

(A Component Unit of the Commonwealth of Massachusetts)

Basic Financial Statements, Required Supplementary Information and Other Supplementary Information

June 30, 2019

(With Independent Auditors' Report Thereon)

(A Component Unit of the Commonwealth of Massachusetts)

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#### **Independent Auditors' Report**

Members of the Board of Directors Massachusetts Department of Transportation:

#### **Report on the Financial Statements**

We have audited the accompanying financial statements of the governmental activities, the business-type activities, the aggregate discretely presented component units, each major fund, and the aggregate remaining fund information of the Massachusetts Department of Transportation (MassDOT), a component unit of the Commonwealth of Massachusetts, as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise MassDOT's basic financial statements as listed in the table of contents.

#### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We did not audit the financial statements of the aggregate discretely presented component units. Those financial statements were audited by other auditors whose reports thereon have been furnished to us, and our opinions, insofar as they relate to the amounts included for those entities, are based on solely on the reports of the other auditors. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

#### Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities, the business-type activities, the aggregate discretely presented component units, each major fund, and the aggregate remaining fund information of MassDOT, as of June 30, 2019, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with U.S. generally accepted accounting principles.



#### Other Matters

**Required Supplementary Information** 

U.S. generally accepted accounting principles require that the management's discussion and analysis and the schedules listed under Required Supplementary Information in the table of contents be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### Other Supplementary Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise MassDOT's basic financial statements. The Other Supplementary Information (OSI) listed in the table of contents is presented for purposes of additional analysis and is not a required part of the basic financial statements.

The OSI is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the OSI is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

#### Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated December 26, 2019 on our consideration of MassDOT's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of MassDOT's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering MassDOT's internal control over financial reporting and compliance.



Boston, Massachusetts December 26, 2019

(A Component Unit of the Commonwealth of Massachusetts) Management's Discussion and Analysis June 30, 2019 (Unaudited)

Management of the Massachusetts Department of Transportation (MassDOT) provides this Management's Discussion and Analysis to assist readers of its financial statements to better understand the financial activities of MassDOT for the fiscal year ended June 30, 2019. We encourage readers to consider this information in conjunction with MassDOT's basic financial statements, which follow this section.

#### **Overview of the Financial Statements**

MassDOT's financial statements present two types of statements each with a different view of MassDOT's finances. This approach focuses on both MassDOT as a whole (government-wide) and the fund financial statements. The government-wide financial statements provide both long-term and short-term information about MassDOT as a whole. The fund financial statements focus on the individual parts of MassDOT, reporting MassDOT's operations in more detail than the government-wide statements. Both presentations (government-wide and fund) allow the user to address relevant questions, broaden the basis of comparison and enhance MassDOT's accountability. Also included in the report is the financial information about activities for which MassDOT acts solely as a trustee or agent for the benefit of those outside of the government. Additional parts of the basic financial statements are the notes to the financial statements, required supplementary information and other supplementary information, which is used to assist readers and investors in reviewing MassDOT's general fund operations in more detail.

#### **Government-Wide Financial Statements**

The government-wide financial statements are designed to provide a broad overview of MassDOT as a whole, with the exception of fiduciary activities, and use accounting methods similar to those used by private-sector companies. The statements provide both short-term and long-term information about MassDOT's financial situation and are prepared using the flow of economic resources measurement focus and the full accrual basis of accounting. All revenues and expenses connected with the fiscal year are reported regardless of the timing of cash flows. The government-wide financial statements include the following two statements:

**Statement of Net Position** – Presents all of MassDOT's assets, deferred outflows of resources, liabilities, and deferred inflows of resources with the difference being reported as "net position". The net position is widely considered a good measure of MassDOT's financial health as increases and decreases in MassDOT's net position serve as a useful indicator of whether MassDOT's financial position is improving or deteriorating. The reader should consider other nonfinancial factors, such as the condition of MassDOT's infrastructure, ways and structures when evaluating financial information.

**Statement of Activities** – Presents information showing how MassDOT's net position changed during the most recent fiscal year. Revenues, expenses, and gains/losses are reported for some items that will not result in cash flows until future fiscal periods (i.e., accounts receivable, long-term debt, etc.). This statement also presents a comparison between direct expenses and program revenues for each division of MassDOT.

## MASSACHUSETTS DEPARTMENT OF TRANSPORTATION (A Component Unit of the Commonwealth of Massachusetts) Management's Discussion and Analysis

June 30, 2019 (Unaudited)

The government-wide financial statements present information in three columns in order to summarize MassDOT's activities. The types of activities presented are as follows:

**Governmental Activities** – Most of MassDOT's basic services (which are primarily funded by toll revenues, contract assistance from the Commonwealth and other nonexchange revenues) are reported in this section by operational division, which are as follows: Highway, Registry of Motor Vehicles, Rail and Transit, and Aeronautics as well as shared services represented by Planning and Enterprise Services (formerly the Office of the Secretary).

**Business-Type Activities** – The Massachusetts Bay Transportation Authority's (MBTA), a component unit, activities are reported here since a portion of their costs are recovered through user fees and charges to external users of goods and services.

**Discretely Presented Component Units** – Separate legal entities for which MassDOT has financial accountability are included in this section. These entities consist of fifteen regional transit authorities and operate similar to private sector companies and the business-type activities described above. The separately audited financial statements of MassDOT's component units may be obtained by directly contacting the various entities.

The fifteen regional transit authorities are as follows:

Berkshire Regional Transit Authority Brockton Area Transit Authority Cape Ann Transportation Authority Cape Cod Regional Transit Authority Franklin Regional Transit Authority Greater Attleboro/Taunton Regional Transit Authority Lowell Regional Transit Authority Martha's Vineyard Transit Authority Merrimack Valley Regional Transit Authority Metrowest Regional Transit Authority Montachusett Regional Transit Authority Nantucket Regional Transit Authority Pioneer Valley Transit Authority Southeastern Regional Transit Authority Worcester Regional Transit Authority

(A Component Unit of the Commonwealth of Massachusetts) Management's Discussion and Analysis June 30, 2019 (Unaudited)

#### **Fund Financial Statements**

Users of government financial statements will find the fund financial statement presentation to be most familiar. A fund is a grouping of related accounts that is used to maintain control over resources that have been allocated to specific projects or activities. MassDOT uses fund accounting to ensure and demonstrate compliance with several finance related legal requirements.

All of the funds of MassDOT can be divided into three categories as follows:

**Governmental Funds** – Most of the basic services provided by MassDOT are financed through governmental funds, which are defined as a set of accounts, focused on near-term inflows and outflows of resources to be spent. These funds are used to account for the same functions reported as governmental activities in the government-wide financial statements. The focus is also on the balances left at the end of the fiscal year available for spending. This information is useful in evaluating MassDOT's near-term financing requirements and it is based on the modified accrual basis of accounting. Such statements provide a detailed short-term view of MassDOT's finances that assist in determining whether there will be adequate financial resources available to meet current needs.

Because the focus of governmental funds is narrower than that of the government-wide financial statements, it is useful to compare the information presented for governmental funds with similar information presented for governmental activities in the government-wide financial statements. This comparison will assist the reader in understanding the long-term impact of the government's near-term financing decisions. The governmental funds balance sheet and the governmental funds statement of revenues, expenditures, and changes in fund balances include reconciliations to facilitate the comparison. The reconciliations are presented on the page immediately following each respective governmental funds' financial statement.

MassDOT has several governmental funds; two of them, the Massachusetts Transportation Trust Fund (MTTF) and Highway Capital Projects Fund are considered major funds for presentation purposes. Each major fund is presented in a separate column in the governmental funds balance sheet and in the governmental funds statement of revenues, expenditures, and changes in fund balances. The remaining governmental funds, which primarily consist of federal grant programs, the Motor Vehicle Inspection Trust Fund (MVITF), and the Central Artery/Tunnel Project Repair and Maintenance Trust (CARM) Fund, are aggregated and presented as other governmental funds.

**Proprietary Funds** – MassDOT maintains two types of proprietary funds. The enterprise fund is used to report the same function presented as business-type activities in the government-wide financial statements. MassDOT reports the MBTA as a major enterprise fund. An internal service fund is used to account for the Owner Controlled Insurance Program that was established to pay contractors' workers' compensation claims related to the Central Artery/Tunnel Project. The services provided by the internal service fund benefit the governmental function and, as a result, are included within governmental activities in the government-wide financial statements.

Proprietary funds financial statements provide the same type of information as in the government-wide financial statements, only in more detail. Like the government-wide financial statements, proprietary funds financial statements use the full accrual basis of accounting. As such, there is no reconciliation required between the government-wide financial statements' business-type activities and the proprietary funds financial statements.

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**Fiduciary Funds** – Such funds are used to account for resources held for the benefit of parties outside MassDOT. Fiduciary funds are not reflected in the government-wide financial statements because the resources of these funds are not available to support MassDOT's own programs. The full accrual basis of accounting is used for fiduciary funds.

MassDOTs' fiduciary funds are Agency funds, which are used to account for assets held in a custodial capacity.

# Notes to the Financial Statements, Required Supplementary Information and Other Supplementary Information

The notes provide additional information that is essential for a full understanding of the data reported in the government-wide and fund financial statements.

The required supplementary information section includes pension schedules related to MassDOT's proportionate share of net pension liability and pension contributions, as required by GASB Statement No. 68, "*Accounting and Financial Reporting for Pensions*", and Other Post Employment Benefit (OPEB) schedules related to MassDOT's share of net OPEB liability and OPEB contributions, as required by GASB 75 "*Accounting and Financial Reporting for Pensions*".

The supplementary information includes a combining balance sheet and a combining schedule of revenues, expenditures and changes in fund balances for MassDOT's general fund (MTTF). The supplementary information provides details for the MTTF's Metropolitan Highway System (MHS), Western Turnpike (WT), Tobin Bridge and Other Operations.

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#### **Government-Wide Financial Analysis**

#### Net Position

The following table reflects a condensed statement of net position based on the government-wide financial statements.

(in thousands of donars)								
	Governmental Busines		Business-typ	e (MBTA)	rimary	Change		
	activi	ties	activit	ies	govern	ment	year over year	
	2019	2018	2019	2018	2019	2018	Amount	%
Current and noncurrent other assets	\$ 1,978,328	1,804,204	1,552,456	1,720,286	3,530,784	3,524,490	6,294	— %
Capital assets	25,417,024	25,239,774	10,607,504	9,931,906	36,024,528	35,171,680	852,848	2 %
Deferred outflows of resources	265,039	215,968	797,542	513,453	1,062,581	729,421	333,160	46 %
Total assets & deferred outflows	27,660,391	27,259,946	12,957,502	12,165,645	40,617,893	39,425,591	1,192,302	3 %
Bonds outstanding and notes payable	1,949,831	1,856,468	5,493,515	5,728,840	7,443,346	7,585,308	(141,962)	(2)%
Noncurrent liabilities	1,571,642	1,852,058	4,240,862	3,720,182	5,812,504	5,572,240	240,264	4 %
Other current liabilities	585,215	660,443	549,054	544,051	1,134,269	1,204,494	(70,225)	(6)%
Deferred inflows of resources	333,407	199,949	200,925	159,084	534,332	359,033	175,299	49 %
Total liabilities & deferred inflows	4,440,095	4,568,918	10,484,356	10,152,157	14,924,451	14,721,075	203,376	1 %
Net position:								
Net investment in capital assets	23,648,992	23,321,614	5,984,296	5,384,327	29,633,288	28,705,941	927,347	3 %
Restricted	873,318	684,637	20,524	20,024	893,842	704,661	189,181	27 %
Unrestricted (Deficit)	(1,302,014)	(1,315,223)	(3,531,674)	(3,390,863)	(4,833,688)	(4,706,086)	(127,602)	(3)%
Total net position	\$ 23,220,296	22,691,028	2,473,146	2,013,488	25,693,442	24,704,516	988,926	4 %

## Condensed Statement of Net Position June 30, 2019 and 2018 (in thousands of dollars)

MassDOT's combined assets and deferred outflows (governmental and business-type activities) exceeded its liabilities and deferred inflows at June 30, 2019 by \$25.7 billion (presented as net position). The main component of net position represents the net investment in capital assets, totaling \$29.6 billion. The majority of capital assets were transferred to MassDOT by the Commonwealth in fiscal year 2010 as a result of transportation reform pursuant to the enabling legislation M.G.L. Ch.6C; however, the Commonwealth continues to finance the debt for these assets. MassDOT uses these capital assets to service the Commonwealth of Massachusetts; therefore, they are not available for future spending.

Governmental activities current and noncurrent other assets, totaling \$2.0 billion, include restricted and non-restricted cash and investments of \$1.5 billion, net receivables of \$495 million, and other assets of \$2.5 million. Governmental activities long-term liabilities, totaling \$1.6 billion, include all noncurrent liabilities, excluding the long-term portion of bonds outstanding and notes payable. Noncurrent liabilities in the condensed statement include \$112 million of derivative instruments, \$191 million in accrued interest on capital appreciation bonds and derivative borrowings, \$571 million in net Pension liability, \$667 million in net OPEB liability, and \$30 million in other liabilities.

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Other current liabilities totaling \$585 million are due within one year, and exclude the current portion of bonds outstanding and notes payable totaling \$46 million. Other current liabilities include accounts payable and accrued expenses of \$405 million, unearned revenue of \$112 million, accrued interest of \$36 million, and other liabilities of \$32 million. Included within the condensed statement's other liabilities category for both noncurrent liabilities and other current liabilities is environmental remediation, workers' compensation, compensated absences, and claims and judgments.

The increase of \$332 million in business-type activities total liabilities and deferred inflows compared to the prior year is attributable to increases in the OPEB and pension obligations, including the related deferred inflows, and an increase in other liabilities. This is offset by an increase in total assets and deferred outflows of \$792 million. Approximately \$676 million, or 85%, of the increase in total assets and deferred outflows in business-type activities is attributable to capital assets.

#### **Changes in Net Position**

MassDOT's total primary government change in net position, noted on the Condensed Statement of Changes in Net Position, increased by \$1.0 billion from fiscal 2018. For fiscal 2019, the governmental activities change in net position amounted to an increase of \$529 million primarily related to increases in toll revenue and operating grants, as well as a reduction in operating expenses.

The governmental activities change in net position increased by \$232 million compared to the prior year due to a increase in revenue of \$80 million and a decrease in expenses of (152) million. Capital grants and contributions amounted to \$1.8 billion of revenues, or 58% of total governmental activities revenue, a decrease from the prior year in the amount of (23) million. Except for the Aeronautics line item, every functional expense experienced a decrease from the prior year.

The following table reflects a condensed statement of activities based on the government-wide financial statements.

(A Component Unit of the Commonwealth of Massachusetts) Management's Discussion and Analysis June 30, 2019 (Unaudited)

#### Condensed Statement of Activities June 30, 2019 and 2018 (in thousands of dollars)

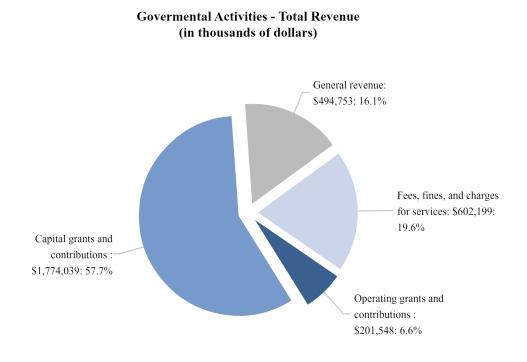
	Governmental Activities		Business-type Activity (MBTA)		Total primary government		Change year over year	
	2019	2018*	2019	2018	2019	2018*	Amount	%
Revenues:								
Program revenues:								
Fees, fines, and charges for services	\$ 602,199	541,929	777,191	764,421	1,379,390	1,306,350	73,040	6 %
Operating grants and contributions	201,548	167,608	_	—	201,548	167,608	33,940	20 %
Capital grants and contributions	1,774,039	1,796,727	684,275	493,506	2,458,314	2,290,233	168,081	7 %
General revenues:								
Operating assistance from the Commonwealth	486,223	486,635	172,102	201,898	658,325	688,533	(30,208)	(4)%
Taxes and assessments	—	_	1,223,346	1,173,288	1,223,346	1,173,288	50,058	4 %
Other income	—	_	46,844	116,899	46,844	116,899	(70,055)	(60)%
Unrestricted investment income	8,530	30	39,637	26,856	48,167	26,886	21,281	79 %
Total revenues	3,072,539	2,992,929	2,943,395	2,776,868	6,015,934	5,769,797	246,137	4 %
Expenses:								
Highway	1,589,336	1,718,593	_	—	1,589,336	1,718,593	(129,257)	(8)%
Planning and Enterprise Services	236,919	258,676	_	—	236,919	258,676	(21,757)	(8)%
Registry of Motor Vehicles	106,397	106,930	_	—	106,397	106,930	(533)	— %
Rail and Transit	490,599	501,283	_	_	490,599	501,283	(10,684)	(2)%
Aeronautics	23,589	12,148	_	_	23,589	12,148	11,441	94 %
Debt service-interest	96,431	97,646	_	_	96,431	97,646	(1,215)	(1)%
MBTA		—	2,483,737	2,368,345	2,483,737	2,368,345	115,392	5 %
Total expenses	2,543,271	2,695,276	2,483,737	2,368,345	5,027,008	5,063,621	(36,613)	(1)%
Change in net position	529,268	297,653	459,658	408,523	988,926	706,176	282,750	40 %
Net position – beginning	22,691,028	22,393,375	2,013,488	1,604,965	24,704,516	23,998,340	706,176	3 %
Net position – ending	\$23,220,296	22,691,028	2,473,146	2,013,488	25,693,442	24,704,516	988,926	4 %

\* Certain reclassifications have been made to conform to the 2019 presentation

(A Component Unit of the Commonwealth of Massachusetts) Management's Discussion and Analysis June 30, 2019 (Unaudited)

#### **Total Revenues**

For fiscal year 2019, total governmental activities revenues (\$3.1 billion) were comprised of general revenues (\$495 million) and program revenues (\$2.6 billion), which include fees, fines and charges for services of \$602 million, operating grants and contributions of \$202 million and capital grants and contributions of \$1.8 billion.



The governmental activities overall revenue increased by \$80 million, or 3%, from the prior year primarily due to an increase in fees, fines and charges for services revenue of \$60 million. This was primarily the result of an increase in toll related revenue of 65 million and a decrease in rental/lease income of \$4 million.

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	Total			Chang year over	
		2019	2018	Amount	%
Program revenues:					
Fees, fines, and charges for services	\$	602,199	541,929	60,270	11 %
Operating grants and contributions		201,548	167,608	33,940	20 %
Capital grants and contributions		1,774,039	1,796,727	(22,688)	(1)%
General revenue		494,753	486,665	8,088	2 %
	\$	3,072,539	2,992,929	79,610	3 %

## Governmental Activities - Program Revenue (in thousands of dollars)

Within program revenues, fees, fines, and charges for services amounted to \$602 million, which is a \$60 million increase from the prior year. This represents a variety of MassDOT revenues, including tolls (\$444 million), rental/lease (\$57 million), and departmental revenue, such as advertising and highway-related permit fees (\$101 million). The increase in general revenue primarily represents an increase in operational funding from the Commonwealth Transportation Fund (CTF).

# Program Revenue - Fees, fines, and charges for services (in thousands of dollars)

	То	tal	Cha year ov	0
	 2019	2018	Amount	%
Tolls	\$ 444,443	379,541	64,902	17 %
Rental/lease	56,502	60,710	(4,208)	(7)%
Departmental	 101,254	101,678	(424)	%
	\$ 602,199	541,929	60,270	11 %

Operating grants and contributions of \$202 million represent both contract assistance for debt service from the Commonwealth and federal grants from various federal agencies, such as Federal Transit Authority, Federal Rail Administration, and Federal Aviation Administration. These contributions are restricted for specific designated purposes and account for approximately 7% of the total MassDOT program revenues. The contributions increased by approximately \$34 million from the prior year.

Capital grants and contributions of \$1.8 billion include funding from the Commonwealth and federal agencies for projects such as the Accelerated Bridge Program (ABP), Statewide Road and Bridge Program, Chapter 90 Local Aid, Regional Transit Authority capital assistance and other capital programs. The majority of these programs are within the Highway division, which account for \$1.2 billion, or 70%, of the overall capital grants and contributions.

(A Component Unit of the Commonwealth of Massachusetts) Management's Discussion and Analysis June 30, 2019 (Unaudited)

The primary factor to cause the Capital grants and contributions to decrease by \$23 million from the prior year balance was a reduction in reimbursable capital expenses.

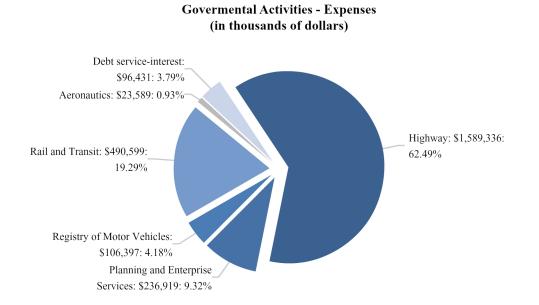
#### **General Revenue**

General revenues, totaling \$495 million, include operating assistance and contract assistance from the Commonwealth, and investment income, increased by \$8 million from the prior year. Subsequent to year-end, MassDOT received additional funding from the Commonwealth totaling \$28 million compared to \$94 million in the prior year. The additional \$28 million was used to cover the 2019 snow & ice deficit (\$6.9 million) and provide other operating support.

#### Expenses

For fiscal year 2019, expenses for governmental activities totaled \$2.5 billion. The Highway Division's operations continue to be one of the MassDOT's highest priorities and commitments, representing \$1.6 billion, or 62%, of the total governmental activities expenses.

The balance of 38% is attributable to Planning and Enterprise Services with \$237 million, the Rail and Transit Division with \$491 million, and debt service-interest expenses of \$96 million. The Registry of Motor Vehicles (RMV) and Aeronautics complete the operational spending pattern with an approximate total of \$130 million.



#### (A Component Unit of the Commonwealth of Massachusetts) Management's Discussion and Analysis June 30, 2019 (Unaudited)

Overall, MassDOT's governmental activities expenses decreased by \$(152) million, or 6% from the prior year. Key elements of this change were a decrease of \$(129) million for Highway activities and a decrease of \$(22) million for Planning and Enterprise Services. The decrease in Highway primarily relates to reductions in claims expense totaling \$31 million, pension and OPEB expense totaling \$30 million and various other reductions in operating expenses. The decrease in Planning and Enterprise Services relates to reductions in pension and OPEB expense totaling \$5 million and various other reductions in operating expenses.

#### Governmental Activities - Expenses (in thousands of dollars)

	 Tota	Change year over year		
	 2019	2018	Amount	%
Highway	\$ 1,589,336	1,718,593	(129,257)	(8)%
Planning and Enterprise Services	236,919	258,676	(21,757)	(8)%
Registry of Motor Vehicles	106,397	106,930	(533)	— %
Rail and Transit	490,599	501,283	(10,684)	(2)%
Aeronautics	23,589	12,148	11,441	94 %
Debt service-interest	 96,431	97,646	(1,215)	(1)%
	\$ 2,543,271	2,695,276	(152,005)	(6)%

## **Business-Type** Activity

The net position for business-type activities is \$2.5 billion, an increase of \$460 million from the prior year, compared to an increase of \$409 million in the prior year. The year over year increase is primarily due to increases in operating revenue and capital grants and contributions of \$13 million and \$191 million, respectively, and an increase in operating expenses of \$123 million.

## **Government Funds Financial Analysis**

As noted earlier, MassDOT uses fund accounting to ensure and demonstrate compliance with finance related legal requirements.

## Governmental Funds

As of June 30, 2019, MassDOT's governmental funds (MTTF, Highway Capital Projects, and other governmental) reported a combined ending fund balance of \$1.4 billion. Of this amount, \$2.5 million is nonspendable and relates to prepaid expenditures. The majority of the remaining fund balance of \$1.3 billion is restricted, which consists of debt service payments and grants or bonded projects that are restricted by external sources and other purposes such as insurance reserve and turnpike operations. Approximately \$703 thousand of the fund balance is assigned leaving a \$99 million unassigned fund balance. All these funds are incorporated in the annual budget and approved by the MassDOT Board of Directors. The MTTF (general fund) is the chief operating fund of MassDOT. As of June 30, 2019, the total fund balance was \$904 million, comprised of \$803 million restricted, \$2.5 million nonspendable (prepaid expenditures), and \$99 million unassigned.

(A Component Unit of the Commonwealth of Massachusetts) Management's Discussion and Analysis June 30, 2019 (Unaudited)

In addition to the MTTF, MassDOT established the Highway Capital Projects Fund as a major governmental fund. The Highway Capital Projects Fund accounts for highway construction projects financed primarily through federal reimbursements passed through the Commonwealth and contract assistance payments received directly from the Commonwealth. As of June 30, 2019, the total fund balance was \$73 million, an increase of \$31 million from the prior fiscal year as a result of the CARM reimbursing the Major Capital Projects Fund for prior year expenditures.

The other governmental funds are special revenue funds used to account for and report the proceeds of specific revenue sources that are restricted or committed to expenditures for specified purposes other than debt service or capital projects. Projects within this category include federal grants, MVITF activity, and the CARM. As of June 30, 2019, the total fund balance was \$385 million.

## **Proprietary Funds**

The Proprietary Funds Statement of Fund Net Position provides the same type of information found in the government-wide statements, but in more detail. MassDOT's proprietary funds include the MBTA (a blended component unit) as a major enterprise fund, and the Owner Controlled Insurance Program (OCIP), an internal service fund.

The net position of the MBTA at the end of the year totaled \$2.5 billion, which consisted of \$6.0 billion in net investment in capital assets, \$21 million restricted for other purposes, and an unrestricted net deficit of \$3.5 billion. OCIP's net position at the end of the year totaled \$2.6 million, which is considered restricted for purposes of this activity.

## **Governmental Funds – MTTF General Fund**

## MTTF Revenues

MTTF (General fund) revenues totaled \$1.18 billion in fiscal 2019, an increase of \$126 million, or 12%, from fiscal 2018. The CTF revenues of \$677 million and toll revenues of \$387 million combine for 90% of the total revenues. The remaining 10%, or \$119 million, consists of rental/lease revenue, investment income, advertising, highway related permits, and other fees.

The CTF revenues include \$100 million dedicated for MHS bonds (through Chapter 27, Section 9 of the Acts of 2009), \$25 million for the operations and maintenance of portions of the Central Artery and the Central Artery North Area, and \$552 million for operations. The operational funding included \$454 million for MassDOT operations, \$88 million for RTA's contract assistance, and \$10 million for the Merit Rating Board.

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### MTTF General Fund - Revenue (in thousands of dollars)

	Total			Chan year ove	0	
	2019		2018	Amount	%	
Tolls	\$	387,056	395,950	(8,894)	(2)%	
Commonwealth Transportation Fund		676,761	567,974	108,787	19 %	
Other (grants, rental/lease, departmental/other)		119,311	93,338	25,973	28 %	
	\$	1,183,128	1,057,262	125,866	12 %	

The \$387 million in toll revenue consists of pledged revenue of \$203 million for Metropolitan Highway System and unpledged revenue of \$145 million for Western Turnpike and \$40 million for the Tobin Bridge operations. The decrease in toll revenues from the prior year is the result of a \$50 million increase in unavailable revenue related to the pay-by-plate program. This amount is recorded as revenue on the government-wide financial statements.

#### MTTF General Fund Toll Revenue by Roadway (in thousands of dollars)

	Total			Change year over y	
		2019	2018	Amount	%
Metropolitan Highway System	\$	202,760	214,776	(12,016)	(6)%
Western Turnpike		144,565	141,653	2,912	2 %
Tobin Bridge		39,731	39,521	210	1 %
	\$	387,056	395,950	(8,894)	(2)%

## **MTTF Expenditures**

During fiscal 2019, the general fund's total expenditures decreased by 10% from the prior year. The majority of the decrease relates to Highway division expenditures, which decreased by 18%, or \$116 million. The decrease is primarily the result of a reduction in pay-go capital expenditures related to toll roads of approximately \$83 million.

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	Tot	al	Chang year over	
	 2019	2018	Amount	%
Highway	\$ 542,937	658,920	(115,983)	(18)%
Planning and Enterprise Services	113,550	116,867	(3,317)	(3)%
Registry of Motor Vehicles	89,924	80,341	9,583	12 %
Rail and Transit	85,800	81,757	4,043	5 %
Aeronautics	2,325	2,095	230	11 %
Debt Service	 149,388	151,185	(1,797)	(1)%
Totals	\$ 983,924	1,091,165	(107,241)	(10)%

#### MTTF General Fund Expenditures (in thousands of dollars)

## MTTF Budgetary Highlights

Funding for MassDOT's general fund (MTTF) operations is dependent in part upon operating assistance from the Commonwealth of Massachusetts' CTF, toll operations, and other departmental revenues.

MassDOT submits its MTTF budget to the Standing Committee on Finance and Audit for review and to the MassDOT Board of Directors for final approval. The Board approved a \$960 million operating budget to cover fiscal year 2019 operations.

The Transportation Finance Act (Chapter 46 of the Acts of 2013) allows MassDOT to transfer excess revenues from the MVITF to the MTTF, providing all expenses of the motor vehicle inspection program are met. In fiscal year 2019, MassDOT transferred \$48 million from the MVITF to the MTTF to fund a portion of operations.

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#### **Capital Asset and Debt Administration**

#### Capital Assets

As of June 30, 2019, MassDOT's combined capital assets totaling \$36.0 billion (net of depreciation) consisted of \$25.4 billion in governmental activities and \$10.6 billion in business-type activities. This total amount represents a net increase (including additions and deductions) of \$853 million, or 2.4% percent, over last year. MassDOT's capital assets include land, construction in progress, infrastructure, buildings and equipment, vehicles, and software as shown in the table below.

	Government	al activities	vities Business-type activities		tivities Total	
	2019	2018	2019	2018	2019	2018
Land	\$ 1,025,599	1,011,475	393,845	390,431	1,419,444	1,401,906
Construction in progress	9,253,819	9,052,639	2,977,084	2,040,030	12,230,903	11,092,669
Infrastructure	15,034,089	15,060,216	5,878,209	6,044,099	20,912,298	21,104,315
Buildings and equipment	78,966	83,431	1,358,366	1,457,346	1,437,332	1,540,777
Vehicles	19,643	29,126	_	_	19,643	29,126
Software	4,908	2,887	_	_	4,908	2,887
Total	\$ 25,417,024	25,239,774	10,607,504	9,931,906	36,024,528	35,171,680

#### MassDOT Capital Assets - At Year End, Net of Depreciation (in thousands of dollars)

Within governmental activities, construction in progress (CIP) increased by \$201 million due to additions to ongoing CIP projects, which include assets related to the Accelerated Bridge Program and Highway Repair Projects (Amesbury Whittier Bridge, Boston-Cambridge Longfellow Bridge, Quincy Fore River Bridge, deck rehabilitation on the Tobin Bridge, Boston - bridge removal Casey Overpass over Washington street, Boston - Brookline superstructure replacement Commonwealth Avenue over I-90, as well as Springfield viaduct replacement and 6 bridge locations on I-95 and the addition of a lane in Needham-Wellesley).

The governmental activities net book value of infrastructure decreased primarily due to the increase in accumulated depreciation of the existing roads and bridges.

Additional information on MassDOT's capital assets can be found in notes 4 and 20.

## Debt

At year-end, MassDOT had \$6.99 billion in outstanding bonds and notes compared to \$7.14 billion last year. On January 24, 2019 MassDOT issued \$437 million in revenue bonds to refund \$454 million of outstanding 2010 Series A Subordinated Bonds (Subseries A-2 and A-6), which were variable rate demand bonds that reset weekly. As part of the current refunding, swap contracts associated with the refunded variable rate bonds were terminated. The termination payment amounted to \$69 million and was used to reduce the derivative liability. Simultaneously with the swap terminations, novation payments totaling \$105 million were made by two counterparties on MassDOT's behalf that effectively entered MassDOT into two forward swap contracts commencing in 2023. The on-behalf payments/premiums are considered borrowings and are included in bonds payable. During fiscal 2019, the MBTA

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issued Senior Subordinated Sales Tax variable rate demand obligation bonds (sub-series A-1) in the amount of \$96 million and sub-series A-2 in the amount of \$96 million.

## MassDOT Outstanding Bonds and Notes at Year End (in thousands of dollars)

	Governmental activities		Business-typ	e activities	Total	
	2019	2018	2019	2018	2019	2018
General Transportation System Bonds (GTS)	\$ —	_	160,680	179,520	160,680	179,520
Revenue	1,847,814	1,794,776	4,203,101	4,436,177	6,050,915	6,230,953
Build America Bonds (BABs)	_	_	428,300	428,300	428,300	428,300
Commercial Paper	_	_	50,000	_	50,000	_
Metropolitan Boston Transit Parking (MBTPC)		—	304,585	304,585	304,585	304,585
Total	\$ 1,847,814	1,794,776	5,146,666	5,348,582	6,994,480	7,143,358

MassDOT maintains bond ratings of A or higher for its governmental activities bonds. The Capital Appreciation Bonds are rated (A+) by Standard & Poor's Corporation (S&P) and Fitch, and (A2) by Moody's Investors Services (Moody's). MassDOT's senior fixed rate bonds are rated (A+) by both S&P and Fitch, and (A2) by Moody's.

Additional information on MassDOT's debt can be found in notes 5 and 21.

## **Construction Commitments**

MassDOT's outstanding commitments for engineering and design and construction contracts were \$24.8 billion at June 30, 2019. Major commitments include funding for the Highway Division in the amount of \$13.1 billion for various highway reconstruction and bridge replacement for numerous projects that include:

- the replacement of the North Washington street Bridge in Boston with a new bridge for the 21st century, a complete street over water that works for everyone: people driving, riding the bus, biking, walking, sightseeing, boating, and living nearby
- Chelsea Viaduct Bridge Repairs and Related work on Route 1 over various streets which is a critical step towards meeting MassDOT's bridge condition goals and improving safety and The Maurice J. Tobin Bridge and Deck Repairs which is a rehabilitation in order to remain safe and in service through the 21st Century
- Dedham Street/ I-95 Interchange Reconstruction Including Rehabilitation/Replacement of 5 Bridges in Canton, Norwood and Westwood.

Major commitments also include funding for various collaborations with the MBTA in the amount of \$10.1 billion for projects such as the Green Line extension, Red and Orange Line infrastructure improvements and vehicle purchase, and South Coast Rail improvements.

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#### Economic Factors and Next Year's Budgets and Rates

The MassDOT Board approved an original fiscal year 2020 operating expenditure and debt service obligation budget of \$944 million in June 2019, which was revised subsequent to year-end to \$947 million. Total revenues which include tolls, fees, permits, court fines, and federal grants are budgeted 3% higher compared to prior year. Total operating and debt expenditures excluding snow & ice are budgeted for a 4% increase.

#### **Future Pronouncements**

GASB has issued the following statements, which require adoption subsequent to June 30, 2019 and are applicable to MassDOT. MassDOT has not yet adopted these statements and is currently assessing the impact of each statement.

Statement No.		Adoption Required in Fiscal Year
84	Fiduciary Activities	2020
87	Leases	2021
89	Accounting for Interest Cost Incurred before the End of a Construction Period	2021
90	<i>Majority Equity Interests, an amendment of GASB Statements No. 14 and No. 61</i>	2020
91	Conduit Debt Obligations	2022

## **Contacting MassDOT's Financial Management**

This financial report is designed to provide our citizens, taxpayers, customers, and creditors with a general overview of MassDOT's finances and to show MassDOT's accountability for the money it receives. Questions concerning the information provided in this report or requests for additional information should be addressed to MassDOT's Chief Financial Officer at: 10 Park Plaza, Suite 5450, Boston, Massachusetts, 02116.

(A Component Unit of the Commonwealth of Massachusetts)

## Statement of Net Position

## June 30, 2019

# (Dollars in thousands)

	Prir			
Assets and Deferred Outflows of Resources	Governmental activities	Business- type activities	Total	Component units
Current assets:				
Cash and short-term investments	\$ 112,289	332,603	444,892	19,616
Restricted cash and investments	1,347,231	135,385	1,482,616	1,637
Derivative instrument	8,581		8,581	
Receivables, net of allowance for uncollectibles:				
Due from Commonwealth	373,768	109,015	482,783	9,830
Due from federal government	19,497	40,869	60,366	24,205
Other	101,559	54,391	155,950	92,448
Other assets	2,450	66,611	69,061	6,834
Total current assets	1,965,375	738,874	2,704,249	154,570
Noncurrent assets:				
Restricted cash and investments	12,953	785,598	798,551	
Receivables, net of allowance for uncollectibles:				
Due from Commonwealth	—			4,414
Due from federal government	—			4,847
Other	—			19,972
Net OPEB asset	—			630
Other assets		27,984	27,984	60,864
Capital assets:				
Nondepreciable	10,279,418	3,370,929	13,650,347	47,386
Depreciable, net of accumulated depreciation	15,137,606	7,236,575	22,374,181	443,195
Total noncurrent assets	25,429,977	11,421,086	36,851,063	581,308
Total assets	27,395,352	12,159,960	39,555,312	735,878
Deferred Outflows of Resources:				
Loss on debt refundings	60,008	160,302	220,310	
Derivative instruments	64,829	4,878	69,707	
OPEB related	30,581	265,866	296,447	810
Pension related	109,621	366,496	476,117	10,631
Total deferred outflows of resources	265,039	797,542	1,062,581	11,441
Total assets and deferred outflows of resources	\$ 27,660,391	12,957,502	40,617,893	747,319

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Statement of Net Position (continued)

June 30, 2019

## (Dollars in thousands)

	Primary government				
	Go	overnmental activities	Business- type activities	Total	Component units
Liabilities and Deferred Inflows of Resources					
Current liabilities:					
Accounts payable and accrued expenses	\$	404,510	313,550	718,060	62,115
Unearned revenue		112,436		112,436	347
Accrued interest payable		35,960	116,834	152,794	1,820
Bonds and notes payable		45,716	396,985	442,701	72,740
Other liabilities		32,309	118,670	150,979	6,672
Total current liabilities		630,931	946,039	1,576,970	143,694
Noncurrent liabilities:					
Accrued interest		191,100		191,100	—
Bonds and notes payable		1,904,115	5,096,530	7,000,645	34,355
Liability for derivative instruments		111,772	5,606	117,378	—
Capital lease obligations		_	65,774	65,774	_
Net pension liability		571,491	1,584,967	2,156,458	33,650
Net OPEB liability		667,121	2,458,432	3,125,553	55,932
Other liabilities		30,158	103,680	133,838	4,771
Unearned revenue		_	22,403	22,403	1,303
Total noncurrent liabilities		3,475,757	9,337,392	12,813,149	130,011
Total liabilities		4,106,688	10,283,431	14,390,119	273,705
Deferred Inflows of Resources:					
Debt instruments		_	164	164	_
OPEB related		257,908	194,404	452,312	5,420
Pension related		75,499	6,357	81,856	5,367
Total liabilities and deferred inflows of resources	\$	4,440,095	10,484,356	14,924,451	284,492
Net Position					
Net investment in capital assets		23,648,992	5,984,296	29,633,288	546,355
Restricted		873,318	20,524	893,842	10,376
Unrestricted (Deficit)		(1,302,014)	(3,531,674)	(4,833,688)	(93,904)
Total net position	\$	23,220,296	2,473,146	25,693,442	462,827
Con anomina notes to financial statements	_				

(A Component Unit of the Commonwealth of Massachusetts)

## Statement of Activities Fiscal year ended June 30, 2019 (Dollars in thousands)

						Net (expens	se)/revenue and	changes in ne	t position
			]	Program revenue	S	Prin	ary governmer	nt	
Functions/program	1	Expenses	Fees, fines, and charges for services	Operating grants and contributions	Capital grants and contributions	Governmental activities	Business- type activities	Total	Component units
Primary government:									
Governmental activities:									
Highway	\$	1,589,336	497,681	44,823	1,239,395	192,563		192,563	
Planning and Enterprise Services		236,919	75,479	32,698	120,798	(7,944)		(7,944)	_
Registry of motor vehicles		106,397	18,162	2,333	1,907	(83,995)		(83,995)	_
Rail and Transit		490,599	10,292	21,649	390,830	(67,828)		(67,828)	_
Aeronautics		23,589	585	45	21,109	(1,850)		(1,850)	_
Debt service – interest		96,431	—	100,000	—	3,569		3,569	_
Total governmental activities		2,543,271	602,199	201,548	1,774,039	34,515		34,515	
Business-type activities :									
Massachusetts Bay									
Transportation Authority		2,483,737	777,191	—	684,275	—	(1,022,271)	(1,022,271)	_
Total primary government	\$	5,027,008	1,379,390	201,548	2,458,314	34,515	(1,022,271)	(987,756)	_
Component units:									
Aggregate component units	\$	549,071	289,855	186,910	60,866				(11,440)
General revenues:	_								
Operating assistance from the Commonwealth						\$ 486,223	172,102	658,325	_
Taxes and assessments						_	1,223,346	1,223,346	_
Other income							46,844	46,844	
Unrestricted investment income						8,530	39,637	48,167	
Total general revenues						494,753	1,481,929	1,976,682	
Change in net position						529,268	459,658	988,926	(11,440)
Net Position – beginning of year						22,691,028	2,013,488	24,704,516	474,267
Net Position – end of year						\$ 23,220,296	2,473,146	25,693,442	462,827
See accompanying notes to financial statements.									

## (A Component Unit of the Commonwealth of Massachusetts) Governmental Funds Balance Sheet June 30, 2019 (Dollars in thousands)

Assets		MTTF (General)	Highway capital projects	Other governmental funds	Total governmental funds
Cash and short-term investments	\$	111,586		703	112,289
Restricted cash and investments		910,278	72,799	372,945	1,356,022
Receivables, net of allowance for uncollectibles:					
Due from Commonwealth		27,951	345,817	_	373,768
Due from federal government		_		19,497	19,497
Other		101,559	_	_	101,559
Other assets		2,450	_	_	2,450
Total assets	_	1,153,824	418,616	393,145	1,965,585
Liabilities, Deferred Inflows of Resources and Fund Balances					
Liabilities:					
Accounts payable and accrued expenditures		50,662	346,018	7,830	404,510
Unearned revenue		112,436			112,436
Total liabilities		163,098	346,018	7,830	516,946
Deferred Inflows of Resources:					
Unavailable Revenue		86,414		_	86,414
Fund balances:					
Nonspendable		2,450	_	_	2,450
Restricted		803,322	72,598	384,612	1,260,532
Assigned		_	_	703	703
Unassigned		98,540	_	_	98,540
Total fund balances		904,312	72,598	385,315	1,362,225
Total liabilities, deferred inflows of resources, and fund balances	\$	1,153,824	418,616	393,145	1,965,585

## (A Component Unit of the Commonwealth of Massachusetts)

Reconciliation of the Governmental Funds Balance Sheet Total Fund Balances to the Statement of Net Position June 30, 2019

#### (Dollars in thousands)

Total governmental fund balances:	\$	1,362,225
Capital assets (net of accumulated depreciation) used in governmental activities are not financial resources and, therefore, are not reported in the governmental funds.		25,417,024
Receivables that are measurable but not available are reported as deferred inflows of resources in the governmental funds but recognized as revenue on a full accrual basis.		86,415
Capitalized loss on debt refunding in governmental activities that is not capitalized at a fund level in the governmental funds.		60,008
In the statement of net position, interest is accrued on outstanding long-term debt, whereas in the governmental funds interest is not reported until due.		(227,060)
Long-term liabilities are not due and payable in the current period and, therefore, are not reported in the governmental funds:		
Bonds and notes payable, net		(1,949,831)
Workers' compensation claims		(19,940)
Other claims and judgments		(2,169)
Compensated absences		(37,151)
Environmental remediation		(1,647)
Derivative instruments, net		(38,362)
Net pension liability, net		(537,369)
Net OPEB liability, net		(894,448)
An internal service fund is used by management to manage its OCIP program related to the central artery construction project. The assets and liabilities of the internal service fund is included in governmental service in the statement of not position.		2 602
activities in the statement of net position.	¢	2,602
Net position of governmental activities	\$	23,220,296

#### (A Component Unit of the Commonwealth of Massachusetts)

Governmental Funds

Statement of Revenues, Expenditures and Changes in Fund Balances

Fiscal year ended June 30, 2019

(Dollars in thousands)

	MTTF (General)	Highway capital projects	Other governmental funds	Total governmental funds
Revenues:				
Toll revenue:				
Pledged as security for revenue bonds	\$ 202,760	—	—	202,760
Unpledged	184,296	—	—	184,296
Commonwealth transportation fund:				
Operations	551,761	—	—	551,761
Metropolitan highway system bonds	100,000	—	_	100,000
Central artery operations and maintenance	25,000	—	—	25,000
Commonwealth grants and contract assistance	—	1,260,697	439	1,261,136
Federal grants and reimbursements:				
Passed through the Commonwealth	_	511,876	_	511,876
Direct	_	—	27,987	27,987
Rental/lease income	55,592	910	_	56,502
Investment income	25,607	1,466	16,126	43,199
Departmental and other	38,112	5,158	57,982	101,252
Total revenues	1,183,128	1,780,107	102,534	3,065,769
Expenditures:			·	
Current:				
Highway	542,937	1,243,287	8,724	1,794,948
Planning and Enterprise Services	113,550	121,321	3,949	238,820
Registry of motor vehicles	89,924	1,915	13,742	105,581
Rail and Transit	85,800	392,522	11,408	489,730
Aeronautics	2,325	21,201	_	23,526
Debt service:				
Principal	41,100	_	_	41,100
Interest	108,288	_	_	108,288
Total expenditures	983,924	1,780,246	37,823	2,801,993
Excess (Deficiency) of revenues over expenditures	199,204	(139)	64,711	263,776
Other financing sources (uses):				
Transfers in	47,956	31,202	_	79,158
Transfers out	_	_	(79,158)	(79,158)
Issuance of refunding bonds	437,195	—	_	437,195
Premium from issuance of refunding bonds	49,927	_	_	49,927
Swap termination payment - current refunding	(69,182)	_	_	(69,182)
Debt service – principal – current refunding	(454,480)	_	_	(454,480)
Total other financing sources (uses)	11,416	31,202	(79,158)	(36,540)
Net change in fund balances	210,620	31,063	(14,447)	227,236
Fund balances at beginning of year	693,692	41,535	399,762	1,134,989
Fund balances at end of year	\$ 904,312	72,598	385,315	1,362,225

(A Component Unit of the Commonwealth of Massachusetts)

Reconciliation of the Statement of Revenues, Expenditures And Changes in Fund Balances of Governmental Funds to the Statement of Activities Fiscal year ended June 30, 2019 (Dollars in thousands)

Net change in fund balances – total governmental funds	\$ 227,236
Governmental funds report capital outlays as expenditures. However, in the statement of activities the cost of those assets are allocated over their estimated useful lives and reported as depreciation expense. These amounts represent the related activity of the current period:	
Capital outlays	861,889
Depreciation	(684,639)
Certain revenues in the statement of activities that do not provide current financial resources are not recognized in the statement of revenues, expenditures and changes in fund balances. As a result, the recognition of revenue for certain accounts receivable differ between the two statements. This amount represents the net change in deferred inflows of resources	(8,151)
The issuance of long-term debt (e.g., bonds and leases) provides current financial resources to governmental funds, while the repayment of the principal of long-term debt consumes the financial resources of governmental funds. Neither transaction, however, has any impact on net position. Also,governmental funds report the effect of premiums, discounts, and similar items when debt is first issued, whereas these amounts are deferred and amortized in the statement of activities.	
These amounts represent the related activity of the current period:	
Proceeds of refunding bonds	(437,195)
Bond maturities	495,580
Net effect of premium, discount and deferred loss on refunding transaction	(15,625)
Amortization of premiums	9,123
Amortization of deferred losses on refunding transactions	(31,587)
Amortization of bond discounts	(545)
Amortization of swap payments received	102
Derivatives are reported in the government-wide statements but are not reported in the governmental liability for funds. This amount represents the net changes in the derivative instruments.	4,647
Governmental funds report swap termination payments as other financing uses. However, in the government-wide financial statements the termination payment is treated as a reduction to the derivative liability.	69,182
In the statement of activities, interest is accrued on outstanding long-term debt, whereas in the governmental funds interest is not reported until due. This amount represents the net change in accrued interest payable.	458
Some expenses reported in the statement of activities do not require the use of current financial resources and, therefore, are not reported in the governmental funds.	
These amounts represent the net changes in accruals:	
Net pension liability, net	(16,966)
Net OPEB liability, net	19,498
Workers' compensation	904
Claims and judgments	36,405
Compensated absences	(877)
Environmental remediation	(278)
An internal service fund is used by management to manage its OCIP program related to the central artery construction project. The net activity of the internal service fund is reported with	107
governmental activities.	107
Changes in net position of governmental activities	\$ 529,268

(A Component Unit of the Commonwealth of Massachusetts)

## Proprietary Funds Statement of Net Position June 30, 2019 (Dollars in thousands)

	Business-type activities - enterprise fund	Governmental activities - internal service fund
Assets and Deferred Outflows of Resources	МВТА	
Current assets:	¢ 222.02	
Unrestricted cash and short-term investments	\$ 332,603	-
Restricted cash and investments	135,385	4,162
Receivables, net of allowance for uncollectibles:	100.015	
Due from Commonwealth	109,015	—
Due from federal government	40,869	—
Other	54,391	—
Other assets	66,611	
Total current assets	738,874	4,162
Noncurrent assets:		
Restricted cash and investments	785,598	—
Other assets	27,984	—
Capital assets:		
Nondepreciable	3,370,929	—
Depreciable, net of accumulated depreciation	7,236,575	
Total noncurrent assets	11,421,086	
Total assets	12,159,960	4,162
Deferred Outflows of Resources:		
Loss on debt refundings	160,302	—
OPEB related	265,866	—
Pension related	366,496	
Total deferred outflows of resources	797,542	
Total assets and deferred outflows of resources	12,957,502	4,162
Liabilities and Deferred Inflows of Resources		
Current liabilities:		
Accounts payable and accrued expenses	313,550	_
Accrued interest	116,834	_
Bonds payable	396,985	_
Other liabilities	118,670	513
Total current liabilities	946.039	513
Noncurrent liabilities:		
Accrued liabilities	103,680	_
Bonds payable	5,096,530	_
Capital lease obligations	65,774	_
Net pension obligation	1,584,967	_
Net OPEB obligation	2,458,432	_
Liability for derivative instruments	5,606	_
Other liabilities		1,047
Unearned revenue	22,403	
Total noncurrent liabilities	9,337,392	1,047
Total liabilities	10,283,431	1,560
Deferred Inflows of Resources:		-,
Debt instruments	164	
OPEB related	194,404	
Pension related	6,357	_
Total liabilities and deferred inflows of resources	10,484,356	
Fund Net Position		
Net investment in capital assets	5,984,296	—
Restricted	20,524	2,602
Unrestricted	(3,531,674)	
Total fund net position	\$ 2,473,146	2,602

(A Component Unit of the Commonwealth of Massachusetts)

# Proprietary Funds Statement of Revenues, Expenses and Changes in Net Position Fiscal year ended June 30, 2019 (Dollars in thousands)

Commuter railroad and local subsidy expense549,600Other8,150Depreciation and amortization364,229Total operating expenses2,248,016(21)		- ente	-type activities rprise fund MBTA	Governmental activities - internal service fund
Operating expenses:1,001,762Salaries and benefits1,001,762Materials, supplies and services307,996Injuries and damages16,279Commuter railroad and local subsidy expense549,600Other8,150Depreciation and amortization364,229Total operating expenses2,248,016Operating income (loss)(1,470,825)Nonoperating revenues (expenses):1,053,201Dedicated sales tax1,053,201Contract assistance – Commonwealth of Massachusetts172,102	Operating revenues:			
Salaries and benefits1,001,762Materials, supplies and services307,996Injuries and damages16,279(21Commuter railroad and local subsidy expense549,600Other8,150Depreciation and amortization364,229Total operating expenses2,248,016(21Operating income (loss)(1,470,825)21Nonoperating revenues (expenses):1,053,201Dedicated sales tax1,053,201Contract assistance - Commonwealth of Massachusetts172,102	Revenue from transportation	\$	777,191	
Materials, supplies and services307,996Injuries and damages16,279Commuter railroad and local subsidy expense549,600Other8,150Depreciation and amortization364,229Total operating expenses2,248,016Operating income (loss)(1,470,825)Nonoperating revenues (expenses):1,053,201Dedicated sales tax1,053,201Contract assistance – Commonwealth of Massachusetts172,102	Operating expenses:			
Injuries and damages16,279(21Commuter railroad and local subsidy expense549,600-Other8,150-Depreciation and amortization364,229-Total operating expenses2,248,016(21Operating income (loss)(1,470,825)21Nonoperating revenues (expenses):1,053,201-Dedicated sales tax1,053,201-Contract assistance - Commonwealth of Massachusetts172,102-	Salaries and benefits		1,001,762	_
Commuter railroad and local subsidy expense549,600Other8,150Depreciation and amortization364,229Total operating expenses2,248,016(21Operating income (loss)(1,470,825)21Nonoperating revenues (expenses):Dedicated sales tax1,053,201Contract assistance - Commonwealth of Massachusetts172,102	Materials, supplies and services		307,996	—
Other8,150Depreciation and amortization364,229Total operating expenses2,248,016(21Operating income (loss)(1,470,825)21Nonoperating revenues (expenses):Dedicated sales tax1,053,201Contract assistance - Commonwealth of Massachusetts172,102	Injuries and damages		16,279	(21)
Depreciation and amortization364,229Total operating expenses2,248,016(21Operating income (loss)(1,470,825)21Nonoperating revenues (expenses):1,053,201Dedicated sales tax1,053,201Contract assistance - Commonwealth of Massachusetts172,102	Commuter railroad and local subsidy expense		549,600	—
Total operating expenses2,248,016(21Operating income (loss)(1,470,825)21Nonoperating revenues (expenses):1,053,201Dedicated sales tax1,053,201Contract assistance – Commonwealth of Massachusetts172,102	Other		8,150	_
Operating income (loss)(1,470,825)21Nonoperating revenues (expenses):1,053,201-Dedicated sales tax1,053,201-Contract assistance - Commonwealth of Massachusetts172,102-	Depreciation and amortization		364,229	_
Nonoperating revenues (expenses):1,053,201Dedicated sales tax1,053,201Contract assistance – Commonwealth of Massachusetts172,102	Total operating expenses		2,248,016	(21)
Dedicated sales tax1,053,201-Contract assistance - Commonwealth of Massachusetts172,102-	Operating income (loss)		(1,470,825)	21
Contract assistance – Commonwealth of Massachusetts172,102	Nonoperating revenues (expenses):			
	Dedicated sales tax		1,053,201	_
Dedicated local assessments 170,145 —	Contract assistance - Commonwealth of Massachusetts		172,102	_
	Dedicated local assessments		170,145	_
Other nonoperating income 46,844 —	Other nonoperating income		46,844	_
Interest income 39,637 86	Interest income		39,637	86
Interest expense (235,721) -	Interest expense		(235,721)	_
Total nonoperating revenues (expenses), net1,246,208	Total nonoperating revenues (expenses), net		1,246,208	86
Loss before capital grants and contributions and transfers (224,617) 107			(224,617)	107
Capital grants and contributions 684,275 —	Capital grants and contributions		684,275	_
Increase in net position 459,658 107	Increase in net position		459,658	107
Net position at beginning of year2,013,4882,495	Net position at beginning of year		2,013,488	2,495
Net position at end of year         \$ 2,473,146         2,602	Net position at end of year	\$	2,473,146	2,602

(A Component Unit of the Commonwealth of Massachusetts)

# Proprietary Funds Statement of Cash Flows Fiscal year ended June 30, 2019 (Dollars in thousands)

	Business-type activities - enterprise fund MBTA	Governmental activities - internal service fund
Cash flows from operating activities:		
Receipts from customers and users	\$ 675,547	_
Receipts from other operations	112,690	
Payments to suppliers and vendors	(1,058,495)	
Payments to employees	(567,460)	—
Claims, premiums and judgments paid		(512)
Net cash used in operating activities	(837,718)	(512)
Cash flows from capital and related financing activities:		
Additions to transportation property	(1,055,786)	—
Interest paid	(239,890)	—
Decrease in deferred credit/charges	7,168	—
Commercial paper advances	50,000	—
Payments on debt	(448,940)	—
Proceeds from capital asset sales	119	—
Proceeds from bond and note issuances	191,225	—
Bond construction and reserve account receipts	8,842	
Capital grants	670,680	—
Other	(8,186)	
Net cash used in capital and related financing activities	(824.768)	
Cash flows from noncapital financing activities:		
Sales tax and local assessment	1,389,500	_
Net cash provided by noncapital financing activities	1,389,500	
Cash flows from investing activities:		
Investment income	70,509	86
Net cash provided by investing activities	70,509	86
Net change in cash and short-term investments	(202,477)	(426)
Cash and cash equivalents, restricted and other special accounts, beginning of year	670,465	4,588
Cash and cash equivalents, restricted and other special accounts, end of year	\$ 467,988	4,162
Reconciliation of operating (loss) income to net cash used in operating activities:		
Operating (loss) income	\$ (1,470.825)	21
Adjustments to reconcile operating (loss) income to net cash used in operating activities:		
Charges not requiring current expenditure of cash:		
Depreciation and amortization	364,229	
Increase in pension liability	141,157	
Increase in net OPEB liability	104,716	_
Changes in all other working capital accounts, except cash and cash equivalents and short-term debt	23,005	(533)
Total adjustments	633,107	(533)
Net cash used in operating activities	\$ (837,718)	(512)

(A Component Unit of the Commonwealth of Massachusetts)

# Fiduciary Funds Statement of Assets and Liabilities June 30, 2019 (Dollars in thousands)

Agency funds	
\$	41,983
	22,514
	64,497
\$	64,497
	\$

(A Component Unit of the Commonwealth of Massachusetts)

Notes to Financial Statements June 30, 2019

(Dollars in thousands)

#### (1) Summary of Significant Accounting Policies and Practices

#### (a) Description of Business

The Massachusetts Department of Transportation (MassDOT) was established by Chapter 25 of the Acts of 2009 of the Commonwealth of Massachusetts (as amended, the Transportation Reform Act), which was enacted and approved in June 2009. The Transportation Reform Act was designed to reform the transportation system of the Commonwealth of Massachusetts (the Commonwealth) and created the new authority, MassDOT, through enactment of Chapter 6C of Massachusetts General Laws (the Enabling Act). MassDOT has a separate legal existence from the Commonwealth and is governed by a board appointed by the Governor. The Governor has appointed a Secretary of MassDOT, who serves as MassDOT's chief executive officer.

MassDOT is governed by an eleven member board, including the Secretary of Transportation who serves as ex officio chair. Ten members are appointed by the Governor. Four members, other than the chair, serve for terms that are coterminous with the Governor. The remaining six members serve for a four–year term. The Board of Directors of MassDOT was authorized to begin exercising its powers on November 1, 2009.

MassDOT was created through the transfer of the assets, liabilities and equity of:

- 1. The former Massachusetts Turnpike Authority (including both the Metropolitan Highway System and the Western Turnpike), which was dissolved as part of the legislation
  - a. The Metropolitan Highway System comprises the Boston Extension of the Turnpike, the Callahan Tunnel, the Central Artery/Tunnel (CA/T Project), the Central Artery North Area (CANA), the Sumner Tunnel and the Ted Williams Tunnel. The Western Turnpike consists of that portion of the Turnpike extending from the New York border in the Town of West Stockbridge to Route 128 in Weston.
  - b. MassDOT assumed the rights, powers, and duties of the former Massachusetts Turnpike Authority upon the November 1, 2009 transfer.
- 2. The operations of the Massachusetts Highway Department of the Commonwealth
- 3. The operations of the Massachusetts Aeronautic Commission
- 4. The operations of the Registry of Motor Vehicles of the Commonwealth
- 5. The operations of the Executive Office of Transportation of the Commonwealth
- 6. Certain assets of the Department of Conservation and Recreation (DCR) of the Commonwealth

In addition, the Tobin Bridge (including its associated land and buildings) was transferred from the Massachusetts Port Authority (effective January 1, 2010).

The Merit Rating Board was transferred to MassDOT's Registry of Motor Vehicles division via Chapter 68, Section 8 of the Acts of 2011.

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Notes to Financial Statements June 30, 2019 (Dollars in thousands)

MassDOT has four divisions, including Highway, Rail and Transit, Aeronautics, and the Registry of Motor Vehicles, which includes the Merit Rating Board, that share administrative functions such as human resources, financial management, information technology, and planning through the shared services division, Planning and Enterprise Services (formerly the Office of the Secretary). Each division is headed by an administrator appointed by the Secretary of MassDOT.

The Enabling Act established the Massachusetts Transportation Trust Fund (MTTF) within MassDOT, into which all bridge, tunnel and highway tolls, together with certain other funds, are deposited. Transit fares of the Massachusetts Bay Transportation Authority (MBTA) may be deposited into the MTTF upon agreement of MassDOT and the MBTA.

The MTTF is to be used for operations, maintenance and capital costs related to the transportation assets under MassDOT's jurisdiction, including MBTA assets and assets of MassDOT transferred pursuant to the legislation, as well as debt service on outstanding MassDOT debt (previously held by the dissolved Massachusetts Turnpike Authority). MassDOT debt is not debt of the Commonwealth. The MTTF is not subject to appropriation and year-end balances do not revert to the Commonwealth.

Other activities transferred from the Commonwealth to MassDOT include the following: (1) the Central Artery and Statewide Road and Bridge Infrastructure Fund; (2) the Central Artery Repairs and Maintenance Trust Fund; (3) the Highway Capital Projects Fund; (4) the Federal Highway Construction Program; (5) the Motor Vehicle Inspection Trust Fund; (6) the Owner Controlled Insurance Program (OCIP) Fund related to the Central Artery/Tunnel Project and (7) various other administrative trusts transferred from the Commonwealth.

The Enabling Act contemplated that the Legislature of the Commonwealth will continue to make capital appropriations for transportation improvements and that such appropriations will continue to be funded through the issuance of Commonwealth debt by the State Treasurer. Outstanding capital spending authorizations are to be made available to MassDOT by the Commonwealth's Secretary of Administration and Finance.

The Enabling Act also established the Commonwealth Transportation Fund (CTF) as a budgetary fund of the Commonwealth for transportation-related purposes, which receives essentially the same revenues that were previously deposited into the Commonwealth's Highway Fund, including gasoline tax receipts and registry fees. The CTF is subject to appropriation by the Legislature and shall be used for transportation related expenses of the executive office of transportation or any successor agency or authority. In addition, it may pay or reimburse the Commonwealth's 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.

Legislation approved by the Governor in fiscal year 2013 provides that the CTF will also receive monies received from sales of motor vehicles and taxes imposed as excises upon sale and use at retail of motor vehicles dedicated to transportation purposes, with a guaranteed annual payment of \$275,000. The guaranteed amount of \$275,000 includes \$100,000 earmarked for MassDOT debt service, \$160,000 earmarked for the MBTA, and \$15,000 earmarked for the regional transit authorities. Legislation approved in 2019 determined amounts to be distributed from the CTF. The following amounts were distributed in fiscal 2019 from the CTF: \$127,000 earmarked for the MBTA and \$88,000 earmarked for the regional transit authorities. In addition, the CTF is used to pay debt service (present and future) associated with highway maintenance and construction projects and provides the funding of MassDOT's annual operating budget. For fiscal year 2019, MassDOT received \$676,761 from the CTF which was comprised of \$463,761

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Notes to Financial Statements June 30, 2019 (Dollars in thousands)

for operations, \$100,000 for debt service, \$88,000 earmarked for the regional transit authorities, and \$25,000 reimbursement for the cost of the operation and maintenance of the CA/T Project and CANA as authorized by Chapter 235 of the Acts of 1998.

Chapter 194 of the Acts of 2011 established the Transportation Infrastructure and Development Fund for "the purpose of transportation and related infrastructure projects" with the provision that not less than 50 percent shall be dedicated to supplementing construction and reconstruction of municipal ways. The primary source of funding consists of disbursements from the Commonwealth's Gaming Revenue Fund. For fiscal year 2019, MassDOT received \$0.

MassDOT is a component unit of the Commonwealth and its financial statements are incorporated into the financial statements of the Commonwealth.

#### (b) Basis of Presentation

The accompanying financial statements of MassDOT have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The Governmental Accounting Standards Board (GASB) is the recognized standard-setting body for establishing governmental accounting and financial reporting principles.

For financial reporting purposes, MassDOT has included all funds, organizations, agencies, boards and commissions considered part of the MassDOT legal entity. MassDOT has also considered all potential component units for which it is financially accountable as well as other organizations for which the nature and significance of their relationship with MassDOT is such that exclusion would cause MassDOT's financial statements to be misleading or incomplete. As required by GAAP, these financial statements present MassDOT (the primary government) and its component units. The information pertaining to the primary government appears in footnotes 1 through 13.

*Blended Component Units* – Blended component units are entities that are legally separate from MassDOT, but are so related to MassDOT, that they are, in substance, the same as MassDOT because their governing board is the same as that of MassDOT or the entities provide services entirely or almost entirely to MassDOT. The Massachusetts Bay Transportation Authority (MBTA) is the only legally separate entity that meets the criteria as a blended component unit. The information pertaining to the MBTA appears in footnotes 14 through 26.

*Aggregate Discretely Presented Component Units* – MassDOT presents the following fifteen (15) regional transit authorities (RTAs) in the aggregate as component units in the accompanying financial statements: Berkshire Regional Transit Authority; Brockton Area Transit Authority; Cape Ann Transportation Authority; Cape Cod Regional Transit Authority; Franklin Regional Transit Authority; Greater Attleboro-Taunton Regional Transit Authority; Lowell Regional Transit Authority; Montachusett Regional Transit Authority; Netrowest Regional Transit Authority; Merrimack Valley Regional Transit Authority; Nantucket Regional Transit Authority; Pioneer Valley Transit Authority; Southeastern Regional Transit Authority; Martha's Vineyard Transit Authority; and the Worcester Regional Transit Authority. MassDOT does not consider any of the discretely presented component units to be major.

The separately audited financial statements of MassDOT's component units may be obtained by directly contacting the various entities.

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Notes to Financial Statements June 30, 2019 (Dollars in thousands)

#### **Government-Wide Financial Statements**

The statement of net position and the statement of activities report information on all non-fiduciary activities of the primary government and its component units. Primary government activities are defined as either governmental or business-type activities. MassDOT's governmental activities generally are financed through toll revenues, contract assistance from the Commonwealth, and other nonexchange revenues. Business-type activities are financed in whole or in part by fees charged to external parties for goods and services.

The statement of net position presents all of the reporting entity's non-fiduciary assets, deferred outflows of resources, liabilities and deferred inflows of resources, with the difference reported as net position. Net position is reported in three categories:

- Net investment in capital assets consists of capital assets, net of accumulated depreciation and reduced by outstanding balances for bonds, notes and other debt that are attributed to the acquisition, construction or improvement of those assets.
- Restricted net position results when constraints placed on asset use is either externally imposed by creditors, grantors, contributors, and the like, or imposed by law through enabling legislation.
- Unrestricted net position consists of net position, which does not meet the definition of the two preceding categories.

When both restricted and unrestricted resources are available for use, it is MassDOT's policy to use restricted resources first, then unrestricted resources as needed.

The statement of activities demonstrates the degree to which the direct expenses of a given function or segment is offset by program revenues. Direct expenses are those that are clearly identifiable within a specific function. Program revenues include (1) charges to customers who purchase, use, or directly benefit from goods or services provided by a given function; (2) grants and contributions that are restricted to meeting the operational requirements of a specific function. Other items not meeting the definition of program revenues are instead reported as general revenue and offset or supplant the net operating deficit or surplus from governmental or business-type activities.

As a general rule, the effect of interfund activity has been eliminated in the government-wide statements. Exceptions to this rule are: 1) activities between funds reported as governmental activities and funds reported as business-type activities and 2) activities between funds that are reported in different functional categories in either the governmental or business-type activities column. Elimination of these activities would distort the direct costs and program revenues for the functions concerned. Interfund receivables and payables have been eliminated from the statement of net position, except for the residual amounts due between governmental and business-type activities.

#### **Fund Financial Statements**

MassDOT reports its financial position and results of operations in funds, each of which is considered a separate accounting entity. The operations of each fund are accounted for with a set of self-balancing accounts that comprise its assets and deferred outflows of resources, liabilities and deferred inflows of resources, fund equity, revenues, and expenditures/expenses. Transactions between funds within a fund type, if any, have not been eliminated.

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Notes to Financial Statements June 30, 2019 (Dollars in thousands)

Separate financial statements are provided for governmental, proprietary and fiduciary funds. Major individual governmental funds and major individual enterprise funds are reported as separate columns in the fund financial statements pursuant to GASB reporting standards, with nonmajor funds being combined into a single column.

MassDOT is not required to and does not have a legally adopted annual budget for any of its governmental funds.

## (c) Measurement Focus and Basis of Accounting

The Government-wide financial statements are reported using the economic resources measurement focus and the full accrual basis of accounting as are the proprietary and fiduciary fund financial statements. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of cash flows. Grants and similar items are recognized as revenues as soon as all eligibility requirements have been met.

Governmental fund financial statements account for the general governmental activities of MassDOT. Governmental fund statements are reported using the current financial resources measurement focus and the modified accrual basis of accounting. Revenues are recognized as they become susceptible to accrual and are both measurable and available. Revenues are considered to be available when they are collected within the current period or soon enough thereafter to pay liabilities of the current period. Significant revenues susceptible to accrual include expenditure driven federal grants and amounts due from the Commonwealth. MassDOT considers all revenues available if they are collected within 60 days after fiscal year end. For federal expenditure driven grants, revenue is recognized when the qualifying expenditures have been incurred and other eligibility requirements are met and amounts are considered available. Expenditures are recorded in the period in which the related fund liability is incurred. Principal and interest on general long-term obligations are recorded as fund liabilities and expenditures when due. Compensated absences, claims and judgments, termination benefits, and similar activities are recognized to the extent that they are normally expected to be liquidated with expendable available financial resources.

MassDOT reports the following fund types:

# **Governmental Fund Types**

The General Fund is the primary operating fund of MassDOT. It is used to account for and report all financial resources not accounted for and reported in another fund. The MTTF is considered the general fund for MassDOT.

The Special Revenue Funds are used to account for and report the proceeds of specific revenue sources that are restricted or committed to expenditure for specified purposes other than debt service or capital projects.

Capital Projects Funds are used to account for and report financial resources that are restricted, committed, or assigned to expenditure for capital outlays, including the acquisition or construction of capital facilities and other capital assets. Capital projects funds exclude those types of capital-related outflows financed by proprietary funds or for assets that will be held in trust for individuals, private organizations, or other governments.

Within the governmental fund types, MassDOT has established the following major fund, in addition to the MTTF:

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Notes to Financial Statements June 30, 2019 (Dollars in thousands)

Highway Capital Projects, a capital projects fund, accounts for highway construction projects financed primarily through federal reimbursements passed through the Commonwealth and contract assistance payments received directly from the Commonwealth.

# **Proprietary Fund Types**

Proprietary funds account for programs financed in whole or in part by fees charged to external parties for goods and services. MassDOT reports the MBTA (a blended component unit) as a major enterprise fund. MassDOT also operates one internal service fund – the Owner Controlled Insurance Program.

Revenues and expenses of proprietary funds are classified as operating or nonoperating as follows – operating revenues and expenses generally result from providing services or producing and delivering goods. All other revenues and expenses are reported as nonoperating.

# **Fiduciary Fund Types**

Fiduciary funds account for assets held in a trustee capacity for others that cannot be used to support MassDOT's programs.

MassDOT reports an Agency Fund, which is used to account for assets held in a custodial capacity. Agency funds do not present the results of operations or have a measurement focus.

## (d) Cash and Short-Term Investments

MassDOT's participation in the Massachusetts Municipal Depository Trust (MMDT) Cash Fund is presented as cash and short-term investments (both restricted and unrestricted) in the accompanying financial statements.

MMDT is an internal investment pool that meets the criteria established under GASB Statement No. 79 to report its investments at amortized cost. As such, the Authority reports its investment in MMDT at amortized cost which approximates the net asset value of \$1.00 (one dollar) per share. MMDT has a maturity of less than one year and is not rated.

Restricted cash and short-term investments also include certain amounts restricted for use by bond indentures and other external requirements. Such amounts are held by the Treasurer in the MMDT Cash Fund as well as amounts held by bond and other trustees.

## (e) Investments

Investment securities are recorded at fair value, based on quoted market price.

The Treasurer of the Commonwealth can hold certain investments on behalf of MassDOT. In the event investments are held by the Treasurer they appear as "Investments" in the accompanying financial statements. Interest earned on specific MassDOT investments is allocated to MassDOT. As of June 30, 2019, the Treasurer held no investments on behalf of MassDOT.

Restricted investments include amounts restricted for use by bond indentures and other external requirements and include certain investments held by bond and other trustees.

For purposes of the statements of cash flows, unrestricted investments purchased with a maturity date of three months or less are considered cash equivalents.

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Notes to Financial Statements

June 30, 2019

(Dollars in thousands)

## (f) Accounts Receivable

Reimbursements due from the Commonwealth for state and federally funded construction project expenditures are reported as "Due from Commonwealth" in the financial statements and are considered 100% collectible. "Due from federal government" receivables include direct grants or reimbursements and are considered 100% collectible. "Other" receivables include rental/lease receivables and toll related receivables, including postpaid toll transactions and toll violations. Other receivables are reported net of estimated allowances for uncollectible accounts, which are based on historical trends and individual account analysis.

## (g) Capital Assets

Capital assets include land, construction in progress, buildings, equipment, vehicles, software and infrastructure (e.g., roads, bridges, ramps, and other similar items). Such assets are reported in the applicable governmental or business-type activity columns of the government-wide financial statements and proprietary funds and are recorded at historical cost or estimated historical cost if purchased or constructed. Donated capital assets are recorded at acquisition value at the date of donation. Assets transferred to MassDOT from other governments (subsequent to its formation) are recorded at net carrying value (historical cost less accumulated depreciation) at the date of transfer.

Equipment, vehicles, computer equipment and software purchases that equal or exceed \$50 are capitalized. Buildings and infrastructure projects with a cost that equals or exceeds \$100 are capitalized. All land and non-depreciable land improvements are capitalized. The costs of normal maintenance and repairs that do not add to the value of assets or materially extend asset lives are not capitalized.

Capital assets are depreciated using the straight-line method over the following useful lives:

Type of asset	Estimated useful life (in years)
Buildings	40
Infrastructure - roads, bridges, and tunnels	40
Equipment	10
Computer hardware and software	3 to 7
Vehicles	5

In the government-wide financial statements, depreciation expense is charged to the function to which the capital assets relate.

Construction in progress includes all associated cumulative costs of a constructed capital asset. Construction in progress is relieved and a depreciable capital asset is reported at the point at which an asset is placed in service for its intended use. Interest incurred during the construction phase of capital assets is not capitalized as the debt related to the construction appears on the books of the Commonwealth.

## (h) Fair Value

Investments are measured at fair value on a recurring basis. Recurring fair value measurements are those that are required to be made at the end of each reporting period. Fair value measurements are categorized based on the valuation inputs used to measure the fair value.

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Notes to Financial Statements June 30, 2019

(Dollars in thousands)

- Level 1 inputs are quoted market prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.
- Level 2 inputs are other than quoted prices in Level 1 that are observable for the asset or liability or similar assets or liabilities either directly or indirectly through corroboration with observable market data.
- Level 3 inputs are significant unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

# (i) Other Assets

Other assets consist principally of prepaid expenses.

# (j) Unearned Revenue

Unearned revenue in the governmental funds financial statements represents monies received in advance of providing goods or services in accordance with the current financial resources management focus and the modified accrual basis of accounting.

# (k) Long-Term Debt

In the government-wide and proprietary funds, long-term debt is reported as liabilities in the statements of net position. Bond premiums and discounts are capitalized and amortized over the life of the bonds using the straight-line method which approximates the effective interest method. Gains and losses related to refunding transactions are presented as deferred inflows and outflows, respectively, and amortized using the straight-line method over the shorter of the maturity of the new debt or the defeased debt.

In the governmental funds, the face amount of long-term debt is reported as other financing sources when the debt is issued. Bond premiums are reported as other financing sources and bond discounts are reported as other financing uses. Issuance costs, whether or not withheld from the actual bond proceeds received, are reported as Planning and Enterprise Services expenditures.

## (l) Fund Balances

The following fund balance classifications describe the relative strength of spending constraints:

*Nonspendable* – represents amounts that cannot be spent either because they are in nonspendable form (i.e., prepaid amounts) or because they are legally or contractually required to be maintained intact.

*Restricted* – represents amounts that can be spent only for specific purposes because of constitutional provisions or enabling legislation or because of constraints that are externally imposed by creditors, grantors, contributors, or the laws or regulations of other governments.

*Committed* – represents amounts that can be used only for specific purposes imposed by a formal action of MassDOT's Board of Directors, which is the highest level of decision-making authority. Committed amounts may be established, modified, or rescinded only through actions approved by the Board of Directors. At June 30, 2019, MassDOT reported no committed fund balances.

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Notes to Financial Statements June 30, 2019 (Dollars in thousands)

*Assigned* – represents amounts that do not meet the criteria to be classified as restricted or committed but are intended to be used for specific purposes. Under MassDOT's structure, this intent can be expressed by the Secretary of Transportation (and Chief Executive Officer), Chief Financial Officer and Controller. This classification also includes the remaining positive fund balance for all governmental funds except for the General Fund.

*Unassigned* – represents the residual fund balance for the General Fund and the negative residual fund balance of any other governmental fund that cannot be eliminated by offsetting assigned fund balance amounts.

In circumstances when an expenditure is made for a purpose for which amounts are available in multiple fund balance classifications, fund balance is depleted in the order of restricted, committed, assigned and unassigned.

Encumbrance amounts have been assigned for specific purposes for which resources already have been allocated.

## (m) Compensated Absences

Employees are granted vacation and sick leave in varying amounts based on collective bargaining agreements and state laws. Upon retirement, termination, or death, certain employees are compensated for unused vacation and sick leave (subject to certain limitations) at an approved rate of pay.

In the government-wide and proprietary fund statements of net position, compensated absences are recorded as an expense and liability as the benefits accrue.

For the governmental fund financial statements, accumulated vacation and sick leave are reported as expenditures and fund liabilities when they become due and payable upon retirement, termination, or death.

## (n) Deferred Inflows and Outflows

MassDOT accounts for certain transactions that result in the consumption or acquisition of resources in one period that are applicable to future periods as deferred outflows and deferred inflows, respectively, to distinguish them from assets and liabilities. For fiscal year 2019, MassDOT has reported deferred outflows pertaining to its derivative instruments, deferred losses on its debt refunding transactions, pension related activities. Deferred inflows relate to deferred gains on debt refunding transactions, pension related activities and OPEB related activities and OPEB related activities.

Deferred inflows of resources in the governmental funds financial statements relate to unavailable revenue for CTF operating assistance and toll revenue.

## (o) Pension Benefits

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the State Employees' Retirement System (SERS) and additions to/deductions from SERS's fiduciary net position have been determined on the same basis as they are reported by the SERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

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## (p) Other Postemployment Benefits

The Commonwealth of Massachusetts administers a single-employer defined benefit Postemployment Benefits Other Than Pensions (OPEB) Plan. Benefits are managed by the Group Insurance Commission (GIC) and investments are managed by the Pension Reserves Investment Management Board (PRIM). The OPEB Plan is reported as an OPEB Trust Fund in the Commonwealth's financial statements and does not issue a stand-alone audited financial report. For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, information about the fiduciary net position of the OPEB Plan and additions to/deductions from OPEB Plan's fiduciary net position have been determined on the same basis as they are reported by the Commonwealth of Massachusetts. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

# (q) Interfund Transfers

During the course of its operations, resources are permanently reallocated between funds. These transactions are reported as transfers in and transfers out.

For the year ended June 30, 2019, interfund transfers totaled \$79,158, which included the following:

- MassDOT transferred \$47,956 from the other governmental funds' motor vehicle inspection trust fund (MVITF) to the MTTF general fund to ensure the budget included sufficient revenue for MassDOT operations. Chapter 46 of the Acts of 2013 indicates available funds may be transferred "provided, however, that expenses of the administration and implementation of the motor vehicle inspection program" are met first.
- MassDOT transferred \$31,202 from the other governmental funds' central artery repairs & maintenance fund to the highway capital projects statewide road & bridge infrastructure fund for reimbursement of prior year costs.

## (r) Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenditures during the reporting period. Actual results could differ from those estimates.

## (2) Deposits and Investments

MassDOT invests in the Massachusetts Municipal Depository Trust (MMDT) Cash Fund. Authorized investments for the MMDT Cash Fund include primarily U.S. government and government agency obligations, certificates of deposits, commercial paper, notes and repurchase agreements, all with maturities of one year or less. MassDOT's investment in MMDT is presented in the accompanying financial statement captions as:

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Cash and short-term investments	\$ 154,272
Restricted cash and investments	1,095,764
	\$ 1,250,036

MassDOT has other investments held by bond and other trustees in accordance with bond indentures and other external requirements. For investments held by trustees, MassDOT has implemented investment policies which incorporate the investment protocols within the Trust Agreements.

In most cases, MassDOT has chosen to limit investments to U.S. Government Treasuries or agencies of the U.S. Government. U.S. Government Agency Obligations purchased may include, but not be limited to, debt issued by: the Student Loan Marketing Association, the Federal Home Loan Bank, the Federal Home Loan Mortgage Corporation, and the Federal National Mortgage Association.

# (a) Custodial Credit Risk

At June 30, 2019, all of MassDOT's bank balances were insured and not exposed to custodial credit risk. For deposits held by MMDT Cash Fund, MassDOT had minimal exposure to custodial credit risk.

MassDOT had no custodial credit risk for investments as all investments were either insured or held in MassDOT's name.

## (b) Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of a debt investment. These investments include certain short-term cash equivalents, various long-term items and restricted assets by maturity in years. MassDOT does not have a formal policy related to interest rate risk.

MassDOT's investments at June 30, 2019 are presented below by investment type and maturity.

		Investments maturit (in years)		
			Less than	
Investment Type	ŀ	air Value	1 year	1-5
U.S. Treasuries	\$	47,336	42,298	5,038
U.S. Agencies		82,948	75,033	7,915
Money market mutual funds		124,013	124,013	
Guaranteed Investment Contract		10,123	10,123	
MMDT		1,250,036	1,250,036	_
Total	\$	1,514,456	1,501,503	12,953

## (c) Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations.

The following table presents the credit quality ratings of the primary government's fixed income investments at June 30, 2019:

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Investment Type	Fair Value		AAA	AA1-AA3	Unrated
U.S. Treasuries	\$	47,336	47,336	_	_
U.S. Agencies		82,948	—	82,948	—
Money market mutual funds		124,013	124,013	—	
Guaranteed Investment Contract		10,123		10,123	
MMDT		1,250,036		—	1,250,036
Total	\$	1,514,456	171,349	93,071	1,250,036

Although the MMDT Cash Fund is not rated, the cash portfolio may only invest in securities rated in one of the two highest short-term rating categories by nationally recognized statistical rating organizations or unrated securities of comparable quality. Securities rated in the highest short-term rating category (and unrated securities of comparable quality) are identified as First Tier securities. Securities rated in the second highest short-term rating category (and unrated securities of comparable quality) are identified as First Tier securities. Securities rated in the second highest short-term rating category (and unrated securities of comparable quality) are identified as Second Tier securities. At June 30, 2019, credit ratings associated with the investments of the Cash Fund were either First Tier or Second Tier.

## (d) Concentration of Credit Risk – Investments

Concentration of credit risk is the risk of loss attributable to the magnitude of a government's investment in a single issuer. No investment category exceeded 5% of the total investments of the primary government at June 30, 2019.

#### (e) Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. MassDOT was not exposed to foreign currency risk as of June 30, 2019.

#### (f) Restricted Cash and Investments by Fund

The following summarizes restricted cash and investments as of June 30, 2019 by the various funds and accounts established by MassDOT for debt covenant requirements and other purposes:

Held by Treasurer Commonwealth General Fund - Toll related accounts as restricted by bond convenants \$ 629,689 General Fund - MTTF Other 20,331 Major Capital Projects - Statewide Road and Bridge Program 69,433 Major Capital Projects- - Transportation Infrastructure and Development Fund 3,366 Other Government Funds - Central Artery Repairs and Maintenance 355,623 Other Government Funds - Motor Vehicle Safety Inspection 2,765 14,557 Other Governmental Funds - Other Held by Bond Trustee 260,258 General - Toll related accounts as restricted by bond covenants Held by AIG Internal Service Fund - Workers' compensation self - insurance 4,162 1,360,184

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## (g) Fair Value Hierarchy and Measurements

MassDOT categorizes its fair value measurements within the fair value hierarchy established by GAAP.

The following is a description of the valuation methodologies used for assets measured at fair value. There have been no changes in the methodologies used at June 30, 2019.

**Institutional Money Market Funds** – Valued at fair value, which is represented by the quoted price for the fund generally \$1.00 (one dollar). Institutional money market funds are generally classified as Level 1.

**U.S. Treasury and Agency Securities** – Securities issued by the U.S. government, its agencies, authorities and instrumentalities are valued using quoted prices, documented trade history in the security and a pricing model maximizing the use of observable inputs determined by investment managers.

- U.S. Treasury Securities consist principally of U.S. Treasury bills, notes and bonds are generally classified as Level 1 of the fair value hierarchy.
- U.S. Government sponsored enterprises securities principally of U.S. Government agency obligations including agency-issued debt, agency mortgage pass-through securities, and agency collateralized mortgage obligation (CMOs) are generally categorized in Level 1 of the fair value hierarchy.

**Derivative instruments** – MassDOT's interest rate swaps and forward delivery agreements are classified as Level 2 as valued using a market approach that considers benchmark interest rates.

The following summarizes the recurring fair value measurement as of June 30, 2019:

	F	air Value	Level 1	Level 2
Investments by Fair Value Level				
Money Market Mutual Funds	\$	124,013	124,013	—
U.S. Treasuries		47,336	47,336	
U.S. Agencies		82,948	82,948	
Total investments by fair value level		254,297	254,297	
Investments measured at amortized cost				
MMDT		1,250,036		
Guaranteed Investment Contract		10,123		
Total investments	\$	1,514,456		
Derivative instruments				
Interest rate swaps (liabilities)	\$	(111,772)		(111,772)
Forward delivery agreement		8,581		8,581
Total investment derivative instruments	\$	(103,191)		(103,191)

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Debt securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities.

Derivative instruments classified in Level 2 of the fair value hierarchy are valued using a market approach that considers benchmark interest rates such as LIBOR and SIFMA.

# (3) Accounts Receivable

Governmental funds accounts receivable at June 30, 2019 consisted of the following:

	Gross accounts receivable	Allowance for uncollectibles	Net accounts receivable
Due from Commonwealth	\$ 373,768		373,768
Due from federal government	19,497		19,497
Other receivables	112,937	11,378	101,559
	\$ 506,202	11,378	494,824

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# (Dollars in thousands)

# (4) Capital Assets

Capital assets of the governmental activities consisted of the following at June 30, 2019:

	 Beginning balance	Increases	Decreases	Ending balance
Capital assets, not being depreciated:				
Land	\$ 1,011,475	14,615	491	1,025,599
Construction in progress	9,052,639	833,487	632,307	9,253,819
Total capital assets, not being depreciated	 10,064,114	848,102	632,798	10,279,418
Capital assets, being depreciated:				
Infrastructure	29,167,020	634,395		29,801,415
Buildings	168,905	3,259	1,117	171,047
Equipment	129,978	1,860	—	131,838
Vehicles	167,049	2,678	—	169,727
Software	30,574	4,393	—	34,967
Total capitals assets, being depreciated	 29,663,526	646,585	1,117	30,308,994
Less accumulated depreciation for:				
Infrastructure	14,106,804	660,522		14,767,326
Buildings	100,258	7,030	1,117	106,171
Equipment	115,194	2,554	—	117,748
Vehicles	137,923	12,161	—	150,084
Software	 27,687	2,372	—	30,059
Total accumulated depreciation	14,487,866	684,639	1,117	15,171,388
Total capital assets, being depreciated, net	15,175,660	(38,054)		15,137,606
Capital assets, net	\$ 25,239,774	810,048	632,798	25,417,024

Depreciation expense was charged to functions/programs of the governmental activities as follows:

Highway	\$ 678,520
Planning and Enterprise Services	2,228
Rail and Transit	 3,891
	\$ 684,639

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# (5) Bonds, Notes and Other Long-Term Liabilities

Long-term debt and other long-term liabilities of the governmental activities consisted of the following at June 30, 2019:

Senior revenue bonds:		eginning Balance	Additions	Reductions	Ending Balance	Due within one year
Metropolitan Highway System:						
1997 Series A, Capital Appreciation Bonds (CAB's), 5.60% to 5.65%, issued September 24, 1997, due 2024 to 2029	\$	42,007	_	-	42,007	_
1997 Series C, Capital Appreciation Bonds (CAB's), 5.50% to 5.55%, issued September 24, 1997, due 2016 to 2023		51,286	_	11,395	39,891	10,739
2010 Refunding, Series A, variable rate bonds, issued May 27, 2010, due 2035 to 2037		207,665	_	_	207,665	_
Borrowings related to the associated swap		2,901	_	102	2,799	107
2010 Refunding, Series B, 4.00% to 5.00%, issued May 27, 2010, due 2011 to 2037		632,060	_	28,850	603,210	9,925
Total senior revenue bonds		935,919		40,347	895,572	20,771
Subordinated revenue bonds:						
Metropolitan Highway System:						
2010 Refunding, Series A, variable rate bonds, issued April 14, 2010, due 2030 to 2039		454,480	_	454,480	_	_
Borrowings related to the associated swap		7,467	_	7,467	_	
2010 Refunding, Series B, 3.25% to 5.00%, issued April 14, 2010, due 2019 to 2039		261,220	_	855	260,365	22,155
2018 Refunding, Series A, 5.00%, issued May 10, 2018, due 2024 to 2029		135,690	_	_	135,690	_
2019 Refunding, Series A, 5.00%, issued January 24, 2019, due 2030 to 2039		_	371,380	_	371,380	_
Borrowings related to the associated interest rate swap		_	118,992	_	118,992	_
2019 Refunding, Series B-1, 5.00%, issued January 24, 2019, due 2025 to 2037		_	51,230		51,230	
2019 Refunding, Series B-2, 2.82% to 3.12%, issued January 24, 2019, due 2020 to 2025 (federally taxable)			14,585		14,585	2,790
Total subordinated revenue bonds		858,857	556,187	462,802	952,242	24,945
Total	1	,794,776	556,187	503,149	1,847,814	45,716
Less: unamortized bond discounts		(6,754)	1,025	(545)	(7,234)	
Plus: unamortized premiums		68,446	49,927	9,123	109,250	_
Total bonds payable	1	,856,468	607,139	511,727	1,949,830	45,716
Other noncurrent liabilities:		, ,	,	,	, ,	,
Workers' compensation		20,844	5,279	6,183	19,940	6,183
Judgments and claims		40,574	(21)	36,824	3,729	2,682
Compensated absences		36,274	23,231	22,354	37,151	22,945
Environmental remediation		1,369	466	188	1,647	499
Total other		99,061	28,955	65,549	62,467	32,309
Total noncurrent	\$ 1	,955,529	636,094	577,276	2,012,297	78,025
	_					

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Interest is payable semiannually on all debt, except on Capital Appreciation Bonds which is accrued over the lives of the Bonds and is payable upon maturity of the Bonds.

Revenue bonds are secured by a lien and pledge of cash and revenues derived from the Metropolitan Highway System. In addition, the Commonwealth has pledged \$100,000 per fiscal year until June 30, 2039 to provide contractual assistance with repayment of the bonds. These contractual payments constitute dedicated payments from the Commonwealth that are deposited directly to the Subordinated Debt Service Fund. The Commonwealth has also pledged \$25,000 per fiscal year until June 30, 2050 to provide contract assistance toward repayment of the senior bonds (until June 2037) and toward payment of subordinated bonds (until June 2039). These contractual payments constitute dedicated payments from the Commonwealth and are deposited into the Senior Debt Service Fund. The amount of pledged revenue is approximately equal to the remaining principal and interest requirements of the outstanding Metropolitan Highway System bonds.

Debt service requirements, excluding derivative borrowings, are as follows:

	Principal	Interest	Total
Year ending June 30,			
2020	\$ 45,609	99,363	144,972
2021	55,610	99,751	155,361
2022	56,636	98,222	154,858
2023	58,907	96,557	155,464
2024	59,770	93,897	153,667
2025-2029	346,686	424,033	770,719
2030-2034	484,295	198,387	682,682
2035-2039	 618,510	88,159	706,669
Total	\$ 1,726,023	1,198,369	2,924,392

As rates change, interest payments on the 2010 Bonds will vary. Outstanding bonds that are redeemable before their scheduled due dates are as follows at June 30, 2019:

Description	Redemption date	Redemption price	:	Principal amount tstanding
Metropolitan Highway System:				
2010 Series B - Subordinated Debt	2021 to 2035	100	\$	238,210
2010 Series A - Senior Debt	2035 to 2037	100		207,665
2010 Series B - Senior Debt	2021 to 2037	100		593,285
2019 Series A - Subordinated Debt	2023 to 2039	100		371,380
2019 Series B-1 - Subordinated Debt	2029 to 2037	100		44,885

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# **Current Refunding**

On January 24, 2019, MassDOT issued \$437,195 in revenue bonds to refund \$454,480 of outstanding 2010 Series A Subordinated Bonds (Subseries A-2 through A-6), which are variable rate demand bonds that reset weekly. The net proceeds of \$455,264 (after payment of \$1,025 in underwriting fees, insurance, swap termination payment of \$69,182, other issuance costs, plus premium of \$49,927) plus an additional \$38,894 of 2010 Series A Subordinated debt service funds and debt reserve funds were used to retire the outstanding 2010 Series A-2 through Series A-6 Subordinated Bonds, terminate swap agreements associated with the refunded variable rate bonds and the related accrued interest of \$717.

The new bonds, 2019 Series A, amounting to \$371,380 have a "soft put" date of January 1, 2023 and a maturity date of January 1, 2039. Through the soft put date, 2019 Series A bonds have an initial term fixed interest rate of 5%. After the soft put date, 2019 Series A bonds will have a variable interest rate. Forward starting swap interest rate contracts (SWAPs) with two counterparties are in place for the variable interest rate contracts provide a fixed synthetic rate of 4.75% and, as further discussed herein, included novation payments made by the two counterparties that are considered borrowings. The 2019 Series B-1 bonds, amounting to \$51,230, have a fixed interest rate of 5%, mature January 1, 2037 and are tax exempt. The 2019 Series B-2 bonds, amounting to \$14,585, are federally taxable. Interest rates range from 2.82% to 3.12% and the bonds mature on January 1, 2025. Principal is paid annually on January 1st while interest is paid semi-annually on January 1st with the first payment commencing July 1, 2019.

As a result of this refunding, MassDOT will reduce its total debt service payments over the next 19 years by approximately \$21,868 and will realize an economic gain (difference between the present values of the debt service payments on the old and new debt) of approximately \$7,963. This transaction has also resulted in a deferred accounting loss of \$33,277 that will be amortized over the life of the new bonds.

# **Demand Bonds**

Included in long-term debt is \$207,665 of Senior variable rate demand bonds. The bonds were issued in May 2010 and the proceeds of the bonds were used to refund certain revenue bonds issued previously by the Massachusetts Turnpike Authority. All of the Senior bonds are subject to purchase on the demand of the holder at a price equal to principal plus accrued interest. The ability of MassDOT, through its Trustee and remarketing agent, to purchase such bonds is secured through letters of credit and standby bond purchase agreements with various nationally recognized financial institutions that expire between April 2020 and May 2022. Under generally accepted accounting principles, variable rate demand obligations (VRDO's) are generally classified as current, rather than long-term, liabilities if, among other things, the supporting security agreements expire less than one year after year end. Although \$107,665 of the VRDO's is secured by an agreement that expires on May 27, 2020, they are subject to a "Mandatory Tender for Purchase" requirement that becomes effective prior to the May 27, 2020 expiration date. This requirement, when effective, results in the VRDO's being treated as long-term debt. As such, these amounts have been presented as long-term liabilities, rather than current liabilities, in the accompanying financial statements.

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# **Prior Defeasances of Debt**

At June 30, 2019, the principal amounts outstanding on revenue bonds and notes that are considered defeased are as follows:

Description	Redemption date	Redemption price	Principal amount outstanding
1993 Series A Term	2019 to 2023	100%	\$90,025

# Derivative Instruments

# **Swap Termination**

As part of the current refunding that occurred on January 24, 2019, MassDOT terminated swap agreements by making net payments to counterparties totaling \$69,182. A portion of amounts from the current refunding were used for the swap termination payments. The amount is reported as other financing uses in the Statement of Revenues, Expenditures and Changes in Fund Balances.

# **Interest Rate Swaps/Swaptions**

The former Massachusetts Turnpike Authority (the Turnpike) entered into swaptions, which upon exercise became interest rate swaps (hereinafter referred to as Swaps) to (1) lock in long-term fixed rate payments and (2) hedge changes in cash flows on variable-rate bonds due to interest rate risk. As of November 1, 2009 (MassDOT's inception), these Swaps were classified as investment derivatives, as they were not associated with a then existing asset or liability of MassDOT. During the year ended June 30, 2010, these Swaps became associated with and were determined to be effective hedges of the 2010 Series A Senior and Subordinated Revenue Bonds issued by MassDOT to refund long-term debt previously issued by the Turnpike. At June 30, 2019, the remaining Swap continues to be an effective hedge of the refunding bonds.

Additionally, the Turnpike received premiums in connection with these swaps upon issuance of the related swaptions. A portion of the premiums is considered borrowings and is valued separately from the swaps. The balance of the borrowings at June 30, 2019 totals \$2,799 and is presented as part of bonds payable in the accompanying government-wide financial statements.

Simultaneously with the 2019 swap termination, MassDOT entered into two forward swap contracts that commence January 1, 2023. As part of the swap termination, novation payments were made by two counterparties on behalf of MassDOT and are considered premiums received related to the forward swaps. The on behalf payments/premiums are considered borrowings and are valued separately from the swaps. The balance of the borrowings at June 30, 2019 totals \$118,992 and is presented as part of bonds payable in the accompanying government-wide financial statements.

# **Forward Delivery Agreement**

MassDOT's bond trustee has invested certain of the debt service funds it holds through a Forward Delivery Agreement (Agreement). The Agreement, administered by Wells Fargo Bank, N.A., provides MassDOT with a guaranteed rate of return on trustee deposits held for debt payments until such time as payments are due. These deposits are recorded on MassDOT's financial statements at the fair value of the underlying securities provided by Wells Fargo through the Agreement. The Agreement qualifies as an investment derivative instrument and is reported at its fair value of \$8,581 as of June 30, 2019. The credit rating of Wells Fargo Bank, N.A. at June 30, 2019, as determined by S&P, was A+.

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The fair value balances and notional amounts of the derivative instruments outstanding at June 30, 2019, classified by type, and the changes in fair value of such derivative instruments for the year then ended as reported in the 2019 financial statements are as follows:

	Changes in fair value					Fair value at June 30, 2019		June 30, 2019	
	Classification	A	mount debit (credit)	Classification	Amount debit (credit)				Notional
Governmental activities:									
Cash flow hedges:									
Pay-fixed interest rate swaps	Deferred outflow	\$	45,108	Derivative liability	\$	(110,584)	\$	561,665	
Investment derivatives:									
Pay-fixed interest rate swaps	Investment revenue		(4,647)	Derivative liability		(1,188)		17,380	
Pay-variable interest rate basis swaps	Investment revenue		(2,214)	Derivative liability					
Subtotal			38,247			(111,772)			
Forward delivery agreements	Investment revenue		(2,129)	Derivative asset		8,581			
		\$	36,118		\$	(103,191)			

The fair values of the interest rate swaps and the Forward Delivery Agreement were estimated using the zero-coupon method. This method calculates the future net settlement payments required by the derivative, assuming that the current forward rates implied by the yield curve correctly anticipate future spot interest rates. These payments are then discounted using the spot rates implied by the current yield curve for hypothetical zero-coupon bonds due on the date of each future net settlement on the derivatives.

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#### (Dollars in thousands)

The following table displays the terms of MassDOT's derivative instruments outstanding at June 30, 2019:

Derivative Item	Туре	Objective	Effective Date	Notional amount	Term date	Payable swap rate	Receivable swap rate	Premiums received	Fair value at June 30, 2019
Cash flow h	edges:							_	
1	Pay-fixed	Hedge interest rate risk	7/1/2008	\$207,665	1/1/2037	4.750%	68% of 1 month	\$ 10,37	5 \$ (92,294
	interest rate	from 2010 senior debt					LIBOR		
	swap	(Series A-1 and A-2)					(1.63064%) (a)		
2	Pay-fixed	Hedge interest rate risk	1/1/2023	236,000	1/1/2039	4.750%	68% of 1 month	80,21	1 (12,374
	interest rate	from 2019 sub. debt					LIBOR		
	swap	(Series A)							
3	Pay-fixed	Hedge interest rate risk	1/1/2023	118,000	1/1/2039	4.750%	68% of 1 month	38,78	1 (5,91
	interest rate	from 2019 sub. debt					LIBOR		
	swap	(Series A)							
Investment	4								
Investment	derivatives:						68% of 1		
4	Pay-fixed		1/1/2023	11,587	1/1/2039	4.750%	month	-	- (81)
	interest rate						LIBOR		
	swap								
5	Pay-fixed		1/1/2023	5,793	1/1/2039	4.750%	68% of 1 month	-	- (37
	interest rate						LIBOR		
	swap								
		Subtotal		\$579,045					(111,772
6	Forward								× ,
	delivery								
	agreement		—		1/1/2029	—	Fixed	-	- 8,58
									\$ (103,19

(a) - Swap Rates as of June 30, 2019

#### **Swap Payments and Related Debt**

Debt service requirements of the 2019 Series A Subordinated Debt (used to refund the 2010 Subordinated Debt Series A-3 through A-6) and 2010 Senior Debt Series A-1 and A-2 and net swap payments for the cash flow hedge swaps, applying the fixed rates (4.75%) of the swaps and assuming 68% of 1 month LIBOR rate (1.63064%) and the variable rates (1.81% - 1.85%) on the Bonds, as of June 30, 2019, are shown in the table below. The 2019 Series A Subordinated bonds are reflected at 4.75% since these are fixed rate bonds which when refunded in 2022 could lead to the same terms of the swap that was associated with the 2010 Subordinated A-3 through A-6 bonds if the swap is not fully terminated or suspended for some period of time.

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				Interest rate	
	Р	rincipal	Interest	swap, net	Total
2020	\$		3,802	6,478	10,280
2021			3,802	6,478	10,280
2022			3,802	6,478	10,280
2023			3,802	6,478	10,280
2024			3,802	24,118	27,920
2025-2029			19,009	120,592	139,601
2030-2034		51,880	19,009	115,485	186,374
2035-2039		527,165	9,016	73,883	610,064
	\$	579,045	66,044	359,990	1,005,079

As rates change, interest payments on the Bonds and net swap payments will vary.

## **Risk Disclosures**

*Credit Risk* – MassDOT is not exposed to credit risk on its interest rate swaps as none of these instruments are in an asset position. However, if interest rates and volatilities change and the fair values of the swaps were to become positive, MassDOT would be exposed to credit risk in the amount of the positive fair values. To mitigate credit risk, MassDOT's counterparties are all required to be rated in the A category or higher by the three rating agencies.

The following represents the credit ratings of the swap counter parties at June 30, 2019:

Derivative swap item	Counterparty credit rating( Moody's, S&P and Fitch)
Derivative 1	Aa2, A+, AA-
Derivative 2	Aa3, A+, A+
Derivative 3	A2, A, A+
Derivative 4	Aa3, A+, A+
Derivative 5	A2, A, A+

*Basis Risk*-MassDOT is exposed to basis risk from cash flow hedges because the floating rate being hedged on the bonds is determined on a basis different from the floating rate on the swaps of 68% of 1 month LIBOR.

Tax Risk – If maximum tax rates were to decline, it is possible that the 68% of one month LIBOR MassDOT receives under various swaps would be less than the amount needed to pay its variable rate bonds. MassDOT and its financial advisor take this risk into consideration when analyzing the sufficiency of the hedge reserve fund balance.

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*Termination Risk* – MassDOT or the counter party may terminate the swap if the other party fails to perform under the terms of the contract. If any of the swaps are terminated, the related variable rate bonds would no longer be hedged. Finally, if at the time of termination the swap has a negative fair value, MassDOT would be liable for a payment equal to the swaps' fair value.

## (6) Pledged Revenues

MassDOT has pledged toll and certain related revenues, generated from the Metropolitan Highway System (MHS) to repay revenue bonds after deducting the amount necessary to pay all operating and maintenance costs, capital reinvestment and the maintenance of certain debt service reserve funds as required by the applicable bond covenants. The bonds were originally issued to provide financing for construction related to the MHS. Certain revenue bonds associated with the original issuance were refunded, for which the pledge remains. The bonds are payable through 2039 from the pledged revenues and a \$100,000 annual contract assistance payments) on the bonds, net of the Commonwealth. Annual principal and interest payments (including net swap payments) on the bonds, net of the Commonwealth's \$100,000 annual contract assistance payment, are expected to require approximately 25% of pledged revenues.

The remaining principal balance to repay MHS revenue bonds amounts to \$1,726,023. The remaining principal and interest (including net swap payments) related to MHS to be paid on the bonds is \$3,284,382. Principal and interest (including net swap payments) paid and pledged revenue received for the year ended June 30, 2019 were \$149,388 and \$202,760, respectively.

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## (7) Governmental Fund Balances

The constraints on fund balances as listed in aggregate in the Governmental Funds Balance Sheet are detailed as follows.

	MTTF (general)	Highway capital projects	Other governmental funds	Total
Nonspendable:				
Prepaid expenditures	\$ 2,450			2,450
Restricted:				
Debt service	260,258			260,258
Turnpike (toll) operations and capital reinvestment	406,000	_	_	406,000
Tobin bridge and metropolitan highway system operations	136,195		_	136,195
Transportation infrastructure fund	—	69,433	—	69,433
Transportation Infrastructure & Development Fund	_	3,165	_	3,165
Central Artery repairs and maintenance	_	_	353,411	353,411
Motor vehicle safety inspection			2,273	2,273
Planning and Enterprise Services			553	553
Registry	869			869
Rail and Transit			28,375	28,375
Total restricted fund balances	803,322	72,598	384,612	1,260,532
Assigned:				
Highway operations			503	503
Registry operations			200	200
Total assigned fund balances			703	703
Unassigned	98,540			98,540
Total governmental fund balances	\$ 904,312	72,598	385,315	1,362,225

## **Governmental Funds - Fund Balance**

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#### (8) Employee Benefit Plans

## (a) Pension Plan

## General Information about the Pension Plan

*Plan description*: Pensions are provided to eligible MassDOT employees through the Massachusetts State Employees' Retirement System (MSERS), a cost-sharing multiple employer defined benefit pension plan as defined in GASB Statement No. 67, *Financial Reporting for Pension Plans*. The former Massachusetts Turnpike Authority (MTA) employees and retirees became members of MSERS upon the creation of the MassDOT. Other employees who transferred to MassDOT have been, and remain, members of MSERS. The assets and liabilities of the former MTA have been transferred to MSERS.

The MSERS is governed by the Massachusetts State Retirement Board (MSRB), which consists of five members-two elected by current and active MSERS members, one by the remaining members of the MSRB, one who is appointed by the State Treasurer and the State Treasurer, who serves as ex-officio and is the Chair of the MSRB. Membership in the MSERS is mandatory immediately upon the commencement of employment for all permanent employees working a minimum of 25 hours per week. MSERS is part of the Commonwealth of Massachusetts' reporting entity and does not issue a stand-alone audited financial report.

*Benefits provided*: MSERS provides retirement, disability, survivor and death benefits to members and their beneficiaries. Massachusetts General Laws (MGL) establishes uniform benefit and contribution requirements for all contributory public employee retirement systems (PERS). These requirements provide for superannuation retirement allowance benefits up to a maximum of 80% of a member's highest three-year average annual rate of regular compensation. For employees hired after April 1, 2012, retirement allowances are calculated on the basis of the last five years or any five consecutive years, whichever is greater in terms of compensation. Benefit payments are based upon a member's age, length of creditable service, group creditable service, and group classification. The authority for amending these provisions rests with the Legislature.

Members become vested after ten years of creditable service. A superannuation retirement allowance may be received upon the completion of twenty years of creditable service or upon reaching the age of 55 with ten years of service. Normal retirement for most employees occurs at age 65; for certain hazardous duty and public safety positions, normal retirement is at age 55. Most employees who joined the system after April 1, 2012 cannot retire prior to age 60.

The MSERS' funding policies have been established by Chapter 32 of the MGL. The Legislature has the authority to amend these policies. The annuity portion of the MSERS retirement allowance is funded by employees, who contribute a percentage of their regular compensation. Costs of administering the plan are funded out of plan assets.

*Contributions*: Chapter 32 of the MGL assigns authority to establish and amend contribution requirements of the plan. Active plan members contribute between 5 and 9% of their gross regular compensation except for State Police which is 12% of regular compensation. The contribution rate is based on the date plan membership commences. Members hired on or after January 1, 1979, contribute an additional 2% of annual regular compensation in excess of \$30.

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The MGLs governing employer contribution requirements to MSERS are varied and vary among employers to such an extent that there is no uniform contribution method. Consequently, MSERS developed an effective contribution methodology that allocates total actual contributions among the employers in a consistent manner (based on an employer's share of total covered payroll). Any differences between the effective contribution and an employer's actual contributions are considered a nonemployer contribution from the Commonwealth. While certain nonemployer contributions are the legal responsibility of the Commonwealth and are identified by MSERS as special funding situations, MassDOT does not fall within this category. For the June 30, 2018 measurement date, the Commonwealth made contributions on behalf of MassDOT totaling \$10,189 and MassDOT made contributions totaling \$29,313 to the pension plan.

# Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At June 30, 2019, MassDOT reported a liability of \$571,491 for its proportionate share of the net pension liability. The net pension liability was measured as of June 30, 2018, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of January 1, 2018 for which update procedures were used to roll forward the total pension liability to the measurement date (June 30, 2018). MassDOT's proportion of the net pension liability is based on actual contributions adjusted for nonemployer contributions (as described above). At June 30, 2018, MassDOT's proportion was 4.31966%, which compared to a proportion of 4.43888% at June 30, 2017.

For the year ended June 30, 2019, MassDOT recognized pension expense of \$57,980. At June 30, 2019, MassDOT reported deferred outflows of resources and deferred inflows of resources from the following sources:

	Ou	Deferred utflows of esources	Deferred Inflows of Resources
Net difference between projected and actual earnings on pension plan investments	\$		19,865
Changes of assumptions		57,917	
Changes in proportion		2,755	43,987
Difference between expected and actual experience		18,123	11,647
Contributions subsequent to the measurement date		30,826	
	\$	109,621	75,499

Excluding contributions made subsequent to the measurement date, the amount reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

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Year ending June 30,	Amount		
2020	\$	22,634	
2021		(1,142)	
2022		(12,816)	
2023		(5,928)	
2024		548	
Totals	\$	3,296	

*Actuarial assumptions*: The total pension liability for the June 30, 2018 measurement date was determined by an actuarial valuation as of January 1, 2018 rolled forward to June 30, 2018. This valuation used the following assumptions:

- 1. (a) 7.35% investment rate of return, (b) 3.50% interest rate credited to the annuity savings fund and (c) 3.00% cost of living increase on the first \$13,000 of allowance each year.
- 2. Salary increases are based on analyses of past experience but range from 4.0% to 9.0% depending on group and length of service.
- 3. Mortality rates were as follows:
  - Pre-retirement reflects RP-2014 Blue Collar Employees Table projected generationally with Scale MP-2016, set forward 1 year for females
  - Post-retirement reflects RP-2014 Blue Collar Healthy Annuitant Table projected generationally with Scale MP-2016, set forward 1 year for females
  - Disability the mortality rate is assumed to be in accordance with the RP-2014 Blue Collar Healthy Annuitant Table projected generationally with Scale MP-2016, set forward 1 year
- 4. Experience studies were performed as follows:
  - Dated February 27, 2014 and encompasses the period January 1, 2006 to December 31, 2011.

Investment assets of MSERS are with the Pension Reserves Investment Trust (PRIT) Fund. The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future rates of return by the target asset allocation percentage. Best estimates of geometric rates of return for each major asset class included in the target asset allocation as of June 30, 2018 are summarized in the following table:

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(Dollars in thousands)

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Global Equity	39%	5.0%
Portfolio Completion Strategies	13%	3.7%
Core Fixed Income	12%	0.9%
Private Equity	12%	6.6%
Value Added Fixed Income	10%	3.8%
Real Estate	10%	3.8%
Timber / Natural Resources	4%	3.4%
Totals	100%	

*Discount rate*: The discount rate used to measure the total pension liability was 7.35%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that contributions from employers will be made at rates equal to difference between actuarially determined contribution rates and the member rates. Based on those assumptions, the pension plan's net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of MassDOT's proportionate share of the net pension liability to changes in the discount rate: The following presents MassDOT's proportionate share of the net pension liability calculated using the discount rate of 7.35%, as well as what the MassDOT's proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.35%) or 1-percentagepoint higher (8.35%) than the current rate:

	19	% Decrease (6.35%)	Current Discount Rate (7.35%)	1% Increase (8.35%)
MassDOT's Proportionate Share of the Net Pension Liability	\$	770,273	571,491	401,638

*Pension plan fiduciary net position*: Detailed information about the pension plan's fiduciary net position is available in the Commonwealth of Massachusetts' Comprehensive Annual Financial Report.

## (b) Other Postemployment Benefits (OPEB)

*Plan Description*. MassDOT participates in the Commonwealth's OPEB plan, an single employer defined Postemployment Benefits Other Than Pensions (OPEB) Plan. Benefits are managed by the Commonwealth's Group Insurance Commission (GIC) and investments are managed by the Pension Reserves Investment Management (PRIM) Board.

At the inception of MassDOT, the employees of the former Massachusetts Turnpike Authority became eligible to participate in the Commonwealth's OPEB plan. All other employees of MassDOT were members of the plan prior to the creation of MassDOT and remain so.

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The State Retiree Benefits Trust Fund (SRBT) is set up solely to pay for OPEB benefits and the cost to administer those benefits. It can only be revoked when all such health care and other non-pension benefits, current and future, have been paid or defeased. GIC administers benefit payments, while the Trustees are responsible for investment decisions. The SRBT is administered by the board of trustees and is reported as an OPEB Trust Fund in the Commonwealth's financial statements and does not issue a stand-alone audited financial report.

Management of the SRBT is vested with a board of trustees, which consists of seven members including the Secretary of Administration and Finance (or their designee), the Executive Director of the GIC (or their designee), the Executive Director of PERAC (or their designee), the State Treasurer (or their designee), the Comptroller (or their designee), one person appointed by the Governor and one person appointed by the State Treasurer. The members elect one person to serve as chair of the board.

*Benefits provided*. Under Chapter 32A of the Massachusetts General Laws the Commonwealth is required to provide certain health care and life insurance benefits for retired employees of the Commonwealth. Substantially all of the Commonwealth's employees may become eligible for these benefits if they reach retirement age while working for the Commonwealth. Eligible retirees are required to contribute a specified percentage of the health care/benefits costs, which are comparable to contributions required from employees.

*Funding Policy*. Employer and employee contributions rates are set in the General Law. The Commonwealth recognizes its share of the costs on an actuarial basis. As of June 30, 2019 and as of the valuation date (January 1, 2018), participants contributed 0% to 20% of the premium cost, depending on the date of hire and whether the participant is active, retiree or survivor status. As part of the fiscal 2010 General Appropriation Act, all active employees pay an additional 5% of premium costs. MassDOT is required to reimburse the Commonwealth at their contractual fringe rate of 8.79% based on current payroll. MassDOT's reimbursement to the Commonwealth for the year ending June 30, 2019 was approximately \$22,478, which equaled the required contribution.

The Massachusetts General Laws (MGLs) governing employer contributions to OPEB determine whether entities are billed for OPEB costs. Consequently, OPEB developed an effective contribution methodology which allocates total actual contributions amongst the employers in a consistent manner (based on an employer's share of total covered payroll). Any differences between the effective contribution and an employer's actual contributions are considered a nonemployer contribution from the Commonwealth. According to MGL, certain nonemployer contributions are the legal responsibility of the Commonwealth and have accordingly been reflected on the schedule of employer and nonemployer allocations as special funding situations. MassDOT is not a special funding situation.

## **OPEB Liabilities, OPEB Expense, and Deferred Inflows of Resources Related to Pensions**

At June 30, 2019 MassDOT reported a liability of \$667,121 for its proportionate share of the net OPEB liability. The net OPEB liability was measured as of June 30, 2018 and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of January 1, 2018 for which procedures were used to roll forward the total OPEB liability to the measurement date. MassDOT's proportion of the net OPEB liability is based on actual contributions adjusted for nonemployer contributions. At June 30, 2018, MassDOT's proportion was 4.47456%.

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## (Dollars in thousands)

For the year ended June 30, 2019, MassDOT recognized OPEB expense of \$656. At June 30, 2019, MassDOT reported deferred outflows of resources and deferred inflows of resources from the following sources:

		Deferred Outflows of Resources	Deferred Inflow of Resources
Net difference between projected and actual investment earnings on OPEB plan investments	\$		1,666
Changes of assumptions		_	204,968
Changes in proportion			49,850
Difference between expected and actual experience		8,103	1,424
Contributions subsequent to the measurement date	_	22,478	
5	\$_	30,581	257,908

Excluding contributions made subsequent to the measurement date, the amount reported as deferred outflows of resources and deferred inflows of resources will be recognized in OPEB expense as follows:

Year ending June 30	Amount
2020	\$ (58,048)
2021	(58,048)
2022	(58,048)
2023	(51,912)
2024	(23,749)
Totals	\$ (249,805)

*Actuarial Assumptions*: The total OPEB liability for the June 30, 2018 measurement date was determined by an actuarial valuation as of January 1, 2018 rolled forward to June 30, 2018. This valuation used the following assumptions:

- 1. The following annual health care cost trend rates:(1) 8.0%, decreasing by 0.5% each year to an ultimate rate of 5.5% in 2023 and then decreasing 0.25% each year to an ultimate rate of 5.0% in 2025 for medical, (2) 5.0% for administration costs. Healthcare costs are offset by reimbursements for Employer Group Waiver Plans ("EGWP"), which are assumed to increase 5.0% per year.
- 2. The mortality rate was in accordance with RP 2014 Blue Collar Mortality Table projected with scale MP-2016 from the central year, with females set forward one year.
- 3. Participation rates:
  - a. 100% of all retirees who currently have health care coverage will continue with the same coverage, except that retirees under age 65with POS/PPO coverage switch to Indemnity at age 65 and those over age 65 with POS/PPO coverage switch to HMO.

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b. All current retirees, other than those indicated on the census data as not being eligible by Medicare, have Medicare coverage upon attainment of age 65, as do their spouses. All future retirees are assumed to have Medicare coverage upon attainment of age 65.

c. 80% of current and future contingent eligible participants will elect health care benefits at age 55, or current age if later.

d. Actives, upon retirement, take coverage, and are assumed to have the following coverage:

-	Retirement Age				
-	Under 65	Age 65 +			
Indemnity	40.0%	85.0%			
POS/PPO	50.0%	0.0%			
HMO	10.0%	15.0%			

Investment assets of the OPEB plan are with the Pension Reserves Investment Trust (PRIT) Fund. The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future rates of return by the target asset allocation percentage. Best estimates of geometric rates of return for each major asset class included in the PRIT Fund's target asset allocation as of June 30, 2018 are summarized in the following table:

		Long-Term Expected Real Rate of Return
Asset Class	Target Allocation	2018
Global Equity	39.0%	5.0%
Portfolio Completion Strategies	13.0%	3.7%
Core Fixed Income	12.0%	0.9%
Private Equity	12.0%	6.6%
Value Added Fixed Income	10.0%	3.8%
Real Estate	10.0%	3.8%
Timber/Natural Resources	4.0%	3.4%
Total	100.0%	

*Discount rate*: The discount rate used to measure the OPEB liability as of June 30, 2018 was 3.95%. The rate was based on a blend of the Bond Buyer Index rate of 3.87% as of the measurement date and the expected rate of return. The OPEB plan's fiduciary net position was not projected to be available to make all projected future benefit payments for current plan members. The projected "depletion date" when projected benefits are not covered by projected assets is 2025. Therefore, the long-term expected rate of return on plan investments of 7.35% per annum was not applied to all periods of projected benefit payments to determine the total OPEB liability as of June 30, 2018.

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Sensitivity of MassDOT's proportionate share of the net OPEB liability to changes in the discount rate: The following presents MassDOT's proportionate share of the net OPEB liability calculated using the discount rate, as well as what the proportionate share of the net OPEB liability would be if it were calculated using a discount rate that is 1- percentage point lower or 1- percentage point higher than the current rate:

	1% Decrease	Current Discount	1% Increase
	(2.95%)	Rate (3.95%)	(4.95%)
MassDOT's Proportionate Share of the Net OPEB Liability \$	787,756	667,121	570,676

Sensitivity of MassDOT's proportionate share of the net OPEB liability to changes in the healthcare cost trend rate: The following presents MassDOT's proportionate share of the net OPEB liability, as well as what the net OPEB liability would be if it were calculated using a healthcare cost trend rate that is 1-percentage point lower or 1-percentage point higher than the current healthcare cost trend rate:

	1% Decrease	Current Rate	1% Increase
MassDOT's Proportionate Share of the Net OPEB Liability	\$ 554,263	667,121	814,453

## (9) Leases

## (a) Commitments

MassDOT has commitments under various operating leases. Total lease expense for the year ending June 30, 2019 was \$8,555. The following is a summary of the future minimum lease payments for operating lease obligations:

Years:	Amount
2020	\$ 5,967
2021	5,473
2022	3,630
2023	3,049
2024	2,665
Thereafter	7,757
Total	\$ 28,541

Capital lease obligations are not material to MassDOT's financial statements.

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## (b) Rental Income

MassDOT leases property and air rights to others. For the year ended June 30, 2019, MassDOT earned \$56,502 in rental income. The following is a schedule by years of minimum future rental income on non-cancelable operating leases as of June 30, 2019:

Amount
\$ 52,262
43,449
41,104
41,170
39,848
 556,739
\$ 774,572

## (10) Risk Management

As part of its normal operations, MassDOT encounters the risk of accidental loss stemming from third party liability claims, property loss or damage, and job related injuries and illnesses. In managing these loss exposures, MassDOT applies a combination of risk management measures, including safety and loss prevention program, emergency planning, contractual risk transfer, self-insurance (internal retention) and commercial insurance. Settled claims resulting from the risks discussed above did not exceed the amount of insurance coverage in force during the year ended June 30, 2019.

In connection with the self-insurance and insurance programs, MassDOT retains part of the losses incurred and internally manages the self-insured claims. The current MassDOT self-insured retention includes (i) up to \$2,500 per loss for public official liability (ii) \$7,500 per loss for privacy & network liability, (iii) \$250 per loss involving damage to buildings and their contents, and (iv) \$50,000 per bridge and tunnel loss. Insurance is purchased above self-insured amounts, subject to availability and reasonableness of cost. Liability insurance policies related to the former Massachusetts Turnpike Authority's exposures in prior periods (for incurred but not reported claims) have been assigned to MassDOT and remain in force.

## (a) Workers' Compensation

MassDOT's fully self-insured workers' compensation program is administered by the Commonwealth of Massachusetts' Human Resources Division (HRD). HRD assumed responsibility for making fair and timely payments of indemnity and medical benefits to injured MassDOT employees, maintaining the claim and financial records and for negotiating appropriate settlements for all workers' compensation claims. This includes all legacy claims from the predecessor entities.

Liabilities for self-insured claims are reported if it is probable that a loss has been incurred and the amount can be reasonably estimated. These losses include an estimate of claims that have been incurred but not reported at year-end and are based on the historical cost of settling similar claims. MassDOT records such liabilities as other liabilities.

The estimated workers' compensation liability for occurrences through June 30, 2019 is \$19,940. This amount is based on the results of a review performed by an independent actuarial firm retained by MassDOT, and represents an estimate of liabilities incurred based on past experience for claims reported and not reported as of June 30, 2019.

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Changes in the workers' compensation claims liability since July 1, 2017 were as follows:

Liability balance, July 1, 2017	\$ 21,850
Provision to record estimated losses	5,024
Payments	(6,030)
Liability balance, June 30, 2018	\$ 20,844
Liability balance, July 1, 2018	\$ 20,844
Liability balance, July 1, 2018 Provision to record estimated losses	\$ 20,844 5,279
	\$ ,

## (b) Owner Controlled Insurance Program (OCIP)

MassDOT has assumed responsibility for providing worker's compensation and general liability insurance for all eligible contractors and subcontractors working on the Central Artery/Tunnel Project (Project) by establishing an OCIP. A Trust, managed and administered by an independent third party (trustee), was established to protect a portion of the assets set aside with the insurance carrier to fund project liabilities. During fiscal 2018, the Trust was dissolved and MassDOT commenced managing and administering OCIP. Amounts related to OCIP are restricted and cannot be used for other purposes and continue to be recorded in the internal service fund.

These insurance programs within the OCIP are structured as retrospectively rated insurance programs with retained loss limits of \$1,000 per claim, \$3,000 on aggregate per occurrence for worker's compensation and \$2,000 per contractor, \$6,000 on aggregate per occurrence for general liability coverage. MassDOT is responsible for loss costs up to these amounts.

The estimated Claims and Judgments liability for the OCIP for occurrences through June 30, 2019 is \$1,560. This amount is based on the results of a review performed by an independent actuarial firm and it represents an estimate of liabilities incurred based on past experience for claims incurred and not reported as of June 30, 2019. Any residual amount remaining at the end of the program will be transferred to MassDOT's Transportation Infrastructure Fund.

Changes in the claims liability since July 1, 2017 were as follows:

Liability balance, July 1, 2017	\$ 2,600
Provision to record estimated losses	(200)
Payments	(400)
Liability balance, June 30, 2018	\$ 2,000
Liability balance, July 1, 2018	\$ 2,000
Provision to record estimated losses	(21)
Payments	(419)
Liability balance, June 30, 2019	\$ 1,560

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# (11) Commitments

MassDOT enters into construction contracts for roads, bridges, highways (including the Metropolitan Highway System and Western Turnpike) with various construction and engineering companies, as well as collaborating with the MBTA on various projects. Significant construction contracts outstanding at June 30, 2019 approximated \$24.8 billion.

# (12) Litigation

MassDOT from time to time is engaged in various matters of routine litigation. These matters include personal injury and property damage claims for which MassDOT's liability is covered in whole or in part by insurance. MassDOT does not expect that these matters will require any amounts to be paid which in the aggregate would materially affect the financial statements. MassDOT accrued \$2,169 for legal claims related to the Fore River Bridge at June 30, 2019.

# (13) Subsequent Events

Subsequent to year end, MassDOT's fiscal 2020 operating budget was revised and approved for \$947,214 in expenditures and debt service. The amount will be funded from operating revenue from CTF (\$571,462), pledged and unpledged revenues (\$459,781), motor vehicle inspection trust fund (\$57,656), federal funds (\$19,601) and other revenues (\$49,756) including departmental, leases, investment income and reserves.

Subsequent to year-end, the Commonwealth legislature approved supplemental funding of the fiscal year 2019 operating budget totaling \$7,951. MassDOT also received \$20,000 in additional funds to support operations.

On October 23, 2019, MassDOT issued \$664,155 in revenue bonds to refund \$831,495 in outstanding 2010 Series B Senior and Subordinated bonds, which are fixed rate bonds. Additionally, MassDOT used \$81,059 of debt reserves and debt service funds for the refunding.

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## (14) MBTA - The Reporting Entity

The Massachusetts Bay Transportation Authority (the "Authority") was originally created in 1964 as a body politic and corporate and a political subdivision of the Commonwealth of Massachusetts (the Commonwealth) to finance and operate mass transportation facilities within, and, to a limited extent, outside of its territorial area of 176 cities and towns and is authorized to enter into agreements for providing mass transportation service by private companies, including railroads. The 176 cities and towns are grouped into three categories, based upon the weighting of each member's allocable percentage of population and assessments: (i) the inner 14 cities and towns; (ii) the outer 51 cities and towns; and (iii) the other 111 served communities.

Chapter 161A is referred to herein, together with Section 35T of Chapter 10 of Massachusetts General Laws, as the "Enabling Act."

The Authority is governed and its corporate powers exercised by the board of directors (the "Board of Directors" or "Board") of the Massachusetts Department of Transportation ("MassDOT"). However, during its existence, the Fiscal Management Control Board (FMCB) is afforded all the powers, responsibilities, and obligations relative to the Authority that are vested in the Board with the exception of authorizing the issuance of debt, which remains the responsibility of the Board. Futhermore, the General Manager is hired and retained by the Secretary of Transportation, as the FMCB reports to the Secretary.

The Control Board 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 2018, 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 Authority 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 ownsource 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 Authority, including contracts entered into before the establishment of the Control Board, 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 Control Board 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.

The Control Board consists of five members appointed by the Governor. Three members shall be members of the Board, one shall have experience in transportation finance and one shall have experience in mass transit operation. On May 25, 2017, the Governor accepted the FMCB's recommendation to extend its governance by two years and will continue until June 30, 2020, as allowed under the authorizing statute. The Governor may not extend the FMCB term beyond June 30, 2020.

The Control Board shall appear before and provide updates to the Board not less than once per month.

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Following the dissolution of the Control Board, the MassDOT Board will resume sole governance of the Authority. The Board consists of 11-members. The Secretary of Transportation shall serves ex-officio as Chair and ten other members are appointed by the Governor, one of whom shall be a rider, as defined in the Enabling Act; one of whom shall have experience in the field of public or private finance; one of whom shall have experience in transportation planning and policy; one of whom shall have experience in civil engineering; one of whom shall have experience in the field of public or private finance or transportation planning and policy; one of whom shall have municipal government experience in one of the fourteen cities and towns, as defined in the Enabling Act; one of whom shall have municipal government experience in one of the fifty-one cities and towns, as defined in the Enabling Act; one of whom shall have municipal government experience in one of the other served communities, as defined in the Enabling Act; one of whom shall have municipal government experience in a city or town not part of the area constituting the authority, as defined in the Enabling Act; and one of whom shall be a representative of a labor organization selected from a list of three nominees provided by the Massachusetts State Labor Council, AFL-CIO. Four of the members, other than the Chair, shall serve for terms that are coterminous with the Governor; provided, however, that at least three of the coterminous members shall have experience in transportation policy, public finance or civil engineering and at least one of the coterminous members shall be a rider. The six remaining members appointed by the Governor shall serve for terms of four years. No more than six of the eleven directors, except the ex-officio director, shall be members of the same political party.

Under the Enabling Act, the Advisory Board, consisting of a representative of each of the cities and towns paying Assessments, shall have certain specified powers, including the power to review the Authority's long term capital program and annual operating budget. The Enabling Act does not provide for the Authority to be a debtor under the federal bankruptcy code.

On May 4, 2011, the Authority approved the establishment of Metropolitan Boston Transit Parking Corporation (MBTPC) a private Massachusetts nonprofit corporation organized under the provisions of Chapter 180 of Massachusetts General Laws, for the limited purpose of taking action necessary to provide for issuance of bonds on behalf of the Authority secured by the revenues from the parking system of the Authority. The MBTPC Systemwide Senior Lien Parking Revenue Bonds, Series 2011 were issued on June 22, 2011. The Authority is the sole member of MBTPC and the Board of Directors consists of three ex officio management employees of the Authority. MBTPC has no employees. MBTPC is authorized under the Systemwide Parking Revenue Bonds Resolution (the "General Resolution") to issue debt payable and has assumed certain rights to receive gross revenues from the parking system of the Authority under a Transfer and Disposition Agreement. The obligations of the corporation, the bonds and Transfer and Disposition Agreement are limited obligations, payable solely from the assets of MBTPC, which are pledged under the General Resolution and recourse shall be limited to such assets. Due to its relationship with the Authority, the MBTPC is considered a blended component of the Authority.

In accordance with the requirements of Governmental Accounting Standards Board (GASB), Statements, of the financial statements must present the Authority (the primary government) and its component units. Pursuant to this criterion, no component units, other than the MBTPC, were identified for inclusion in the accompanying financial statements. Additionally, the accompanying financial statements are incorporated into the financial statements of MassDOT, as the Authority is a component unit of MassDOT.

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## (15) MBTA - Summary of Significant Accounting Policies

## (a) Basis of Financial Reporting

The Authority applies U.S. generally accepted accounting principles ("GAAP") as prescribed by GASB. The accompanying financial statements have been prepared using the economic resources measurement focus and the accrual basis of accounting and reflect transactions on behalf of the Authority, the reporting entity. The Authority accounts for its operations as an enterprise fund. Operating revenues and expenses result from providing transportation services to member communities. All other revenues and expenses are reported as nonoperating revenues and expenses.

## (b) Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

## (c) Cash

Cash and cash equivalents include cash on deposit and money market funds.

## (d) Investments

Investments are generally presented at fair value, other than certain investments that are recorded at amortized cost. The MBTA uses an independent pricing source to determine the fair value of investments at quoted market prices. Changes in fair value are included in nonoperating interest income in the Statement of Revenues, Expenses and Changes in Net Position. The investments recorded at amortized cost are those outlined by GASB standards and include: Investments held by the Authority in nonparticipating interest-earning investment contracts and money market investments and participating interest-earning contracts that have a remaining maturity at the time of purchase of one year or less. The Authority also records its investments in state & local government series obligations at cost due to prohibition of transferability of the obligations. The Authority invests in the Massachusetts Municipal Depository Trust (MMDT), which is an external investment pool and is not SEC-registered. MMDT is state-regulated and is valued at amortized cost.

## (e) Statements of Cash Flows

For purposes of the statements of cash flows, the Authority considers all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents, which are reported as temporary cash investments.

## (f) Cash and Investment Accounts

Certain cash and investments are segregated from operating cash and investments and labeled restricted due to certain internal or external restrictions as follows:

- Bond Construction Accounts represent unexpended bond proceeds.
- Stabilization Accounts represent funds held in accordance with statutory requirements to be used when annual revenues are projected to be less than annual expenses, or if the Authority has insufficient funds on hand to pay current expenses.

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- Lease Deposits represent investments (Treasury STRIPS and a collateralized investment agreement) held by trustees that will be used to make scheduled equity payments on the Authority's capital leases.
- Bond Reserve Accounts represent funds required to be maintained by trust agreements and bond resolutions. Amounts also reflect the fair value of forward delivery agreements.

Unrestricted cash and temporary investments are free of any internal or external restrictions. Other cash and temporary investments represent internally restricted funds held for capital maintenance, debt service and other expenses.

## (g) Capital Assets

All capital assets exceeding \$5, with a useful life of greater than one year, are stated at historical cost. These costs include the Authority's labor costs for employees working on capital projects, related fringe benefits, and an allocated share of general and administrative costs. Ordinary maintenance and repairs are charged to expense as incurred.

Depreciation of capital assets is computed using the straight line method over the estimated useful life of the asset. The major categories of transportation property in service and their estimated useful lives are as follows at June 30, 2019:

	Estimated useful life
Ways and structures	10 - 60 years
Building and equipment	3 - 25 years

## (h) Construction in Progress

For the year ended June 30, 2019, \$1,122,684 was expended towards the completion of major construction projects and improvements in progress. The projects and improvements completed were transferred to the appropriate transportation property accounts. Major projects included transit service extensions, right of way improvements, and purchases of new rolling stock and other equipment.

The Authority does not capitalize interest.

# (i) Materials and Supplies

Materials and supplies are stated at average cost and include items to support the Authority's operations.

# (j) Self-Insurance

The Authority is fully self-insured for various risks including workers' compensation, and injuries and damages claims. The Authority also self-insures a portion of casualty, liability claims, and property losses.

## (k) Revenue Recognition

The Authority realizes revenue from a variety of different sources including but not limited to dedicated sales tax revenue and dedicated assessment revenue (collectively referred to as Dedicated

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Revenues, state contract assistance appropriated funds, fare revenue, and nonfare revenue such as real estate, parking, and advertising revenues.

Under the Enabling Act, the Dedicated Revenues are impressed with a trust for the benefit of Authority bondholders. Furthermore, the Commonwealth covenants that while any Authority bonds or notes secured by the Dedicated Revenues are outstanding and remain unpaid, the Dedicated Revenues shall not be diverted, and, so long as the Dedicated Revenues are necessary for the purpose for which they have been pledged. The Authority recognizes the Dedicated Revenues as nonoperating revenue.

The Dedicated Sales Tax is equal to the greater of the base revenue amount (as defined in the Enabling Act) and the amount raised by a 1% statewide sales tax to be funded from existing sales tax receipts, subject to adjustment under certain circumstances set forth in the Enabling Act, plus \$160,000 annually. The dedicated assessment revenue consists of the obligation of 176 cities and towns in the Authority's expanded district to pay assessments for transportation services and benefits rendered. The Commonwealth deducts the assessments from each municipality's local aid payments; as such, these payments are received from the Commonwealth.

The dedicated assessments shall be adjusted each July 1 by the growth rate of the inflation index over the preceding 12 months not to exceed 102.5% of the previous year's assessment.

The Transportation Reform Act established the Commonwealth Transportation Fund (CTF), a budgetary fund of the Commonwealth for transportation related purposes, to receive essentially the same revenue previously deposited into the Highway Fund, including gasoline tax receipts and registry fee revenue. The Transportation Finance Act also provided funding for various transportation services and infrastructure needs within the various units of MassDOT. The Commonwealth appropriated the amount of \$127,000 from the CTF to the Authority for FY19. In addition, the Commonwealth made \$60,000 available to the Authority in the FY19 capital budget for pay-go capital purposes. These amounts are subject to appropriation by the Commonwealth in future years. The Authority recognizes the state appropriated funds from the CTF on an accrual basis as nonoperating revenue.

The Authority generates significant revenue from the operation of its transportation system, including both fare revenue and nonfare revenue such as those derived from real estate, parking, and advertising. Fare revenue is recorded on an accrual basis as operating revenue when fare media is purchased by riding customers through fare vending equipment and pass programs administered by the Authority. Real estate, parking, and advertising revenue is recorded on an accrual basis as operating revenue is recorded on an accrual basis as operating revenue upon reporting of independent contractors managing these revenue streams on behalf of the Authority. Such activity is reflected as operating revenue in the accompanying financial statements

## (1) Capital Grants and Contributions

The Authority receives capital grants from certain governmental agencies to be used for various purposes connected with the planning, modernization, and expansion of transportation facilities and equipment.

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#### (m) Compensated Absences

The Authority accrues for vested vacation pay when it is earned by employees. The amount of vested vacation pay accrued as of June 30, 2019 was \$19,668.

## (n) Postemployment Benefits

The Authority sponsors three defined benefit pension plans, including the MBTA Retirement Fund, the MBTA Police Association Retirement Plan and the MBTA Deferred Compensation Plan. The Authority measures and records a net pension liability on its statement of net position which represents its unfunded pension plans' obligation. For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the MBTA Retirement Fund, the MBTA Police Association Retirement Plan, and the MBTA Deferred Compensation Plan, and additions to/ deductions from the Plans' fiduciary net position have been determined on the same basis as they are reported by the Plans. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments held by the plans are measured at fair value.

The Authority also sponsors an unfunded other post-employment benefit (OPEB) plan which is more fully described in note 26.

## (o) Environmental and other Remediation Obligations

The Authority recognizes pollution remediation liabilities in accordance with GASB Statement No. 49, *Accounting and Financial Reporting for Pollution Remediation Obligations* and GASB Statement No. 83, *Certain Asset Retirement Obligations*. At June 30, 2019 the Authority recorded a long-term liability of \$6,483 related to certain underground storage tanks and for the removal of Polychlorinated Biophenyls (PCB) at one of its facilities.

## (p) Derivatives

The Authorities derivative activities included various forward delivery agreements (FDA) and various interest rate swaps which are recorded at fair value. At June 30, 2019, the fair value of the FDA which are considered investment derivatives totaled \$51,398. At June 30, 2019, the fair value of the interest rate swaps which are considered as hedge instruments totaled (\$5,606).

Derivative instruments are reported as assets or liabilities at fair value on the statement of net position. Fair value is determined using a market approach that considers benchmark interest rates.

Changes in fair value may be reported in the statement of revenue, expenses, and changes in net position, or as deferred inflows or deferred outflows of resources in the statement of net position depending upon whether the derivative instrument qualifies for hedge accounting.

# (q) Available Unrestricted Resources

The Authority's policy is to utilize available unrestricted resources prior to restricted resources.

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#### (r) Deferred Inflows and Outflows

The Authority accounts for certain transactions that result in the consumption or acquisition of one period that are applicable to future periods as deferred outflows and deferred inflows, respectively, to distinguish them from assets and liabilities. Deferred outflows of resources increase net position, similar to assets and deferred inflows of resources decrease net position similar to liabilities.

## (s) Statement of Net Position

The statement of net position presents all of the Authority's assets, deferred outflows of resources, liabilities and deferred inflows of resources, with the difference reported as net position. Net position is reported in three categories:

*Net investment in capital assets* consists of capital assets, net of accumulated depreciation and amortization and reduced by outstanding balances for bonds, notes and other debt that are attributed to the acquisition, construction or improvement of those assets.

*Restricted net position* result when constraints placed on net position use are either externally imposed by creditors, grantors, contributors, and the like, or imposed by law through enabling legislation.

*Unrestricted net position* consists of net position which does not meet the definition of the two preceding categories.

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# (16) MBTA - Deposits and Investments

The Authority's investment policy is to only invest in securities named in the respective trust agreements.

The Authority is authorized by its board of directors to make deposits into checking and savings accounts and to invest in direct obligations of the U.S. Treasury, its agencies and instrumentalities, bankers' acceptances, investment agreements, municipal bonds, repurchase agreements secured by U.S. government and agency obligations, and certain other investments permitted under the trust indentures.

Obligations of any agency or instrumentality of the United States of America including, but not limited to, the following may be acceptable as collateral to secure certificates of deposit or other instruments:

- (A) Federal Home Loan Banks
- (B) Federal Land Banks
- (C) Federal Intermediate Credit Banks
- (D) Bank for Cooperatives
- (E) Federal National Mortgage Association
- (F) Federal Farm Credit Banks

The Authority may invest in prime commercial paper of corporate issuers with a minimum quality rating of P-1 by Moody's Investors Service (Moody's) or A-1 by Standard and Poor's (S&P). These instruments can vary in maturity; however, no more than 10% of the investment funds shall be invested in the commercial paper of a single corporation.

Additionally, the Authority is authorized to invest in the Massachusetts Municipal Depository Trust (MMDT), a pooled money market like investment fund managed by the Commonwealth, established under General Laws, Chapter 29, Section 38A. MMDT is an external investment pool that meets the criteria established by GASB 79 to report its investments at amortized cost. As such, the Authority reports its investment in MMDT at amortized cost which approximates the net asset value of \$1.00 (one dollar) per share. MMDT has a maturity of less than one year and is not rated.

Marketable securities, which consist primarily of U.S. government instruments, are carried at fair value based upon quoted market prices. Nonparticipating interest earning contracts, including certificates of deposit and guaranteed investment contracts, and state and local government series obligations are carried at cost.

Deposits and investments consisted of the following amounts presented in the accompanying statement of net position at June 30, 2019:

 2019	
\$ 114,861	
668,473	
20,524	
51,398	
 65,727	
920,983	
 332,603	
\$ 1,253,586	
\$	

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Included in bond reserve, stabilization, and other accounts at June 30, 2019 are investments in Commonwealth debt instruments with a fair value of \$44,850.

The Board approved the establishment of a Lockbox Capital Maintenance Fund (the Fund) that is to be funded by the increase in fare revenue generated by the fare changes. Resources deposited in the Fund will be used for pay-as-you-go capital improvements. Spending from the Fund for any purpose other than capital improvements requires at least a two-thirds vote of the FMCB. The Fund had a balance of \$118,092 as part of the unrestricted cash balance as of June 30, 2019.

## (a) Custodial Credit Risk – Deposits

The custodial credit risk for deposits is the risk that, in the event of a bank failure, the Authority's deposits may not be recovered. The deposits in the bank in excess of the insured amount and collateralized amount are uninsured and uncollateralized. The carrying amount of the Authority's deposits at June 30, 2019 was \$149,709. The bank balance at June 30, 2019 was \$151,909. Of this amount, \$0 was exposed to custodial credit risk as uninsured and uncollateralized. These amounts reflect the Federal Deposit Insurance Corporation limit of \$250 per institution at June 30, 2019.

## (b) Interest Rate Risk – Investments

Interest rate risk is the risk that changes in interest rates of debt investments will adversely affect the fair value of an investment. The Authority follows the guidelines in the Authority's trust agreements, and does not have a formal investment policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates.

The Authority's fixed income investments at June 30, 2019 are presented below. All investments are presented by investment type and maturity.

	2019						
			Investment maturities (in years)				
Investment type		Amount	Less than 1 year	1 - 3	4 - 8	More than 8	
Money Market Funds	\$	347,835	347,835				
MMDT		318,279	318,279	_	_	_	
Guaranteed investment contracts		1,325	_	_	_	1,325	
U.S. Treasury STRIPS		65,727	_	_	_	65,727	
U.S. Treasury Securities		13,334	13,334	_	_	_	
U.S. government-sponsored enterprises		198,204	172,285	_	_	25,919	
State and Local Government		44,850	_	_	16,066	28,784	
State and Local Government		62,926			12,180	50,746	
	\$	1,052,480	851,733		28,246	172,501	

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#### (c) Credit Ratings

The Authority has \$347,835 invested in money market funds as of June 30, 2019. These investments are not rated.

The Authority has \$318,279 invested in MMDT as of June 30, 2019, a state investment pool managed by Fidelity Investments as agent for the Commonwealth and shareholders of the MMDT. MMDT is unrated.

The Authority holds guaranteed investment contracts with a fair value of \$1,325 at June 30, 2019,. These investments are not rated.

The Authority had \$186,837 in U.S. Treasury STRIPS, U.S. Treasury securities, State and local government series and municipal bonds as of June 30, 2019. The investments in Treasury STRIPS, U.S. Treasury Securities and State and local government series obligations are backed by the full faith and credit of the U.S. government. The municipal bonds have an implied credit rating of Aaa/AA+.

The Authority has \$198,204 invested in US government-sponsored enterprises as of June 30, 2019. These investments have an implied credit rating of AAaa/AA+ or they have been collateralized to AAA.

## (d) Concentration of Credit Risk – Investments

Concentration of credit risk is the risk of loss attributable to the magnitude of the Authority's investment in a single issuer. The issuers where securities at year-end exceeded 5% of the total investments, other than U.S. government obligations and mutual funds, are as follows:

	Credit rating by Moody's/S&P	2019	Percentage of portfolio
Federal Home Loan Banks	Aaa/AA+	\$115,863	7.23%
Federal National Mortgage Association	Aaa/AA+	76,054	11.01

## (e) Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. The Authority was not exposed to foreign currency risk as of June 30, 2019.

## (f) Fair Value Hierarchy and Measurements of Investments

Investments are measured at fair value on a recurring basis. Recurring fair value measurements are those that are required to be made at the end of each reporting period. Fair value measurements are categorized based on the valuation inputs used to measure the fair value.

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- Level 1 inputs are quoted market prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.
- Level 2 inputs are other than quoted prices in Level 1 that are observable for the asset or liability or similar assets or liabilities either directly or indirectly through corroboration with the observable market data.
- Level 3 inputs are significant unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The following is a description of the valuation methodologies used for assets measured at fair value. There have been no changes in the methodologies used at June 30, 2019.

**Institutional Money Market Funds** – Valued at fair value, which is represented by the quoted price for the fund – generally \$1.00 (one dollar) per share. Money market funds are generally classified as Level 1.

**U.S. Treasury Strips** - Treasury strips are typically valued based on pricing sources with reasonable level of price transparency or derived from a treasury curve. Treasury strips are generally categorized as Level 2 of the fair value hierarchy.

**U.S. Treasury Securities** - Securities issued by the U.S. Government, its agencies, authorities and instrumentalities are valued using quoted prices, documented trade history in the security and a pricing model maximizing the use of observable inputs determined by investment managers.

- U.S. Treasury Securities consist principally of U.S. Treasury bills, notes and bonds are generally classified as Level 2 of the fair value hierarchy
- U.S. Government sponsored enterprises securities consist principally of U.S. Government agency obligations including agency-issued debt, agency mortgage pass-through securities, and agency collateralized mortgage obligations are generally categorized in Level 2 of the fair value hierarchy.

**Municipal bonds** – State and municipal bonds are generally valued based on the independent prices obtained from third party valuation services. Where prices of recently executed market transactions of similar securities and of comparable size are easily observed, those are taken into consideration for arriving at the fair value. When independent prices are available for state and municipal bonds, these are categorized as Level 2 of the fair value hierarchy.

**Derivative Instruments** – The Authority's interest rate swaps and forward delivery agreements are classified as Level 2 as valued using a market approach that considers benchmark interest rates.

The Authority has no securities classified as Level 3.

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#### (g) Fair Value and Amortized Cost Measurements

The Authority categorizes its investments within the fair value hierarchy as of June 30, 2019 as follows:

	2019				
	Total		Fair Value Level 1	Fair Value Level 2	
Investments by fair value level					
Money Market Funds	\$	347,835	347,835		
U.S. Treasury STRIPS		65,727		65,727	
U.S. Treasury securities		13,334		13,334	
U.S. Government sponsored enterprises		198,204	—	198,204	
Municipal bonds		44,850		44,850	
Total Investments by fair value level		669,950	347,835	322,115	
Investments measured at amortized cost					
MMDT		318,279			
State & Local Government Series		62,926			
Guaranteed investment contracts		1,325			
Total Investments measured at amortized cost		382,530			
<b>Total Investments</b>	\$	1,052,480	347,835	367,907	
Interest rate swaps	\$	(5,606)	_	(5,606)	
Forward delivery agreements	\$	51,398	—	51,398	

#### (h) Forward Delivery Agreements

The Authority has entered into several forward delivery agreements (FDAs) with various counterparties related to its debt service and debt service reserve funds (collectively, the Funds). These FDAs provide for the counterparties to pay the Authority a fixed rate of return on the amounts on deposit in the Funds in exchange for the Authority's obligation to purchase securities at specified dates in the future. Under the FDAs, the Authority receives fixed return rates ranging from 4.000% to 6.765% and commits to purchase the securities at their market value on the specified future dates through June 30, 2037. The credit ratings of the counterparties to the FDAs as of June 30, 2019, as determined by Standard and Poor's, were from "A-" to "AA".

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#### (17) MBTA - Pledged Revenues

The Authority has pledged, as security for Sales Tax Series Bonds issued and Assessment Bonds issued, a portion of the Commonwealth sales tax (excluding meals tax) that is restricted for purposes of providing a dedicated revenue source to the Authority and a portion of the assessments obligated to be paid by cities and towns for which the Authority provides specified transportation services. Such bonds, issued by the Authority, provide financing for a portion of the capital improvement projects included in the Authority's approved Capital Investment Program ("CIP"), and are payable through June 30, 2046. The pledge of dedicated sales tax receipts and assessments from local communities remains in place until all bonds outstanding are retired and paid. The Authority generally issues bonds annually to fund its CIP, and these funds will continue to be pledged as security for the bonds until such time as the Authority no longer finances its CIP through the issuance of bonds secured by such pledged revenues and all such Authority bonds issued and outstanding have been retired. The total amount of dedicated sales tax revenues and local assessment revenues received in fiscal year 2019 was \$1,053,201 and \$170,145, respectively a total of \$1,223,346. Total annual debt service (principal and interest) paid during fiscal year 2019 on outstanding Sales Tax Series, Assessment and Prior Obligation Bonds was \$688,830, representing 39.9% of pledged revenues.

The MBTPC pledge of dedicated parking receipts of the parking system of the Authority remains in place until all bonds outstanding are retired and paid. The debt service requirement in fiscal year 2019 was \$15,373, which represents 34.11% of \$45,067 revenue in the fiscal year 2019.

Total principal and interest remaining on Sales Tax Series Bonds, Assessment Bonds, Prior Obligation Bonds, and MBTPC Bonds outstanding as of June 30, 2019 are \$7,820,068.

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# (18) MBTA - Net Investment in Direct Financing Lease

The Authority entered into a direct financing lease related to the underground parking garage structure located at Nashua Street and Legends Way in the City of Boston effective on June 6, 2012. The lease is for a subsurface building area with five levels of parking with a capacity for 1,275 automobiles (unaudited). The lease agreement is for a 75 year term with an initial rent payment of \$50,000 paid on the commencement date of the lease. Future annual base rent payments will commence on the tenth anniversary of the lease, June 6, 2022, and continue for a 30 year period.

The following lists the components of the net investment in direct financing lease as of June 30, 2019 ;

	2019
Total minimum lease payments receivable	\$ 68,981
Less unearned income	(40,997)
Net investment in direct financing lease	\$ 27,984

# (19) MBTA - Lease Obligations

## (a) Capital Lease Arrangements

Transportation property and facilities under capital leases are summarized in the capital assets note 20.

In fiscal 2006, the Authority entered in a Sale-in/Lease-out (SILO) transaction involving 80 commuter rail cars. The agreement provides for the lease of rolling stock for a period of 11 years for 48 cars and 17 years for the remaining 32 cars. Because the transaction did not meet the "in-substance defeasance" criteria, the lease liability and the related refunding trust established to pay off the lease payments as they come due are included in the accompanying financial statements. As of June 30, 2019, the outstanding lease liabilities were \$65,774.

## (b) Operating Leases

As of June 30, 2019, the Authority leased approximately 37,000 square feet of office space and equipment within a property in Somerville, Massachusetts. This lease requires minimum lease payments of \$802 and \$687 in fiscal years 2019 and 2020, respectively. The lease terminates as of June 30, 2020.

In June 2017, the Authority, as lessor, entered into a 99-year lease with a third party for space at the South Station for an annual lease payment of \$1,000 plus contractual increases over the life of the lease.

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June 30, 2019

# (Dollars in thousands)

# (20) MBTA - Capital Assets

A summary rollforward of capital assets at June 30, 2019 is as follows:

	Beginning balance June 30, 2018	Increases	Decreases	Ending balance June 30, 2019
Capital assets not being depreciated:				
Land	\$ 390,431	3,533	119	393,845
Construction work in progress	2,040,030	1,122,684	185,630	2,977,084
Total capital assets not being depreciated	2,430,461	1,126,217	185,749	3,370,929
Capital assets being depreciated:				
Ways and structures	10,946,642	57,475	443	11,003,674
Buildings and equipment	3,587,940	55,809	11,747	3,632,002
Service Vehicles	2,422			2,422
Capitalized interest	150,704	_	_	150,704
Capital Lease - SILO	148,704	_	_	148,704
Capital Lease - MBB#2	27,622	_	_	27,622
Capital Lease Assets - Other	9,524	_		9,524
Total capital assets being depreciated	14,873,558	113,284	12,190	14,974,652
Less accumulated depreciation for:				
Ways and structures	4,902,543	222,922	—	5,125,465
Buildings and equipment	2,247,072	144,951	12,190	2,379,833
Service Vehicles	1,171	455	—	1,626
Capitalized interest	69,231	4,963	—	74,194
Capital Lease - SILO	129,839	2,933	—	132,772
Capital Lease - MBB#2	15,845	1,682	—	17,527
Capital Lease Assets - Other	6,412	248		6,660
Total	7,372,113	378,154	12,190	7,738,077
Other capital assets, net	7,501,445	(264,870)		7,236,575
Capital assets, net	\$ 9,931,906	861,347	185,749	10,607,504

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#### (21) MBTA - Long-Term Debt

#### (a) Bonds Payable

Debt issued by the Authority prior to and outstanding as of July 1, 2000 (the Prior Obligations) is backed by the full faith and credit of the Commonwealth to the extent revenues collected by the Authority are insufficient to pay the debt, until the debt is paid off. Principal and interest payments on that debt were subsidized by the Commonwealth prior to June 30, 2000. As of June 30, 2019, Prior Obligations in the amount of \$160,680 are outstanding.

Principal on GTS bonds, all issued prior to July 1, 2000, is payable in annual installments on March 1st and interest is payable semiannually on March 1st and September 1st. The GTS bonds were issued to provide funds for the financing of the Authority's transportation properties.

Debt issued by the Authority after June 30, 2000 (new debt) will not be supported by the Commonwealth's guarantee. Additionally, the Authority is not expected to receive any principal or interest subsidies from the Commonwealth for the repayment of the prior obligations and new debt of the Authority, unless authorized by special legislation.

On July 2, 2018, the authority issued Subordinated Senior Sales Tax Variable Rate Demand Obligation Bonds, Subseries 2018 A-1 in the amount of \$95,610 and Subseries 2018 A-2 in the amount of \$95,615. Principal payments are made annually on July 1 through the maturity date of July 1, 2026.

On December 8, 2017, the Authority entered into a TIFIA loan and a RRIF loan with the United States Department Transportation in the amount of \$162,000 and \$220,000 respectively. The Authority can draw on either loan no later than December 1, 2021. Both the TIFIA and RRIF loan have an interest rate of 2.63%. Amortization commences on July 1 after the draw date and final maturities occur on January 1, 2039. Interest payments are made on January 1 and July 1. There was no outstanding loan balance on either loan as of June 30, 2019.

The Authority issued Commercial Paper Sales Tax Series B notes (CP) in the amount of \$50,000 during fiscal year 2019. As of June 30, 2019, \$50,000 in commercial paper was outstanding.

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June 30, 2019

# (Dollars in thousands)

The Authority's outstanding bonds payable at June 30, 2019 are as follows:

	Final fiscal year of maturity	Interest rates	Outstanding principal as of June 30, 2019	Due in fiscal year 2020
General transportation system bonds:				
1991 Series A Bonds dated November 1, 1991	2021	7.07% - 7.15%	\$ 19,305	9,325
1998 Series C Bonds dated November 1, 1998	2022	5.50%	2,970	1,000
2000 Series Variable Rate Demand Obligation dated March 2000*	2030	Variable	138,405	8,770
Revenue Bonds:			100,080	19,095
2003 Series A Senior Sales Tax dated January 29, 2003	2022	5.25%	62,310	17,730
2003 Series C Senior Sales Tax dated February 3, 2004**	2024	Variable & Fixed	94,745	26,030
2004 Series B Senior Sales Tax dated March 9, 2004	2031	4.00%-5.25%	214,780	41,285
2004 Series C Senior Sales Tax dated December 22, 2004	2025	5.50%	80,635	21,380
2005 Series A Senior Sales Tax dated March 24, 2005	2032	5.00%	735,450	12,015
2005 Series B Senior Sales Tax dated December 21, 2005	2030	4.25%-5.50%	91,765	70
2006 Series A Senior Sales Tax dated March 2, 2006	2035	5.25%	238,850	
2006 Series B Senior Sales Tax dated December 5, 2006	2024	5.25%	123,370	24,070
2006 Series Series A Assessment dated September 13, 2006***	2035	Variable & Fixed	161,340	_
2007 Series A-1 Senior Sales Tax dated May 24, 2007	2035	5.25%	205,675	_
2008 Series B Senior Sales Tax dated April 20, 2008	2034	5.00% -5.25%	32,375	1,490
2009 Series D Senior Sales Tax dated October 29, 2009	2020	3.00%-5.00%	7,400	7,400
2010 Series A Senior Sales Tax dated February 17, 2010****	2031	Variable	80,255	80,255

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(Dollars in thousands)

	Final fiscal year of maturity	Interest rates	Outstanding principal as of June 30, 2019	Due in fiscal year 2020
Revenue Bonds continued:				
2010 Series B Senior Sales Tax dated April 6, 2010	2036	4.00%-5.00%	\$ 68,060	1,600
2010 Series C Senior Sales Tax dated December 8, 2010	2021	0.05	46,450	23,180
2012 Series A Assessment dated June 21, 2012	2042	4.00%-5.00%	370,435	31,840
2014 Series A Senior Sales Tax dated April 23, 2014	2045	3.00%-5.00%	184,545	5,515
2015 Series A Senior Sales Tax dated October 14, 2015	2046	2.00%-5.00%	177,855	_
2015 Series B Senior Sales Tax dated October 14, 2015	2036	4.00%-5.00%	180,550	11,455
2016 Series A Senior Sales Tax dated July 19, 2016	2034	Zero Coupon	288,195	_
2016 Series A Assessment dated July 19, 2016	2029	2.00%-5.00%	119,260	_
2017 Series A-1 Subordinated Sales Tax dated October 12, 2017	2047	5.00%	99,170	_
2017 Series A-2 Subordinated Sales Tax dated October 12, 2017	2047	5.00%	130,930	_
2017 Bond Anticipation Notes Subordinated Sales Tax dated October 12, 2017	2022	4.00%	271,095	_
2018 Senior Series A, Subordinated Sales Series A-1 dated October 12, 2018 *****	2027	Variable	95,610	11,285
2018 Senior Series A, Subordinated Sales Series A-2 dated October 12, 2018 *****	2027	Variable	95,615	11,290

4,256,720	327,890

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	Final fiscal year of maturity	Interest rates	I	utstanding principal of June 30, 2019	Due in scal year 2020
Metropolitan Boston Transit Parking (MBTPC) Bonds:					
2011 Series A MBTPC					
dated June 22, 2011	2042	4.00% - 5.25%		304,585	 
				304,585	 
Revenue Build America (BABs) Bonds					
2009 Series C Senior Sales Tax dated October 29, 2009	2040	4.75% - 5.569%	\$	218,300	
2010 Series D Senior Sales Tax dated December 8, 2010	2041	4.546% - 5.869%		210,000	
				428,300	
Commercial Paper	2020			50,000	\$ 50,000
Total outstanding principal				5,200,285	 396,985
Unamortized capital appreciation				(53,619)	
Total long-term				5,146,666	
Less current maturities				(396,985)	
Plus unamortized bond premiums/discounts, net				346,849	
Total long-term bonds payable			\$	5,096,530	

- \* The bonds were issued as variable rate demand obligations (VRDO) and their variable interest is based on a weekly reset tied to SIFMA. As of September 28, 2011, the 2000 Series VRDO was split into 2000 Series A-1 VRDO and 2000 Series A-2 VRDO. The Authority classifies these bonds as long term and has a standby purchase agreement providing liquidity support from Barclays Bank PLC.
- \*\* The 2020 maturity in the amount of \$25,005 is variable rate debt based on the MUNI-CPI rate, plus 79 basis points.
- \*\*\* The 2024 maturity in the amount of \$19,260 and the 2025 maturity in the amount of \$5,000 is variable debt based on the MUNI-CPI rate, plus 123 basis points.
- \*\*\*\* This bond was issued as a windows VRDO and its variable interest is based on the SIFMA rate, plus 9 basis points. As of June 30, 2019 the variable interest is based on the SIFMA rate, plus 30 basis points. The Authority classifies these bonds short-term, as it does not have a standby purchase agreement and/ or a letter of credit providing liquidity support for the remarketing window. The Authority does not currently anticipate the bond being called.
- \*\*\*\*\* These bonds were issued as VRDOs and their variable interest is based on a weekly reset tied to SIFMA. The Authority classifies these bonds as long term and has a standby purchase agreement providing liquidity support from State Street Bank and Trust Company.

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# (Dollars in thousands)

The principal and interest maturities of the bonds and notes payable as of June 30, 2019 are as follows:

	]	Principal	Interest
Fiscal Year(s):			
2020	\$	396,985	232,367
2021		295,076	218,971
2022		562,753	201,714
2023		212,181	184,630
2024		283,334	171,150
2025-2029		1,273,284	674,494
2030-2034		986,653	381,759
2035-2039		618,535	194,306
2040-2044		418,665	60,693
2043-2047		99,200	6,469
Total	\$	5,146,666	2,326,553

A summary roll forward of bonds payable for the year ended June 30, 2019 is as follows:

	2019						
	Balan 2018		- <b>I</b>	Refunded/ redeemed principal	Capital appreciation bond accretion	Balance 2019	
GTS	\$ 179	9,520 -	- (18,840)			160,680	
REVENUE	4,436	6,177 191,22	25 (238,875)	(191,225)	5,799	4,203,101	
BABs	428	3,300 -		—	—	428,300	
Commercial Paper		— 50,00		—		50,000	
MBTPC	304	-,585 -		—		304,585	
	\$ 5,348	3,582 241,22	25 (257,715)	(191,225)	5,799	5,146,666	

During FY19, there was no activity on either the TIFIA loan or RRIF loan; as a result, each has an outstanding balance of \$0 as of June 30, 2019.

A rollforward of the 2016A capital appreciation bonds for the year ended June 30, 2019 is as follows:

	Due	at Maturity	Unamortized appreciation	Outstanding balance
June 30, 2018	\$	288,195	(59,418)	228,777
Accretion			5,799	5,799
June 30, 2019	\$	288,195	(53,619)	234,576

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The following funds are included in restricted assets at June 30, 2019 in connection with the Authority's revenue bond trust agreements and bond resolutions:

	2019						
		sessment bonds	Sales tax bonds	MBTPC bonds	Outstanding balance		
Debt service	\$	76,378	327,580	8,675	412,633		
Debt service reserve		29,252	213,510	13,078	255,840		
	\$	105,630	541,090	21,753	668,473		

The minimum required balance in the debt service reserve funds at June 30, 2019 were \$164,882 for the Sales Tax Series Bonds and \$27,200 for the Assessment Bonds. The minimum required balances in the debt service reserve funds at June 30, 2019 for MBTPC Bonds were \$12,294. The MBTA has complied with its financial bond covenants by maintaining sufficient cash and investments in the debt service reserve funds.

In order to take advantage of low interest rates and easily accessible short-term capital markets, the Authority has the ability to issue commercial paper to raise funds in order to meet its capital needs. The Authority has a \$250,000 commercial paper program in total of which \$150,000 is administered by JP Morgan and \$100,000 by Barclays Capital Inc. The Authority's commercial paper program has been assigned short-term ratings of P-1 and A-1+by Moody's and S&P, respectively. The Authority had \$50,000 outstanding comercial paper as of June 30, 2019.

## (b) Debt Refundings

The 2018 A-1 and 2018 A-2 Senior Sales Tax Variable Rate Demand Obligation bonds were issued in the amount of \$95,610 and \$95,615 respectively, on July 2, 2018. The first interest payment was made on January 1, 2019. The final maturity is July 1, 2026. Proceeds were used to refund the Authority's 2017 Series A Senior Sales Tax Multi-Modal Obligation Bonds of \$190,650. In prior years, the Authority defeased in substance several GTS, Sales Tax Series, and Assessment Series Bonds by placing the proceeds of new bonds or available cash in an irrevocable trust fund to provide for future debt service payments on the old debt. As of June 30, 2019, 100% of all previously defeased in-substance debt has been retired.

## (c) Standby Purchase Agreements

The GTS 2000 Series Bonds issued March 10, 2000 were issued as a Variable Rate Demand Obligation. The Authority's obligation to purchase these Bonds in the event of a failed remarketing is secured by a Standby Bond Purchase Agreement (SBPA) with Barclays Bank PLC, a nationally recognized financial institution. The SBPA was renewed on September 14, 2018 and will expire on September 21, 2022.

The 2018 Subseries A-1 and 2018 Subseries A-2 Series Bonds were issued on July 2, 2018 as Variable Rate Demand Obligations. The Authority's obligation to purchase these Bonds in the event of a failed remarketing is secured by a Standby Bond Purchase Agreement (SBPA) with State Street Bank and Trust Company, a nationally recognized financial institution. The SBPA will expire on July 2, 2023.

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## (22) MBTA - Commitments and Contingencies

# (a) Capital Investment Program ("CIP")

The Authority's continuing CIP for mass transportation has projects in service and in various stages of approval, planning, and implementation. The following tables show, as of June 30, 2019, capital project costs approved, expenditures against these projects, and estimated costs to complete these projects, as well as the major funding sources:

Funding source	Approved roject costs	Expenditures through June 30, 2019	Unexpended costs
Federal grants	\$ 9,374,780	8,606,283	768,497
State and local sources	4,762,752	3,734,284	1,028,468
Authority bonds	8,361,942	6,665,876	1,696,066
Total	\$ 22,499,474	19,006,443	3,493,031

The terms of the federal grant contracts require the Authority to, in part, utilize the equipment and facilities for the purposes specified in the grant agreement, maintain these items in operation for a specified time period, which normally approximates the useful life of the equipment, and comply with the Equal Employment Opportunity and Affirmative Action programs required by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users ("SAFETEA-LU"). Failure to comply with these terms may jeopardize future funding and require the Authority to refund a portion of these grants to the Federal Transit Administration ("FTA"). In management's opinion, no events have occurred that would result in the termination of these grants or require the refund of a significant amount of funds received under these grants.

Other cases and claims include disputes with contractors and others arising out of the Authority's CIP. In the opinion of the general counsel to the Authority, amounts reasonably expected to be paid by the Authority would be within the scope of grant funds and other funds available to the Authority for the respective projects.

The Authority has entered into several long-term contracts to purchase coaches, locomotives, buses, rapid transit cars, and other transportation equipment. Unpaid amounts under these contracts total approximately \$955,474 at June 30, 2019.

# (b) Legal and Other

The Authority is involved in numerous lawsuits, claims, and grievances arising in the normal course of business, including claims for personal injury and personnel practices, property damage, and disputes over eminent domain proceedings. In the opinion of the general counsel to the Authority, payments of claims by the Authority, for amounts not covered by insurance, in the aggregate, are not expected to have a material adverse effect on the Authority's financial position.

The Authority participates in a number of federally assisted grant programs. These programs are subject to financial and compliance audits by the grantors or their representatives. In the opinion of the Authority's management, liabilities resulting from such disallowed expenditures, if any, will not be material to the accompanying financial statements.

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(Dollars in thousands)

#### (23) MBTA - Risk Management

The Authority is exposed to various risks of loss related to general liability, property and casualty, workers' compensation, and unemployment.

Buildings are fully insured to the extent that losses exceed the self-insured retention of \$2,500 for buildings valued over \$25,000 and the self-insured retention of \$1,000 for buildings valued under \$25,000 effective March 1, 2014. The Authority is self-insured for workers' compensation, unemployment claims, vehicle damage and loss. Beginning July 1, 2015, the Authority provided all its employees with health insurance through the health insurance plans administered by the Group Insurance Commission of the Commonwealth ("GIC") and was no longer self-insured. Under GIC, the Authority pays 75% to 80% of all healthcare premiums for active employees within the health insurance plans administered by GIC; and pays 80% to 90% of all health premiums for retired employees within the health insurance plans administered by the GIC. Supplemental postemployment benefits for certain retirees are provided by the Authority as well. See note 27.

The Authority self-funds a \$7,500 per occurrence deductible for general liability. The Authority has a program of excess public liability insurance to provide for \$67,500 of layered coverage on a per occurrence and annual aggregate basis. In the opinion of the general counsel to the Authority, payments of claims by the Authority for amounts not covered by insurance, in the aggregate, are not expected to have a material adverse effect on the Authority's financial position.

Expenditures for claims and judgments and workers' compensation were \$9,247 and \$14,529, respectively for the year ended June 30, 2019.

The requirements of GASB, Statements require that liabilities for self insured claims be reported if it is probable that a loss has been incurred and the amount can be reasonably estimated. These losses include an estimate of claims that have been incurred but not reported. The Authority reserves such liabilities, which consist of workers' compensation, health claims (prior to June 30, 2015), and injuries and damages (legal claims) as accrued expenses as of June 30, 2019 and 2018. Changes in the self insurance liabilities in fiscal year 2019 were as follows:

	2019	2018	
Liability, beginning of year	\$ 162,288	144,410	
Provisions for claims	2,845	37,505	
Payments	(23,776)	(19,627)	
Liability, end of year	\$ 141,357	162,288	

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(Dollars in thousands)

## (24) MBTA - Commuter Railroad

Under the Enabling Act, the Authority may enter into agreements with private transportation companies, railroads, and other concerns providing for joint or cooperative operation of any mass transportation facility and for operation and use of any mass transportation facility and equipment for the account of the Authority.

On February 5, 2014 the Authority and Keolis Commuter Services ("Keolis") entered into an operating agreement effective July 1, 2014 to provide commuter railroad service over the Authority's rail lines. The contract is for a period of eight (8) years, through June 30, 2022. The Authority has a fixed base contract amount of \$2,686,342 over the eight-year term of the agreement. The contract also has a provision for an extension period, comprised of the option to extend for no less than two but no greater than four, year extension. The payments for all commuter rail costs incurred by Keolis totaled \$459,284 in fiscal year 2019. The fixed base contract over the term of the contract and four year extension period termination date of June 30, 2026 is \$4,258,131.

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June 30, 2019

(Dollars in thousands)

# (25) MBTA - Retirement Plans

The Authority provides retirement benefits to employees through six defined benefit retirement plans and one defined contribution plan: The MBTA Retirement Fund, the MBTA Police Association Retirement Plan, the MBTA Deferred Compensation Plan, the MBTA Executive Deferred Compensation Plan, the MBTA Executive Deferred Compensation Annuity Plan, the MBTA Excess Benefit Annuity Plan and the MBTA Deferred Compensation Savings Plan.

The MBTA Retirement Fund, a single employer plan, covers all employees except the MBTA police, who are covered separately, and certain executives who elect coverage under an alternate plan. The MBTA Retirement Fund and the MBTA Police Association Retirement Plan, a single employer plan, both provide retirement, disability, and death benefits to their members. The MBTA Retirement Fund issues separately audited financial statements that may be obtained by writing to One Washington Mall, Boston, Massachusetts 02108, or by calling (617) 316-3800. The MBTA Police Association Retirement Plan also issues separately audited financial statements that may be obtained by writing to the Board of Directors, MBTA Police Association Retirement Plan, P.O. Box 35, Grafton, Massachusetts 01519.

The MBTA Deferred Compensation Plan, a single-employer plan, provides supplemental pension benefits for certain Local 453, Steelworkers, Transit Employee Administrators (collective bargaining units) and executive employees after retirement. Employees may participate in both the MBTA Retirement Fund and the MBTA Deferred Compensation Plan. The MBTA Deferred Compensation Plan is unfunded and does not issue separately audited financial statements.

The remaining defined benefit plans are single employer plans that are unfunded and do not issue separately audited financial statements. These plans collectively have less than ten active and retired participants. A copy of the actuarial report for any of these retirement plans can be obtained by writing to the Office of the Chief Financial Officer, MBTA, Ten Park Plaza, Boston, Massachusetts 02116.

# Employees covered by benefit terms.

At December 31, 2018, the following employees were covered by the benefit terms:

	MBTA Retirement Fund	MBTA Police Association Retirement Fund	MBTA Deferred Compensation Plan
Retired employees or beneficiaries receiving benefits	6,841	110	941
Active employees	5,392	247	641
Inactive employees entitled to, but not yet receiving benefits	355	30	_
Totals:	12,588	387	1,582

# (a) Funding Policy and Annual Pension Cost

The pension agreements between the Authority and Local 589, dated July 1, 2014 for the MBTA Retirement Fund and the MBTA Police Association dated June 30, 2003, designates that the board of trustees of each retirement plan establish the contribution requirements; however, the Authority may amend these requirements.

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#### (Dollars in thousands)

			Contribution Percentage				
	Valuation Date	Effective Date	Employer	Employee	Total		
-	12/31/2016	7/1/2017	20.0111%	7.1189%	27.1300%		
	12/31/2017	7/1/2018	22.6811%	8.0089%	30.6900%		
	12/31/2018	7/1/2019	25.1261%	8.8239%	33.9500%		

The historical MBTA Retirement Fund contribution rates are as follows:

Actual contributions made in were in accordance with these contribution requirements.

The historical MBTA Police Association Retirement Plan contribution rates are as follows:

		<b>Contribution Percentage</b>					
Valuation Date	Effective Date	Employer	Employee	Total			
12/31/2016	7/1/2017	14.1800%	8.7900%	22.9700%			
12/31/2017	7/1/2018	14.1800%	8.7900%	22.9700%			
12/31/2018	7/1/2019	14.1800%	8.7900%	22.9700%			

Contributions are not required to be made for the MBTA Deferred Compensation Plan. Rather, benefit payments are made on a "pay as you go" basis.

## (i) Net Pension Liability

The Authority's June 30, 2019 net pension liability for each retirement plan was measured as of December 31, 2018, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of December 31, 2017 rolled forward to December 31, 2018.

Actuarial assumptions. The total pension liability in the December 31, 2018 actuarial valuations were determined using the following actuarial assumptions, applied to all periods included in the measurement:

Pension	MBTA Retirement Fund	MBTA Police Association Plan	MBTA Deferred Compensation Plan
Actuarial assumptions:			
Inflation rate	2.75%	3.15%	2.75%
Salary increases	2.75% - 8%	3.50%	2.75% - 8%
Investment rate of return*	7.50%	7.00%	3.64%

\*Net of pension plan investment expense, including inflation

For the December 31, 2018 MBTA Police Association Plan actuarial valuation, mortality rates are used for all active employees and were based on the RP-2000 Blue Collar Mortality Tables with generational projection using the Scale BB. The RP-2000 Blue Collar Tables for Health Males projected by Scale BB generationally are the basis for all retirees and deferred vested participants. The RP-2000 Blue Collar Tables for Health Females projected by Scale BB generationally are the

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basis for all beneficiary participants. The RP-2000 Tables for Disabled Lives projected by Scale BB generationally are used for the period after disability retirement.

For the December 31, 2018 MBTA Retirement Fund and MBTA Deferred Compensation Plan actuarial valuations, mortality rates are used for all active employees and were based on the RP-2014 Blue Collar Mortality Tables with generational projection using the Scale MP-2018. 94.5% of the RP-2014 Blue Collar Mortality Tables projected by Scale MP-2018 generationally are the basis for all retirees. 107.5% of the RP-2014 Blue Collar Mortality Tables for all beneficiary participants. The RP-2014 Disabled Mortality Tables projected by Scale MP-2018 generationally are the basis for all beneficiary participants. The RP-2014 Disabled Mortality Tables projected by Scale MP-2018 generationally are used for the period after disability retirement. Among pre-retirement deaths, 7.5% are assumed to qualify for accidental death benefits.

The actuarial assumptions used in the December 31, 2018 valuation for the MBTA Retirement Fund were based on the results of an actuarial experience study for the four-year period ending December 31, 2017. There was no separate experience study performed for the MBTA Police Association Plan or the MBTA Deferred Compensation Plan.

The long-term expected rate of return on pension plan investments was determined using a buildingblock method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the target allocation as of December 31, 2018 are summarized in the following tables:

	2018			
	Target Allocation	Long Term Expected Real Rate of Return		
Equity	43%	7.91%		
Fixed Income	25%	2.36		
Alternatives	30%	6.67		
Cash	2%	1.06		
Total	100%	-		
		—		

# **MBTA Retirement Fund**

## **MBTA Police Association**

	2018			
	Target Allocation	Long Term Expected Real Rate of Return		
Equity	45%	7.67%		
Fixed Income	36%	2.07		
Alternatives	19%	4.56		
Total	100%	-		

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Discount rate: The discount rate used to measure the total pension liability as of December 31, 2018 was 7.50% for the MBTA Retirement Fund while the discount rate for the MBTA Police Association Retirement Plan was 7.00%. The projection of cash flows used to determine the discount rate assumed that employee contributions will continue to be made in accordance with the current funding policy. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current MBTA Retirement Fund and MBTA Police Association Retirement Plan members. The discount rate used to measure the total pension liability for the MBTA Deferred Compensation Plan was 3.64%. Since this plan is unfunded, the assumed discount rate has been determined in accordance with the method prescribed by GASB No. 67 and is based on the S&P Municipal Bond 20 Year Grade Rate Index, whose yield to maturity was 3.64% as of December 31, 2018.

#### (ii) Change in the Net Pension Liability – MBTA Retirement Fund

Increase (Decrease)				
Total Pension Liability		Plan Fiduciary Net Position	Net Pension Liability	
	(a)	(b)	(a)-(b)	
\$	2,829,386	1,603,176	1,226,210	
	46,101		46,101	
	207,498		207,498	
	11,599		11,599	
	43,927		43,927	
	_	92,013	(92,013)	
	_	32,606	(32,606)	
	_	(52,073)	52,073	
	(221,710)	(221,710)	_	
	_	(4,317)	4,317	
	87,415	(153,481)	240,896	
\$	2,916,801	1,449,695	1,467,106	
	1. \$	Total Pension Liability           (a)           \$ 2,829,386           46,101           207,498           11,599           43,927	Total Pension Liability         Plan Fiduciary Net Position           (a)         (b)           \$ 2,829,386         1,603,176           46,101         —           207,498         —           11,599         —           43,927         —           —         92,013           —         32,606           —         (52,073)           (221,710)         (221,710)           —         (4,317)           87,415         (153,481)	

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(Dollars in thousands)

## (iii) Change in the Net Pension Liability – MBTA Police Association Retirement Plan

Increase (Decrease)			
		Plan Fiduciary Net Position (b)	Net Pension   Liability (c)
\$	102,230	86,816	15,414
	2,019		2,019
	7,137		7,137
		2,727	(2,727)
		1,702	(1,702)
		(3,316)	3,316
	1,346		1,346
	(4,675)	(4,675)	_
		(242)	242
	5,827	(3,804)	9,631
\$	108,057	83,012	25,045
		Total Pension Liability (a)           \$ 102,230           \$ 102,230           2,019           7,137           —           1,346           (4,675)           —           5,827	Total Pension Liability (a)         Plan Fiduciary Net Position (b)           \$ 102,230         86,816           2,019            7,137            2,727         -           1,702         -           (3,316)         1,346           1,346            (4,675)         (4,675)           5,827         (3,804)

# (iv) Change in the Net Pension Liability – MBTA Deferred Compensation Plan

	Increa	se (Decrease)
	Total Pe	ension Liability
Balances at December 31, 2017	\$	92,193
Changes for the year:		
Service cost		2,099
Interest		2,887
Difference between expected and actual experience		2,155
Changes in assumptions		(578)
Benefit payments, including refund of employee contributions		(5,940)
Net changes		623
Balances at December 31, 2018	\$	92,816

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#### (Dollars in thousands)

#### Sensitivity of net pension liability to changes in the rate

The following presents the net pension liability of the Authority, calculated using the discount rates disclosed as well as what the Authority's net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate as of December 31, 2018:

		2017						
	Current Rate	1 % Decrease of te Current Rate			Decrease of Current			
MBTA Retirement Fund	7.50%	\$	\$ 1,760,361		1,467,106	\$	1,217,856	
MBTA Police Assoc. Retirement Plan	7.00%	7.00%			25,045		13,606	
MBTA Deferred Compensation	3.64%		103,506		92,816		83,880	

# Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the year ended June 30, 2019 the Authority recognized pension expense of \$243,399; \$3,367; and \$8,964 for the MBTA Retirement Fund, the MBTA Police Association Retirement Plan and the MBTA Deferred Compensation Plan, respectively.

At June 30, 2019 the Authority reported deferred outflows of resources and deferred inflow of resources related to pension amounts from the following sources:

Deferred Outflows of Resources:	MBTA Retirement Fund		Retirement		MBTA Police Assoc. Retirement	MBTA Deferred Compensation Plan	Total
Changes in assumptions	\$	110,158	336	2,561	113,055		
Net difference between projected and actual earnings on pension plan investments		109,849	5,996	_	115,845		
Contributions subsequent to the measurement date		48,711	2,014	3,145	53,870		
Differences between expected and actual experience		77,768	2,062	3,896	83,726		
Total deferred outflows of resources		346,486	10,408	9,602	366,496		
<b>Deferred Inflows of Resources:</b>							
Differences between expected and actual experience	\$		(3,448)		(3,448)		
Changes in assumptions		(1,353)		(1,556)	(2,909)		
Total deferred inflows of resources		(1,353)	(3,448)	(1,556)	(6,357)		
Less: Contributions subsequent to the measurement date		(48,711)	(2,014)	(3,145)	(53,870)		
Net deferred outflows and inflows of resources exclusive of employer specific deferrals	\$	296,422	4,946	4,901	306,269		
		05					

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Amounts reported as deferred outflows of resources related to pensions resulting from the Authority contributions subsequent to the measurement date will be recognized as a reduction in the net pension liability in the subsequent year.

Other amounts reported as deferred outflows and inflows of resources related to pensions will be recognized/ (amortized) into pension expense as follows:

	MBTA Retirement Fund		Retirement		MBTA Police Assoc. Retirement Plan	MBTA Deferred Compensation Plan
Year ended June 30:						
2020	\$	114,607	1,569	2,543		
2021		85,973	637	2,358		
2022		62,127	687			
2023		33,715	2,082			
2024		—	(29)	—		
Totals:	\$	296,422	4,946	4,901		

## **Payable to the Pension Plans**

At June 30, 2019 the Authority reported a payable for \$267,000 for the outstanding amount of contributions to pension plans required for the year ended June 30, 2019.

## (b) The MBTA Deferred Compensation Savings Plan

The Authority provides a defined contribution retirement plan for nonunion and certain grandfathered union management not participating in the MBTA Retirement Fund. Authority employee trustees administer the plan and recommend benefit amendments that require approval from the Authority's general manager. The plan requires members to contribute 8.009% of total covered payroll with the Authority contributing 8%. The plan had 444 members at June 30, 2019. The cost of the Plan to the Authority was \$1,582 for the year ended June 30, 2019. Member contributions vest to plan members immediately, while contributions made by the Authority vest to plan members as follows: 50% after three years, 75% after four years, and 100% after five years of credited service. The total asset balance of \$37,334 as of June 30, 2019, were held by a third party administrator who allocates the assets of fully funded member account balance at the direction of individual member discretion.

## (26) MBTA - Other Postemployment Benefits (OPEB)

In addition to providing the pension benefits described, the Authority provides OPEB for eligible retired employees under two arrangements. The Authority participates in the Commonwealth of Massachusetts' Group Insurance Commission ("GIC") plan which provides health and other benefits to both Medicare and Non-Medicare eligible retirees. The Authority also provides eligible retirees with additional non-duplicative supplemental life insurance and Medicare Part B premium benefits through the Transit Employees Health and Welfare Fund. The benefits, benefit levels, employee contributions, and employer contributions are governed by the Authority, collective bargaining agreements, and state statute. Plan membership as of July 1, 2018 is as follows:

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(Dollars in thousands)

Retirees or beneficiaries currently receiving benefit payments	\$ 6,104
Active employees	\$ 5,989 12,093

**Benefits** Provided

Through the GIC, the Authority provides medical, prescription drug, mental health/substance abuse, and life insurance to retirees and their covered dependents. All active employees who retire from the Authority and meet the eligibility criteria will receive these benefits.

# (a) Funding Policy

Retiree contributions to the GIC plan vary based on the date of retirement. Pre- and post-65 retirees with a retirement date on or before July 1, 1994 contribute 10% to the cost of the health plan. Retirees who retired after July 1, 1994 and filed for retirement prior to August 10, 2009 contribute 15% of the cost of the health plan. Retirees who retired after July 1, 1994 and filed for retirement on or after August 10, 2009 but on or before October 1, 2009 with a retirement date on or before January 31, 2010 contribute 15% of the cost of the health plan. Retirees who file for retirement after October 1, 2009 will contribute 20% of the cost of the health plan. The Authority contributes the remainder of the health plan costs on a pay-as-you-go basis.

## (b) Total OPEB Liability

The Authority's total OPEB liability of \$2,458,432 was measured as of June 30, 2018 and was determined by an actuarial valuation as of June 30, 2018

Actuarial assumptions and other inputs: The total OPEB liability as of June 30, 2018 was determined using the following actuarial assumptions and other inputs, applied to all periods included in the measurement, unless otherwise specified:

Inflation	2.98%
Salary increases	2.75 to 8.00

Actuarial Cost Method and Amortization Period. The entry age normal cost method based on level percentage of projected salary.

(i) MBTA Retirement Fund

Active and Deferred Mortality: The RP-2014 Blue Collar Mortality Tables with fully generational projection using Scale MP-2018 Improvement

*Retired Mortality:* 94.5% of the RP-2014 Blue Collar Mortality Tables with fully generational projection using Scale MP-2018 Improvement

*Surviving Spouse Mortality:* 107.5% of the RP-2014 Blue Collar Mortality Tables with fully generational projection using Scale MP-2018 Improvement

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June 30, 2019

#### (Dollars in thousands)

*Disabled Mortality:* The RP-2014 Disability Mortality Tables with fully generational projection using Scale MP-2018 Improvement.

(ii) MBTA Police Association Retirement Fund:

Prior and Current Year:

Active Mortality: RP-2000 Pre-Commencement Blue Collar Adjusted - Fully Generational Scale BB Improvement

*Retired and Deferred Mortality:* 97.2% of RP-2000 Post-Commencement Male Blue Collar Adjusted - Fully Generational Scale BB Improvement

*Surviving Spouse Mortality:* 116.5% of RP-2000 Post-Commencement Female Blue Collar Adjusted - Fully Generational Scale BB Improvement

Disabled Mortality: RP-2000 Disabled Retiree - Fully Generational Scale BB Improvement

*Discount Rate.* The discount rate used to measure the total OPEB liability is 2.98% per annum, the 20 year S&P Municipal Bond 20 Year High Grade index at June 30, 2018. The discount rate used for June 30, 2017 was assumed to be 3.13% and is also based on the 20 year S&P Municipal Bond 20 Year High Grade index.

*Healthcare cost trend rates.* Trend rates begin with 6.6% and decrease to an ultimate rate of 5.0% after ten years.

The actuarial assumptions used in the June 30, 2018 valuation were based on the results of an actuarial experience study for the period from January 1, 2013 to December 31, 2017.

(iii) Change in Total OPEB Liability

	Incre	ase (Decrease)
Balances at June 30, 2017	\$	2,208,769
Changes for the year:		
Service cost		71,286
Interest		70,435
Differences between expected and actual experience		(98,131)
Changes of assumptions		265,990
Benefit payments, including refund of		(59,917)
Net changes		249,663
Balances at June 30, 2018	\$	2,458,432

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(Dollars in thousands)

Sensitivity of the net OPEB liability to changes in the discount rate. The following presents the total OPEB liability of the Authority, as well as what the Authority's total OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower (1.98%) or 1-percentage-point higher (3.98%) than the current discount rate (in thousands):

	19	% Decrease	Discount Rate	1% Increase
Total OPEB liability	\$	2,978,643	2,458,432	2,061,767

Sensitivity of the total OPEB liability to changes in the healthcare cost trend rates. The following presents the total OPEB liability of the Authority, as well as what the Authority's total OPEB liability would be if it were calculated using healthcare cost trend rates that are 1-percentage point lower or cost trend rates that are 1-percentage point higher than the current healthcare cost trend rates (in thousands):

	1% Decrease		Discount Rate	1% Increase
Total OPEB Liability	\$	2,052,569	2,458,432	3,036,244

# *(iv) OPEB expense and Deferred Outflows of Resources and Deferred Inflows of Resources related to OPEB*

For the year ended June 30, 2019 the Authority recognized OPEB expense of \$144,747. At June 30, 2019, the Authority reported deferred outflows of resources and deferred inflows of resources related to OPEB amounts from the following sources:

\$ 216,365
49,501
265,866
(79,823)
(114,581)
(194,404)
71,462
 (49,501)
\$ 21,961
\$

Amounts reported as deferred outflows of resources related to OPEB resulting from the Authority contributions subsequent to the measurement date will be recognized as a reduction in the net OPEB liability in the year ending June 30, 2019.

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June 30, 2019

#### (Dollars in thousands)

Other amounts reported as deferred outflows and inflows of resources related to OPEB will be recognized /(amortized) into pension expense as follows:

Year ended June 30:	
2020	\$ 3,026
2021	3,026
2022	3,026
2023	3,026
2024	9,857
Totals	\$ 21,961

## (c) Transit Employees Health and Welfare Trust

In fiscal 2015 the Authority and Local 589 (Local Union 589, Amalgamated Transit union, AFL-CIO and CLC) as a result of an arbitration award established a separate trust fund, the Transit Employee Health and Welfare Trust Fund (the "Trust Fund"), to address legislative changes impacting healthcare and other coverage (medical, dental, vision and life insurance) for Local 589 active and retired employees (collectively, the "employees"). The Authority and the employees are required to make contributions to the Trust Fund based on the rates agreed to in the Collective Bargaining Agreement. Contributions, once received by the Trust Fund, must be used exclusively "to provide benefits to eligible participants and/ or appropriate administrative or operating expenditures." The Trust allows participation of any Authority employee and retiree and provides pre and post retiree benefits to those individuals through the Trust Fund. As such the Trust Fund does not meet the definition of a qualifying trust under the requirements of GASB 75 and its assets cannot be used to reduce the Authority's total OPEB liability.

In fiscal 2019, the Authority made contributions to the Trust Fund of \$12,500. The liability for the Authority's obligation for the benefits administered by this Trust Fund is recorded as part of the Authority's total OPEB liability. All operating activities of the Trust Fund have been excluded from the accompanying financial statements.

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**Required Supplementary Information** 

Fiscal year ended June 30, 2019

(Dollars in thousands)

(Unaudited)

# SCHEDULE OF MASSDOT'S PROPORTIONATE SHARE OF THE NET PENSION LIABILITY (1)

	2019	2018	2017	2016	2015
	neasurement ate June 30, 2018)	(measurement date June 30, 2017)	(measurement date June 30, 2016)	(measurement date June 30, 2015)	(measurement date June 30, 2014)
MassDOT's proportion % of the net pension liability	 4.31966%	4.43888%	4.67817%	5.07498%	4.98100%
MassDOT's proportionate share of the net pension liability	\$ 571,491	569,276	645,065	577,676	369,795
MassDOT's covered-employee payroll	\$ 248,834	256,471	263,416	280,329	266,308
MassDOT's nonemployer contributions provided by the Commonwealth	\$ 10,189	9,185	8,701	2,648	8,199
MassDOT's proportionate share of the net pension liability as a percentage of its covered-employee payroll	229.67%	221.96%	244.88%	206.07%	138.86%
Plan fiduciary net position as a percentage of the total pension liability	67.91%	67.21%	63.48%	67.87%	76.32%

(1) Data is being accumulated annually to present 10 years of the reported information.

(A Component Unit of the Commonwealth of Massachusetts)

Required Supplementary Information Fiscal year ended June 30, 2019 (Dollars in thousands) (Unaudited)

# SCHEDULE OF MASSDOT'S PENSION CONTRIBUTIONS (1)

	2019	2018	2017	2016	2015
Contractually required contribution	\$ 30,826	29,313	25,519	24,893	29,126
Contributions in relation to the contractually required contribution	(30,826)	(29,313)	(25,519)	(24,893)	(29,126)
Contribution deficiency (excess)	\$ —				
MassDOT's covered-employee payroll	\$ 255,607	248,834	256,471	263,416	280,329
Contributions as a percentage of covered employee payroll	12.06%	11.78%	9.95%	9.45%	10.39%
	2014	2013	2012	2011	
Contractually required contribution	\$ 21,118	17,220	22,376	13,469	
Contributions in relation to the contractually required contribution	(21,118)	(17,220)	(22,376)	(13,469)	
Contribution deficiency (excess)	\$ —				
MassDOT's covered-employee payroll	\$ 266,308	254,807	249,176	255,095	
Contributions as a percentage of					

(1) Data is being accumulated annually to present 10 years of the reported information.

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# Required Supplementary Information Fiscal year ended June 30, 2019 (Dollars in thousands) (Unaudited)

# SCHEDULE OF MASSDOT'S CHANGES IN NET OPEB LIABILITY (1)

	2019		2018
	(measurement date June 30, 2018)		(measurement date June 30, 2017)
MassDOT's proportion % of the net OPEB liability		4.47456%	4.59294%
MassDOT's proportionate share of the net OPEB liability	\$	667,121	803,052
MassDOT's covered-employee payroll	\$	248,834	256,471
MassDOT's nonemployer contributions provided by the Commonwealth			_
MassDOT's proportionate share of the net OPEB liability as a percentage of its covered-employee payroll		268.10%	313.12%
Plan fiduciary net position as a percentage of the total OPEB liability		7.38%	5.39%

(1) Data is being accumulated annually to present 10 years of the reported information.

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# Required Supplementary Information Fiscal year ended June 30, 2019 (Dollars in thousands) (Unaudited)

# SCHEDULE OF MASSDOT'S OPEB CONTRIBUTIONS (1)

	2019		2018
Actuarially determined contribution	\$	22,478	22,193
Contributions in relation to the actuarially determined contribution		(22,478)	(22,193)
Contribution deficiency (excess)	\$	_	
Covered employee payroll	\$	255,607	248,834
Contributions as a percentage of covered employee payroll		8.79%	8.92%

(1) Data is being accumulated annually to present 10 years of the reported information.

# (A Component Unit of the Commonwealth of Massachusetts)

# Massachusetts Transportation Trust Fund Combining Balance Sheet June 30, 2019 (Dollars in thousands)

Assets	Metropolitan Highway System		Western Turnpike	Tobin Bridge	Other operations	Total
Cash and short-term investments	\$				111,586	111,586
Restricted cash and investments		487,025	265,152	137,770	20,331	910,278
Receivables, net of allowance for uncollectibles:						
Due from Commonwealth					27,951	27,951
Other		57,368	31,633	8,527	4,031	101,559
Due from other funds		_	_		_	_
Other assets		1,643	425	134	248	2,450
Total assets	\$	546,036	297,210	146,431	164,147	1,153,824
<b>Liabilities, Deferred Inflows of Resources and Fund Balances:</b> Liabilities:						
Accounts payable and accrued expenditures		18,049	11,582	4,256	16,775	50,662
Unearned revenue		110,193	1,941		302	112,436
Total liabilities		128,242	13,523	4,256	17,077	163,098
Deferred Inflows of Resources:						
Unavailable Revenue		30,401	22,216	5,846	27,951	86,414
Fund balances:						
Nonspendable		1,643	425	134	248	2,450
Restricted		385,750	261,046	136,195	20,331	803,322
Unassigned		_	_		98,540	98,540
Total fund balances		387,393	261,471	136,329	119,119	904,312
Total liabilities, deferred inflows of resources and fund balances	\$	546,036	297,210	146,431	164,147	1,153,824

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# Massachusetts Transportation Trust Fund Combining Schedule of Revenues, Expenditures, and Changes in Fund Balances Fiscal year ended June 30, 2019 (Dollars in thousands)

Revenues	Metropolitan Highway System		Western Turnpike	Tobin Bridge	Other operations	Eliminations	Total
Toll revenue:							
Pledged as security for revenue bonds	\$	202,760	_		—	_	202,760
Unpledged		—	144,565	39,731	—	—	184,296
Commonwealth transportation fund:							
Operations		—	—	_	551,761	—	551,761
Metropolitan highway system bonds		100,000	—	—		—	100,000
Central artery operations and maintenance		25,000	_		_	_	25,000
Rental/lease income		10,844	27,922	_	16,826	_	55,592
Investment income		13,835	4,983	2,989	3,800	_	25,607
Departmental and other		14,738	10,166	2,070	11,138	_	38,112
Total revenues		367,177	187,636	44,790	583,525		1,183,128
Expenditures							
Current							
Highway**		159,729	93,662	27,029	262,517	_	542,937
Planning and Enterprise Services		20,345	11,157	585	81,463	_	113,550
Registry of motor vehicles		_			89,924	_	89,924
Rail and Transit		_	_	_	85,800	_	85,800
Aeronautics		_	_	_	2,325	_	2,325
Debt service:							
Principal		41,100	_	_	_	_	41,100
Interest		108,288					108,288
Total expenditures		329,462	104,819	27,614	522,029		983,924
Excess (deficiency) of revenues over expenditures		37,715	82,817	17,176	61,496		199,204
Other financing sources (uses):							
Transfers in		126		_	47,956	(126)	47,956
Transfers out		—	—	_	(126)	126	
Issuance of refunding bonds Premium from issuance of refunding bonds		437,195 49,927			—	_	437,195 49,927
Swap termination payment - current refunding		(69,182)	_	_	_	_	(69,182)
Debt Service-principal,current refunding		(454,480)		_	_	_	(454,480)
Total other financing sources (uses)		(36,414)			47,830		11,416
Net change in fund balances		1,301	82,817	17,176	109,326		210,620
Fund balances at beginning of year		386,092	178,654	119,153	9,793	_	693,692
Fund balances at end of year	\$	387,393	261,471	136,329	119,119		904,312

See accompanying independent auditors' report.

\*\* Pay go Maintenance expenditures of \$109 million are included in total line (\$71 million in MHS & \$38 million WT)