



Maryland Transit Administration Pension Plan

GASB68 Actuarial Information for the
Measurement Period Ending
June 30, 2016



100 Light Street, 9th Floor
Baltimore, MD 21202

Submitted by:

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September 28, 2016

Heidi Tarleton
Deputy Chief Financial Officer
Maryland Transit Administration
6 St. Paul Street, 8th floor
Baltimore, MD 21202

**Re: MTA Pension Plan – GASB68
Actuarial Information for the
Measurement Period Ending June 30,
2016**

Dear Heidi,

The following report contains the GASB 67 and GASB 68 actuarial information to be included with the MTA's financial statements for FYE 2016. The GASB68 information has been provided as of the June 30, 2016 measurement date for FYE 2016.

The Net Pension Liability (NPL) has increased by \$450.8 million from FY15. The largest cause of the changes was the changes in assumptions, which included the decrease in the blended discount rate from 4.75% in FY15 to 3.50% in FY16. The total effect of all assumption changes increased the NPL by \$338.9 million. The new CBA increased the NPL by an additional \$82.5 million, primarily due to the elimination of the benefit cap.

Methodology, Reliance and Certification

This report is prepared for the Maryland Transit Administration (MTA). The report contains the actuarial information to be included with the MTA's financial statements for the year ending June 30, 2016 (the MTA's fiscal year end date) as required by GASB68. This information has been prepared for use in the financial statements of the MTA. This information is not intended for, nor should it be used for, any additional purposes.

The total pension liability is based on the July 1, 2015 actuarial valuation data and assumptions and rolled forward to June 30, 2016. The methods, assumptions, and participant data used are detailed in the July 1, 2015 actuarial valuation report with the exception of the actuarial cost method, the discount rate and the rates of expected future increases to the benefits for pensioners and beneficiaries. These calculations are based on the Level Percent of Pay Entry Age Normal cost method as required by GASB68. The calculations are also based on a blended discount rate of 3.50%. The plan's expected rate of investment return of 8.25% has been blended with the Bond Buyer GO 20-year Bond Municipal Bond Index of 2.85% as of June 30, 2016. The development of the blended discount rate is included within this report. The projected benefits for purposes of this report include expected Cost-of-Living Adjustments (COLAs) for benefits for pensioners and beneficiaries of 2.50% per year and the removal of the dollar-per-month limit on benefits. Although there is not a firm promise to provide COLAs, there is a pattern of providing annual increases and have been included as part of the substantive plan. The development of the blended discount rate also reflects the future employee contribution rate of 2.0%.

Bolton Partners, Inc.

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Actuarial, Benefit and Investment Consultants

Methodology, Reliance and Certification (cont.)

The calculation of the actuarially determined contribution (ADC) for the fiscal year ended June 30, 2016 is contained in the July 1, 2015 actuarial valuation report. The included calculations assume MTA will continue to make contributions based on the FY16 results and are not adjusted to reflect the new CBA or any future increases in benefits for pensioners and beneficiaries (COLAs). Accordingly, the plan's fiduciary net position is not expected to be available to make all future benefit payments of current plan members.

The long-term nominal expected rate of return on pension plan investments was determined using a building-block method where return expectations are established for each asset class. The building-block approach uses the current underlying fundamentals, not historical returns. For example, spread and the risk free rate are used for fixed income; and dividends, earnings growth, and valuation are used for equity. These return expectations are weighted based on asset/target amounts.

These calculations and comparisons with assets are applicable for the valuation date only. The future is uncertain, and the plan may become better funded or more poorly funded in the future. This valuation does not provide any guarantee that the plan will be able to provide the promised benefits in the future.

This is a deterministic valuation in that it is based on a single set of assumptions. This set of assumptions is one possible basis for our calculations. Other assumptions may be equally valid. The future is uncertain and the plan's actual experience will differ from those assumptions; these differences may be significant or material because these results are very sensitive to the assumptions made and, in some cases, to the interaction between the assumptions. We may consider that some factors are not material to the valuation of the plan and may not provide a specific assumption for those factors. We will likely consider changes in assumptions at a future date.

The MTA is responsible for selecting the plan's funding policy, actuarial valuation methods, asset valuation methods, and assumptions. The policies, methods and assumptions used in this valuation are those that have been so prescribed and are described in this report. The MTA is solely responsible for communicating to Bolton Partners, Inc. any changes required thereto.

The MTA could reasonably ask how the valuation would change if we used a different assumption set or if plan experience exhibited variations from our assumptions. This report does not contain such an analysis. This type of analysis would be a separate assignment.

The cost of this plan is determined by the benefits promised by the plan, the plan's participant population, the investment experience of the plan and many other factors. An actuarial valuation is a budgeting tool for the MTA or in this case a measure of accounting expense. It does not affect the cost of the plan. As the experience of the plan evolves, it is normal for the level of contributions and expense of the plan to change. If a contribution is not made for a particular year, either by deliberate choice or because of an error in a calculation, that contribution can be made in later years. We will not be responsible for contributions that are made at a future time rather than an earlier time. The plan sponsor is responsible for funding the cost of the plan.

We make every effort to ensure that our calculations are accurately performed. These calculations are complex. Despite our best efforts, we may make a mistake. We reserve the right to correct any potential errors by amending the results of this report or by including the corrections in a future valuation report.

Methodology, Reliance and Certification (cont.)

Because modeling all aspects of a situation is not possible or practical, we may use summary information, estimates, or simplifications of calculations to facilitate the modeling of future events in an efficient and cost-effective manner. We may also exclude factors or data that are immaterial in our judgment. Use of such simplifying techniques does not, in our judgment, affect the reasonableness of valuation results for the plan.

This report is based on plan provisions, census data, and asset data submitted by the MTA. We have relied on this information for purposes of preparing this report, but have not performed an audit. The accuracy of the results presented in this report is dependent upon the accuracy and completeness of the underlying information. The plan sponsor is solely responsible for the validity and completeness of this information.

The MTA is solely responsible for selecting the plan's investment policies, asset allocations and individual investments. Bolton Partners, Inc.'s actuaries have not provided any investment advice to the MTA.

The information in this report was prepared for the internal use of the MTA, the plan and their auditors in connection with our actuarial valuations of the pension plan as required by GASB68. This report may not be used for any other purpose; Bolton Partners, Inc. is not responsible for the consequences of any unauthorized use nor the reliance on this information by any other party.

The calculation of actuarial liabilities for valuation purposes is based on a current estimate of future benefit payments. The calculation includes a computation of the "present value" of those estimated future benefit payments using an assumed discount rate; the higher the discount rate assumption, the lower the estimated liability will be. For purposes of estimating the liabilities (future and accrued) in this report, you selected an assumption based on the expected long-term rate of return on plan investments. Using a lower discount rate assumption, such as a rate based on long-term bond yields, could substantially increase the estimated present value of future and accrued liabilities.

This report provides certain financial calculations for use by the auditor. These values have been computed in accordance with our understanding of generally accepted actuarial principles and practices and fairly reflect the actuarial position of the Plan. The various actuarial assumptions and methods which have been used are, in our opinion, appropriate for the purposes of this report.

The report is conditioned on the assumption of an ongoing plan and is not meant to present the actuarial position of the Plan in the case of Plan termination. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions, changes in economic or demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status), and changes in plan provisions or applicable law.

Methodology, Reliance and Certification (cont.)

The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The July 1, 2015 actuarial valuation report summarizes the data, methods, and assumptions used to prepare these results.

Sincerely,

BOLTON PARTNERS, INC.



Kevin Binder, FSA, EA, MAAA



Kristopher Seets, FSA, EA

Maryland Transit Administration Pension Plan
Actuarial Information to Include in the Financial Statements
for the June 30, 2016 Measurement Date

Net Pension Liability

The components of the net pension liability at June 30, 2016, were as follows:

Total pension liability	\$ 1,359,360,763
Plan fiduciary net position	<u>(244,775,653)</u>
Employer's net pension liability	<u>\$ 1,114,585,110</u>
Plan fiduciary net position as a percentage of the total pension liability	18.01%

Actuarial assumptions. The total pension liability was determined by an actuarial valuation as of July 1, 2015 rolled forward to June 30, 2016 using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.5 percent
Salary increases	Rates vary by participant service
Investment rate of return	8.25 percent, net of pension plan investment expense, including inflation for funded benefits. Unfunded benefits are discounted at 2.85 percent. The effective blended discount rate is 3.50%.
Mortality	RP-2014 Blue Collar tables with MP-2014. The RP-2014 Disabled Retiree table is used for disabled members

The above is a summary of key actuarial assumptions. Full descriptions of the actuarial assumptions are available in the July 1, 2015 actuarial valuation report.

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

	<u>1% Decrease</u> 2.50%	<u>Current Discount Rate</u> 3.50%	<u>1% Increase</u> 4.50%
Employer's net pension liability	\$ 1,343,892,754	\$ 1,114,585,110	\$ 929,147,533

Maryland Transit Administration Pension Plan
*Actuarial Information to Include in the Financial Statements
for the June 30, 2016 Measurement Date*

Changes in the Net Pension Liability

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at 6/30/15	\$ 908,528,257	\$ 228,261,060	\$ 680,267,197
Changes for the year:			
Service cost	48,498,923		48,498,923
Interest	31,181,033		31,181,033
Changes of benefit terms	82,510,189		82,510,189
Differences between expected and actual experience	(15,023,996)		(15,023,996)
Changes of assumptions	338,949,559		338,949,559
Contributions - employer		40,997,059	(40,997,059)
Contributions - member		-	-
Net investment income		12,767,932	(12,767,932)
Benefit payments, including refunds of member contributions	(35,283,202)	(35,283,202)	-
Administrative expense		(1,967,196)	1,967,196
Other		-	-
Net Changes	<u>450,832,506</u>	<u>16,514,593</u>	<u>434,317,913</u>
Balances at 6/30/16	<u>\$ 1,359,360,763</u>	<u>\$ 244,775,653</u>	<u>\$ 1,114,585,110</u>

Maryland Transit Administration Pension Plan
Actuarial Information to Include in the Financial Statements
for the June 30, 2016 Measurement Date

Components of Employer's Pension Expense for the Fiscal Year Ended June 30, 2016

Note	Description	Amount
A	Service Cost	\$ 48,498,923
B	Interest on the total pension liability	31,181,033
A	Changes of benefit terms	82,510,189
C	Differences between expected and actual experience	(4,949,325)
C	Changes of assumptions	56,061,381
A	Employee contributions	-
D	Projected earnings on pension plan investments	(8,054,704)
C	Differences between expected and actual earnings on plan investments	(1,730,331)
A	Pension plan administrative expense	1,967,196
A	Other changes in fiduciary net position	-
	Total Pension Expense	<u><u>\$ 205,484,362</u></u>

Notes:

A Provided in the Changes in Net Pension Liability exhibit.

B Based on the following calculation:

	Amount for Period (a)	Portion of Period (b)	Projected Rate of Return (c)	Projected Earnings (a) x (b) x (c)
Beginning total pension liability	\$ 908,528,257	100%	3.50%	\$ 31,798,489
Service Cost (End of Year)	48,498,923	0%	3.50%	-
Benefit payments, including refunds of employee contributions	(35,283,202)	50%	3.50%	(617,456)
Total interest on the total pension liability				<u><u>\$ 31,181,033</u></u>

C Provided in the Schedules of Deferrals.

D Based on the following calculation:

	Amount for Period (a)	Portion of Period (b)	Projected Rate of Return (c)	Projected Earnings (a) x (b) x (c)
Beginning plan fiduciary net position	\$ 228,261,060	100%	3.50%	\$ 7,989,137
Employer contributions	40,997,059	50%	3.50%	717,449
Employee contributions	-	50%	3.50%	-
Benefit payments, including refunds of employee contributions	(35,283,202)	50%	3.50%	(617,456)
Administrative expense and other	(1,967,196)	50%	3.50%	(34,426)
Total Projected Earnings				<u><u>\$ 8,054,704</u></u>

Maryland Transit Administration Pension Plan
*Actuarial Information to Include in the Financial Statements
for the June 30, 2016 Measurement Date*

Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At June 30, 2016, the Employer reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Differences between expected and actual experience	\$ -	\$ 26,892,910
Changes of assumptions	328,728,269	-
Net difference between projected and actual earnings on pension plan investments	-	6,133,639
Total	<u>\$ 328,728,269</u>	<u>\$ 33,026,549</u>

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended June 30:	
2017	\$ 49,381,725
2018	49,381,725
2019	49,381,723
2020	50,169,412
2021	51,112,058
Thereafter	46,275,077

Maryland Transit Administration Pension Plan
Actuarial Information to Include in the Financial Statements
for the June 30, 2016 Measurement Date

Changes in the Net Pension Liability and Related Ratios

Last 10 Fiscal Years

(Dollar amounts in thousands)

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Total pension liability										
Service cost	\$ 48,499	\$ 24,718	\$ 19,438							
Interest	31,181	39,237	43,472							
Changes of benefit terms	82,510	-	-							
Differences between expected and actual experience	(15,024)	(19,621)	4,025							
Changes of assumptions	338,950	53,480	38,643							
Benefit payments, including refunds of member contributions	(35,283)	(30,636)	(32,598)							
Net change in total pension liability	450,833	67,177	72,980							
Total pension liability - beginning	908,528	841,351	768,371							
Total pension liability - ending (a)	<u>\$ 1,359,361</u>	<u>\$ 908,528</u>	<u>\$ 841,351</u>							
Plan fiduciary net position										
Contributions - employer	\$ 40,997	\$ 35,400	\$ 39,749							
Contributions - member	-	-	-							
Net investment income	12,768	14,045	15,783							
Benefit payments, including refunds of member contributions	(35,283)	(30,636)	(32,598)							
Administrative expense	(1,967)	(1,851)	(1,587)							
Other	-	-	-							
Net change in plan fiduciary net position	\$ 16,515	\$ 16,958	\$ 21,347							
Plan fiduciary net position - beginning	228,261	211,303	189,957							
Plan fiduciary net position - ending (b)	<u>\$ 244,776</u>	<u>\$ 228,261</u>	<u>\$ 211,303</u>							
Net pension liability - ending (a)-(b)	<u>\$ 1,114,585</u>	<u>\$ 680,267</u>	<u>\$ 630,048</u>							
Plan fiduciary net position as a percentage of the total pension liability	18.01%	25.12%	25.11%							
Covered-employee payroll ¹	\$ 137,427	\$ 135,545	\$ 137,596							
Net pension liability as a percentage of covered-employee payroll	811.04%	501.88%	457.90%							
Expected average remaining service years of all participants	7	7	7							

Information for FY2013 and earlier is not available

¹Covered-employee payroll shown is expected pensionable earnings only. Amounts do not include any non-pensionable earnings.

Notes to Schedule:

Benefit changes: FY15 reflects the removal of the dollar-per-month benefit limit.

Changes of assumptions: FY15 reflects a reduction to the effective discount rate from 4.75% to 3.50% and a change to the RP2014 Blue Collar mortality tables with MP2014 generational projection.

Maryland Transit Administration Pension Plan

Actuarial Information to Include in the Financial Statements
for the June 30, 2016 Measurement Date

Schedule of Employer Contributions

Last 10 Fiscal Years

(Dollar amounts in thousands)

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Actuarially determined contribution	\$ 44,736	\$ 40,807	\$ 39,749							
Contributions in relation to the actuarially determined contribution	40,997	35,400	39,749	Information for FY2013 and earlier is not available						
Contribution deficiency (excess)	<u>\$ 3,739</u>	<u>\$ 5,407</u>	<u>\$ -</u>							
Covered-employee payroll ¹	\$ 137,427	\$ 135,545	\$ 137,596							
Contributions as a percentage of covered employee payroll	29.83%	26.12%	28.89%							

¹Covered-employee payroll shown is expected pensionable earnings only. Amounts do not include any non-pensionable earnings.

Notes to Schedule

Valuation date:

Actuarially determined contribution amounts are calculated as of the beginning of the fiscal year (July 1) for the year immediately following the fiscal year. Actuarial valuations are performed every year.

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Level Dollar Entry Age Normal
Amortization method	Level Payments (Closed)
Remaining amortization period	Remaining payments range from 5 to 25 years
Asset valuation method	5-year smoothed market
Inflation	3.5 percent
Salary increases	Rates vary by participant service
Investment rate of return	7.60 percent, net of pension plan investment and administrative expenses, including inflation
Retirement age	Rates vary by participant age
Mortality	RP-2014 Blue Collar tables with MP-2014. The RP-2014 Disabled Retiree table is used for disabled members

Maryland Transit Administration Pension Plan

Actuarial Information to Include in the Financial Statements
for the June 30, 2016 Measurement Date

Schedule of Differences between Projected and Actual Earnings on Pension Plan Investments

In conformity with paragraph 33b of Statement 68, the effects of differences between projected and actual earnings on pension plan investments are recognized in pension expense using a systematic and rational method over a closed five-year period, beginning in the current reporting period. The following table illustrates the application of this requirement.

Year	Differences between Projected and Actual Earnings on Pension Plan Investments	Recognition Period (Years)	Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Plan Investments								
			2012	2013	2014	2015	2016	2017	2018	2019	2020
2012	\$ -	5	\$ -	\$ -	\$ -	\$ -	\$ -				
2013	-	5		-	-	-		\$ -			
2014	-	5			-	-		-	\$ -		
2015	(3,938,427)	5				(787,685)	(787,685)	(787,685)	(787,685)	\$ (787,687)	
2016	(4,713,228)	5					(942,646)	(942,646)	(942,646)	(942,646)	\$ (942,644)
Net increase (decrease) in pension expense			\$ -	\$ -	\$ -	\$ (787,685)	\$ (1,730,331)	\$ (1,730,331)	\$ (1,730,331)	\$ (1,730,333)	\$ (942,644)

Deferred Outflows of Resources and Deferred Inflows of Resources Arising from Differences between Projected and Actual Earnings on Pension Plan Investments

Year	Investment Earnings Less than Projected (a)	Investment Earnings Greater Than Projected (b)	Amounts Recognized in Pension Expense Through June 30, 2016 (c)	Balances at June 30, 2016	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2013	\$ -	\$ -	\$ -	\$ -	\$ -
2014	-	-	-	-	-
2015	-	3,938,427	1,575,370	-	2,363,057
2016	-	4,713,228	942,646	-	3,770,582
				\$ -	\$ 6,133,639

Maryland Transit Administration Pension Plan
Actuarial Information to Include in the Financial Statements
for the June 30, 2016 Measurement Date

Schedule of Differences between Expected and Actual Experience

In conformity with paragraph 33a of Statement 68, the effects of differences between projected and actual experience are recognized in pension expense, beginning in the current reporting period, using a systematic and rational method over a closed period equal to the average of the remaining service lives of all employees that are provided with pensions through the pension plan (active and inactive employees), determined as of the beginning of the measurement period. The following table illustrates the application of this requirement.

		Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Plan Investments												
Year	Differences between Expected and Actual Experience	Recognition Period (Years)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2011	\$ -	1	\$ -											
2012	-	1		\$ -										
2013	-	1			\$ -									
2014	-	7				\$ -								
2015	(19,621,279)	7					\$ (2,803,040)	(2,803,040)	(2,803,040)	(2,803,040)	(2,803,040)	(2,803,040)	(2,803,039)	
2016	(15,023,996)	7						\$ (2,146,285)	\$ (2,146,285)	\$ (2,146,285)	\$ (2,146,285)	\$ (2,146,285)	\$ (2,146,285)	\$ (2,146,286)
Net increase (decrease) in pension expense			\$ -	\$ -	\$ -	\$ -	\$ (2,803,040)	\$ (4,949,325)	\$ (4,949,325)	\$ (4,949,325)	\$ (4,949,325)	\$ (4,949,325)	\$ (4,949,324)	\$ (2,146,286)

Deferred Outflows of Resources and Deferred Inflows of Resources Arising from Differences between Expected and Actual Experience

Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in Pension Expense Through June 30, 2016 (c)	Balances at June 30, 2016	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2012	\$ -	\$ -	\$ -	\$ -	\$ -
2013	-	-	-	-	-
2014	-	-	-	-	-
2015	-	19,621,279	5,606,080	-	14,015,199
2016	-	15,023,996	2,146,285	-	12,877,711
				\$ -	\$ 26,892,910

Maryland Transit Administration Pension Plan
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2016 Measurement Date

Schedule of Changes of Assumptions

In conformity with paragraph 33a of Statement 68, the effects of the effects of changes of assumptions should be recognized in pension expense, beginning in the current reporting period, using a systematic and rational method over a closed period equal to the average of the remaining service lives of all employees that are provided with pensions through the pension plan (active and inactive employees), determined as of the beginning of the measurement period. The following table illustrates the application of this requirement.

		Increase (Decrease) in Pension Expense Arising from the Effects of Changes of Assumptions													
Year	Changes of Assumptions	Recognition Period (Years)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
2011	\$ -	1	\$ -												
2012	-	1		\$ -											
2013	-	1			\$ -										
2014	-	7				\$ -									
2015	53,480,106	7					\$ 7,640,015	7,640,015	7,640,015	7,640,015	7,640,015	7,640,015	7,640,016		
2016	338,949,559	7						\$ 48,421,366	\$ 48,421,366	\$ 48,421,366	\$ 48,421,366	\$ 48,421,366	\$ 48,421,366	\$ 48,421,363	
Net increase (decrease) in pension expense			\$ -	\$ -	\$ -	\$ -	\$ 7,640,015	\$ 56,061,381	\$ 56,061,381	\$ 56,061,381	\$ 56,061,381	\$ 56,061,381	\$ 56,061,382	\$ 48,421,363	

Deferred Outflows of Resources and Deferred Inflows of Resources Arising from Changes of Assumptions

Year	Increases in the Total Pension Liability (a)	Decreases in the Total Pension Liability (b)	Amounts Recognized in Pension Expense Through June 30, 2016 (c)	Balances at June 30, 2016	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2012	\$ -	\$ -	\$ -	\$ -	\$ -
2013	-	-	-	-	-
2014	-	-	-	-	-
2015	53,480,106	-	15,280,030	38,200,076	-
2016	338,949,559	-	48,421,366	290,528,193	-
				<u>\$ 328,728,269</u>	<u>\$ -</u>

Maryland Transit Administration Pension Plan

Actuarial Information to Include in the Financial Statements
for the June 30, 2016 Measurement Date

Projection of Contributions

(Dollar amounts in thousands)

Year	Projected Covered-Employee Payroll			Projected Contributions			
	Payroll for Current Employees (a)	Payroll for Future Employees (b)	Total Employee Payroll ¹ (c) = (a) + (b)	Contributions from Current Employees (d)	Employer Contributions for Current Employees (e)	Contributions Related to Payroll of Future Employees ² (f)	Total Contributions (g) = (d) + (e) + (f)
1	\$ 137,154	\$ -	\$ 137,154	\$ 2,743	\$ 44,722	\$ -	\$ 47,465
2	135,916	6,038	141,954	2,718	43,054	1,605	47,377
3	134,253	12,669	146,923	2,685	41,320	3,254	47,260
4	132,167	19,898	152,065	2,643	28,585	3,290	34,519
5	129,840	27,547	157,387	2,597	27,356	4,401	34,354
6	126,899	35,997	162,896	2,538	26,050	5,557	34,145
7	123,898	44,699	168,597	2,478	24,788	6,667	33,932
8	120,567	53,930	174,498	2,411	23,513	7,772	33,696
9	116,846	63,759	180,605	2,337	22,218	8,877	33,432
10	112,532	74,395	186,927	2,251	20,868	10,008	33,126

Note: Years subsequent to year 10 have been omitted from this table.

¹ Total covered-employee payroll increases 3.50% per year.

² Contributions related to future employees that are above service costs and, therefore, can be allocated to payment of benefits of current employees

Maryland Transit Administration Pension Plan

Actuarial Information to Include in the Financial Statements
for the June 30, 2016 Measurement Date

Projection of Pension Plan's Fiduciary Net Position

(Dollar amounts in thousands)

Year	Projected Beginning Fiduciary Net Position (a)	Projected Total Contributions ¹ (b)	Projected Benefit Payments (c)	Projected Administrative Expense ² (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (f) = (a) + (b) - (c) - (d) + (e)
1	\$ 244,776	\$ 47,465	\$ 37,630	\$ 1,591	\$ 20,534	\$ 273,554
2	273,554	47,377	40,127	1,778	22,794	301,820
3	301,820	47,260	42,780	1,962	25,004	329,343
4	329,343	34,519	45,655	2,141	26,623	342,689
5	342,689	34,354	48,715	2,227	27,588	353,688
6	353,688	34,145	51,801	2,299	28,356	362,090
7	362,090	33,932	54,943	2,354	28,909	367,634
8	367,634	33,696	58,297	2,390	29,216	369,860
9	369,860	33,432	61,843	2,404	29,242	368,288
10	368,288	33,126	65,384	2,394	28,954	362,590

Note: Years subsequent to year 10 have been omitted from this table.

¹ From Projection of Contributions table; Column (g)

² Pension plan administrative expense equal to 0.65% of Projected Beginning Net Position

Maryland Transit Administration Pension Plan

Actuarial Information to Include in the Financial Statements
for the June 30, 2016 Measurement Date

Actuarial Present Value of Projected Benefit Payments

(Dollar amounts in thousands)

Year	Projected Beginning Fiduciary Net Position ¹	Projected Benefit Payments	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Benefit Payments	Present Value of "Unfunded" Benefit Payments	Present Value of Benefit Payments Using the Single Discount Rate
(a)	(b)	(c)	(d)	(e)	(f) = (d) / (1 + 2.85%) ^(a)	(g) = (e) / (1 + 8.25%) ^(a)	(h) = (c) / (1 + 3.50%) ^(a)
1	\$ 244,776	\$ 37,630	\$ 37,630	\$ -	\$ 34,762	\$ -	\$ 36,357
2	273,554	40,127	40,127	-	34,243	-	37,459
3	301,820	42,780	42,780	-	33,725	-	38,584
4	329,343	45,655	45,655	-	33,249	-	39,785
5	342,689	48,715	48,715	-	32,773	-	41,016
6	353,688	51,801	51,801	-	32,194	-	42,140
7	362,090	54,943	54,943	-	31,544	-	43,184
8	367,634	58,297	58,297	-	30,919	-	44,271
9	369,860	61,843	61,843	-	30,300	-	45,375
10	368,288	65,384	65,384	-	29,593	-	46,351
18	141,371	93,266	93,266	-	22,388	-	50,208
19	77,912	96,073	-	96,073	-	56,327	49,970
20	5,346	98,755	-	98,755	-	56,295	49,628
98	-	-	-	-	-	-	-
99	-	-	-	-	-	-	-
Total					\$ 529,643	\$ 1,447,160	\$ 1,976,803

Note: Years 11-17 and 21-97 have been omitted from this table

¹ From Projection of Pension Plan's Fiduciary Net Position table; Column (a)