levels;
  - New Money issuance for sustainable capital projects with long average lives to maximize the benefit of AAA rating. Current estimates assume $100 million is needed to achieve bondholder consent, coupled with a small taxable refunding.



2022 Plan of Finance – Assessment New Money Structure

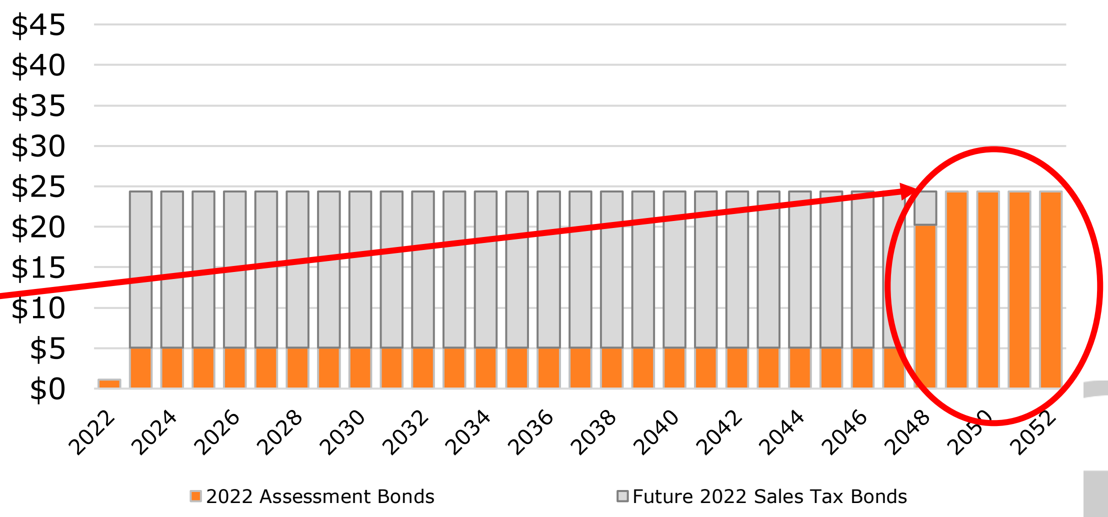
- The 2022 Plan of Finance includes new money bonds:
  - Assessment New Money issuance for sustainable capital projects with long average lives to maximize the benefit of AAA rating. Estimate $100 million needed to achieve bondholder consent.
  - Balance of FY22 Capital Improvement Plan not raised by Assessment Bonds will be issued as Subordinated Sales Tax bonds in the future.

Assessment Debt Service After 2022 Financing by Budget Year ($MM)



FY2023 Annual New Money Sources and Structure

$357M Sales Tax + $100M Assessment = $457M



2022 Plan of Finance - Modernize Assessment Bond Indenture

The following are the changes proposed to the Assessment Bond Indenture:

- **Remove the Debt Service Reserve Fund Requirement** to eliminate negative carry;
  - Negative carry is a condition in which the cost of holding an investment or security exceeds the income earned while holding it.
- **Strengthen the Additional Bonds Test** (“ABT”) and update the revenue calculation and coverage level, among others;
- **Permit subordinate lien** and/or residual lien issuance in the future;
- **Clean up archaic language** related to investments, auction rate securities, notice publication, formal definitions, etc.;
- **Maintain cross-collateralization** provisions; and
- **Preserve top credit ratings** on the Assessment lien.

2022 Plan of Finance - Debt Service Reserve Fund Release

- Remove debt service reserve requirement from indenture in order to eliminate negative carry, which is created by funding on the long portion of the interest rate curve while investing on the short portion of the interest rate curve
- Preserve above-market investment yields between 4.193% and 5.463% on the forward delivery agreements associated with those reserves, by transferring to sales tax reserves
- A portion of ~$34 million release is used to pay off outstanding 2006A Assessment bonds to reduce maximum annual debt service on the lien
- Remaining portion of release put towards reducing the size of the 2012A current refunding issue.

Quantifying Impact

Capacity Increase

- The capacity under the current indenture is approximately $1.034 billion.
- The combination of (i) reducing MADS and (ii) revising the ABT increases estimated bonding capacity to approximately $2.031 billion, ***increasing current capacity by $996 million,*** but doesn't account for the impact accessing the additional capacity, as this would materially escalate annual debt service payments in the operating budget.

Increased Capacity after ABT Revision and Restructuring ($000s)*					
	ABT		MADS	Capacity	Cumulative Change in Capacity
	Multiple	Revenue			
Current	1.20x	$136,027	$82,814	**$1,034,844**	
1 After ABT Change	**1.35x**	**177,861**	82,814	**1,573,046**	**+$538,202**
2 After Restructuring	**1.35x****	**177,861**	**62,609**	**2,031,527**	**+$458,481**

TOTAL = $996,683

*ABT and MADS calculations based on 2012A Refunding only, before New Money issuance
**Preliminary, subject to change

Summary and Resolution Request

Summary of Benefits

SALES TAX BONDS

- Funds $457.3 million of new projects within the FY23-FY27 CIP (remaining $132.7 million will be issued as a TIFIA loan for the Quincy Bus Facility project).

ASSESSMENT BONDS

- Execute tax-exempt refunding for an estimated $50 million in net present value savings
- Improve debt capacity by strengthening the ABT, calculating it off of actual pledged revenue instead of the $136 million Assessment Floor
- Also improve capacity on the assessment lien by reducing MADS to approximately $68.9 million in 2025-2027, from $82.8 million in 2027, which causes an improvement in coverage to 2.58x from 1.64x
- Remove debt service reserve requirement from indenture in order to eliminate negative carry, while preserving above-market investment yields between 4.193% and 5.463% on the forward delivery agreements associated with those reserves
- Reduce amortization in FY 2024 to provide budgetary relief ($3.5 million)
- Structure new money sustainability term bond to take advantage of AAA credit spreads on the long end of the curve.

Summary of Resolution

- Recommendation of MBTA Board would authorize issuance of Assessment Bonds to:
    - Fund new money debt issuance of $457.3 million;
    - Current Refund 2012A Assessment Bonds for savings;
    - Refund and/or defease a portion of other Assessment Bonds to reduce annual debt service;
    - Take advantage of rare opportunity to attain bondholder consent to modernize the Assessment trust agreement in one transaction; and
    - Approve the necessary documents.