Maryland Transit Administration

Post-Employment Medical and Life Insurance Benefits

GASB 75 Actuarial Information

for the Fiscal Year Ending June 30, 2019

Submitted by:

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September 30, 2019

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

Dear Heidi:

The report provides the information needed for the Maryland Transit Administration (MTA) FY2019 OPEB disclosure under the GASB 75 accounting standard. Section 1 is meant to give a high level of summary of the OPEB valuation. Most of the information needed for the CAFR footnote is provided at the end of the report in Appendix 3. Section 2 summarizes the plan provisions, Section 3 the valuation data and Section 4 the actuarial methods and assumptions.

This report has been prepared for the Maryland Transit Administration for the purpose of complying with the GASB 75 accounting standard. It is neither intended nor necessarily suitable for other purposes. Bolton Partners is not responsible for the consequences of any other use, nor the reliance upon this report by any other party.

Future medical care cost increase rates are unpredictable and could be volatile. They will depend upon the economy, future health care delivery systems, and emerging technologies. Future medical trend increases can vary significantly from those assumed and small changes in the medical trend assumption can result in actuarial losses or gains of 5 to 15 percent of liabilities.

The report is based on July 1, 2018 census data, which is less than 30 months before the last day of fiscal year 2019. Accordingly, provided that there are no significant changes in plan design or employee demographics, these results could be relied upon to comply with GASB 75 in FYE 2019.

The report is based on data and retiree premium information submitted by the Maryland Transit Administration and medical claims and claims paid for the period July 1, 2018 – June 30, 2019 as reported by the Carefirst. We have not performed an audit of the data and have relied on this information for purposes of preparing this report. For demographic assumptions (retirement, termination, and disability), we relied upon the assumptions used for valuing the pension plan.

The actuarial methods and assumptions used in this report comply with GASB 75 and the actuarial standards of practice promulgated by the Actuarial Standards Board.

Bolton Partners is completely independent of the Maryland Transit Administration, its programs, activities, and any of its officers or key personnel. We, and anyone closely associated with us, does not have any relationship which would impair our independence on this assignment.

Kevin Binder is a Member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report.

Respectfully submitted,

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Section I. Executive Summary

Background

In June 2015 the Government Accounting Standards Board (GASB) released Statement 75 which has replaced Statement 45 for post-employment benefits other than pensions (OPEB). This standard will be applied to post employment medical benefits that are provided to eligible Maryland Transit Administration retirees.

Under GASB45 the Net OPEB Obligation was a liability on the MTA's financial statements. Under GASB 75 the entire unfunded actuarial accrued liability is now on the MTA's financial statements. There is no longer a Net OPEB Obligation. The annual expense is simply equal to the increase (decrease) in the unfunded actuarial accrued liability, however to minimize expense volatility some of the increase (decrease is deferred).

This report provides the required disclosure information under GASB 75 for FYE 2019 for Maryland Transit Administration based on July 1, 2018 census data.

OPEB Trust Arrangement and Funding Policy

The Plan is funded on a pay-as-you-go basis. There is no pre-funding of benefits and no assets invested in a trust. Claims paid for the period July 1, 2017 – June 30, 2018 were provided by Carefirst. Retiree premium information was provided by the MTA. While we reviewed this information for completeness, we did not audit the data received.

Discount Rate Assumption

The discount rate used to determine the liabilities under GASB 75 depends upon the plan's funding policy. The discount rate for plan's that do not prefund OPEB promises through an irrevocable trust is based on an index rate for 20-year, tax exempt general obligation municipal bonds with an average rating of AA/Aa or higher. For this valuation we used the bond rates was 3.62 percent. This rate is the bond rate for the 6/30/2018 measurement date.

The Measurement Date

GASB 75 liabilities are as of the measurement date. The measurement date is a date between the last day of the prior fiscal year (June 30, 2018) and the last day of the fiscal year (June 30, 2019). MTA has selected a June 30, 2018 for FY 2019 measurement date

The Annual Expense

The annual expense under GASB 75 is equal to the change in the unfunded actuarial accrued liability from the prior year's measurement date (July 1, 2017) to the measurement date (July 1, 2018), with some of the same change deferred to future years. It is equal to the normal cost accrual plus interest on the actuarial accrued liability. Changes in the unfunded actuarial accrued liability due to experience gains or losses or changes in assumptions are recognized over the expected future working lifetime of participants. The expected future working lifetime takes into account retirees. For example, if the average working lifetime for employees is 10 years and 70 percent of the participants are employees and 30 percent of participants are retirees, the expected future working lifetime would be 7 years.

Comparison with Prior Results

The prior valuation was based on July 1, 2017 data and completed on September 15, 2017. Those results were used in the FYE 2018 GASB 75 disclosure dated October 3, 2018.

Section I. Executive Summary

Comparison with Prior Results

The following table compares the data and reconciles the expense.

Comparison of Current and Previous Valuations Data as of	July 1, 2017	July 1, 2018
Demographic Data		
Employees with Medical Coverage	2,334	2,350
Retirees	1,361	1,411
Reconciliation of Expense Unfunded Liability		
Net OPEB Liability as of 6/30/2017		$833,289,231
Increase/(Decrease) due to Passage of Time		52,921,242
Increase/(Decrease) due to Demographic Experience		25,250,109
Increase/(Decrease) due to Claims Experience		(37,237,741)
Increase/(Decrease) due to Change in decrements		2,296,791
Increase/(Decrease) due to Change in mortality		(51,985,658)
Increase/(Decrease) due to Change in trend		(90,908,804)
Increase/(Decrease) due to Change in Discount Rate		(4,757,961)
Net OPEB Liability as of 6/30/2018		728,867,209

Plan Provisions

Retirees and beneficiaries of the Maryland Transit Administration Pension Plan (except for transfers from union to management positions) who had health and life coverage as active employees, and are receiving a pension, are eligible for coverage if they retire from active service. Terminated vested employees are not eligible for retiree healthcare.

Employees participate in the Maryland Transit Administration Pension Plan. The retirement eligibility is defined as the earlier of:

- Age 65 with 5 years of service
- Age 52 with 30 years of service
- Age 55 with age plus years of service equal to at least 85

Surviving spouses are allowed access to the plan and pay the same premium rates as the participant for up to 3 years after the death of the member.

Retirees and spouses must contribute a defined monthly premium reflecting the plan selected, tier of coverage, and whether or not the participant/spouse is Medicare eligible. MTA pays the cost of the plan in excess of the employee-paid premium.

Disabled participants with 5 years of service (7 years of credited service for Local 1300 members hired on or after May 18, 2013 and Local 2 members hired on or after September 10, 2014) are entitled to the same benefit as retirees, if they are disabled in the opinion of the State Medical Director.

Section I. Executive Summary

Plan Provisions

Surviving Spouses of members enrolled in the life insurance benefit receive a lump sum benefit of $30,000 if a deceased member was active or $10,000 if the deceased member was retired. $3,000 of both amounts is deemed to be paid by the member while the balance is paid by the employer.

See Section 2 for more details

Demographic Data

Demographic data as of July 1, 2018 was provided to us by the Maryland Transit Administration. This data included medical and drug enrollment for current employees and retirees. Although we have not audited this data, we have no reason to believe that it is inaccurate.

Because the census data is less than 30 months before the last day of fiscal year 2019, it can be relied upon to comply with GASB 75 for FYE 2019.

Claims Data

Gross claims are based on enrollment and medical and prescription drug claims for employees and retirees paid for FYE 2019. Although we have not audited the claims data, we have no reason to believe that it is inaccurate.

Claims paid for the period July 1, 2018 – June 30, 2019 were provided by Carefirst. Retiree premium information was provided by the MTA. While we reviewed this information for completeness, we did not audit the data received.

Impact of Health Care Reform

We have adjusted the medical care trend due to the projected impact of the “Cadillac Tax”. The Cadillac Tax is one of the provisions of the Affordable Care Act (ACA) of 2010. The Cadillac Tax provision is effective in 2022. The Cadillac Tax only applies to plans that cost $10,200 or more for an individual or $27,500 per family. There will be a 40 percent excise tax for expenditures over these thresholds. The cost thresholds are indexed by general inflation each year after 2022. Because medical trends are projected to be higher than general inflation, we would expect the percentage of the premium that is subject to the premium tax to increase over time.

There are other provisions of the ACA that could impact future costs. Some of the provisions (for example risk adjustment charges for plans that cover healthier populations) could increase costs, while others (for example, less uninsured care costs might be passed on to those with insurance) may reduce costs over time.   Because the impact of these provisions is unclear at this time, we have made no other adjustments to the medical care trend.

Demographic Assumptions

All employees are assumed to participate in the Maryland Transit Administration Pension Plan. Demographic assumptions used mirror those used for the pension plan for FYE 2019. These assumptions have been updated since the last valuation to reflect the changes discussed in the Experience study report dated August 16, 2019.

Section 4 details the assumptions for electing coverage.

Section I. Executive Summary

Economic Assumptions

The trend assumption was developed using the Society of Actuaries (SOA) Long-Run Medical Cost Trend Model baseline assumptions. The SOA Model released in December 2007 and revised in October 2018 was used for this valuation. The following baseline assumptions were used as input variables into this model:

Rate of Inflation	2.5%
Rate of Growth in Real Income / GDP per capita	1.5%
Excess Medical Spending Above General Economic Growth	1.2%
Expected Health Share of GDP in 2028	20.5%
Health Share of GDP Resistance Point	25.0%
Year for Limiting Cost Growth to GDP Growth	2075

The SOA Long-Run Medical Cost Trend Model and its baseline projection are based on an econometric analysis of historical U.S. medical expenditures and the judgments of experts in the field. The long-run baseline projection and input variables have been developed under the guidance of an SOA Project Oversight Group.

Actuarial Certification

In preparing the valuation we relied on demographic, enrollment, and claims data provided by the Maryland Transit Administration and Carefirst. We reviewed the data for reasonableness but did not audit the data. The actuarial methods and assumptions used in this report comply with GASB 75 and the actuarial standards of practice promulgated by the Actuarial Standards Board.

Future medical care cost increase rates are unpredictable and could be volatile. They will depend upon the economy, future health care delivery systems, and emerging technologies. Future medical trend increases can vary significantly from those assumed and small changes in the medical trend assumption can result in actuarial losses or gains of 5 to 15 percent of liabilities.

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.

Section I. Executive Summary

Actuarial Certification

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.

Kevin Binder is a Member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report.

Section II. Summary of Principal Plan Provisions

General Eligibility Rules
Retirees and beneficiaries of the Maryland Transit Administration Pension Plan (except for transfers from union to management positions) who had health and life coverage as active employees, and are receiving a pension, are eligible for coverage if they retire from active service. Terminated vested employees are not eligible for retiree healthcare.

Employees participate in the Maryland Transit Administration Pension Plan. The retirement eligibility is defined as the earlier of:

- Age 65 with 5 years of service
- Age 52 with 30 years of service
- Age 55 with age plus years of service equal to at least 85

Disability
Disabled participants with 5 years of service (7 years of credited service for Local 1300 members hired on or after May 18, 2013 and Local 2 members hired on or after September 10, 2014) are entitled to the same benefit as retirees, if they are disabled in the opinion of the State Medical Director.

Death
Members must meet the eligibility requirements for normal or early retirement at time of death.

Surviving Spouses
Surviving spouses are allowed access to the plan and pay the same premium rates as the participant for up to 3 years after the death of the member.

Medicare Part B
Retiree Medicare Part B premiums are paid entirely by the MTA with proof of eligibility. Spouses, dependents, and surviving spouses are not eligible to receive this benefit.

Life Insurance
Surviving spouses of members enrolled in the life insurance benefit receive a lump sum benefit of $30,000 if a deceased member was active or $10,000 if the deceased member was retired. $3,000 of both amounts is deemed to be paid by the member while the balance is paid by the employer.

Section II. Summary of Principal Plan Provisions

Retiree Contributions

Retirees and spouses must contribute a defined monthly premium reflecting the plan selected, tier of coverage, and whether or not the participant/spouse is Medicare-eligible. The FYE 2019 employee contribution schedule is described below:

Plan	RetireeMonthly Cost
HMO	
Individual Pre-65	$0.00
Individual Post-65	$0.00
Retiree/Spouse Pre-65	$197.61
Retiree/Spouse Post-65	$93.67
PPO	
Individual Pre-65	$133.65
Individual Post-65	$100.39
Retiree/Spouse Pre-65	$415.35
Retiree/Spouse Post-65	$182.93
Drug	
Individual Pre-65	$42.36
Individual Post-65	$91.44
Employee/Spouse Pre-65	$112.78
Employee/Spouse Post-65	$182.95
Dental	
Individual	$12.58
Employee/Spouse	$25.21
Vision	
Individual	$0.99
Employee/Spouse	$2.32

Section II. Summary of Principal Plan Provisions

Underlying Medical Plan

Two Medical Plans are offered: an HMO and a PPO Plan. Dental, Vision, and Prescription Drug plans are also offered.

The following table summarizes the primary plan features of the underlying medical plan:

		PPO	
	HMO	**In network**	**Out of Network**
Deductible	$0	$0	$300 Individual $600 Family
Coinsurance Amounts (paid by participant)			
Preventive Care	$0	$0	20%
Inpatient Hospital	$0	$0	20% after deductible
Emergency Room	$50 waived if admitted	$50 waived if admitted	$50 waived if admitted
PCP Visit	$10	$10	20% after deductible
Specialist Visit	$20	$20	20% after deductible
Outpatient/Facility Hospital (Med Visit)	$10 PCP/$20 Specialist	$10 PCP/$20 Specialist	20% after deductible
Prescription Drug Plan (34 day supply)			
Generic	$8	$8	$8
Preferred Brand	$15	$15	$15
Non Preferred Brand	$25	$25	$25
Maintenance Drugs (90 day supply Mail order/Retail)			
Generic	$0/$16	$0/$16	$0/$16
Preferred Brand	$15/$30	$15/$30	$15/$30
Non Preferred Brand	$25/$50	$25/$50	$25/$50

Changes in Plan Provisions since Prior Valuation

None.

Section III. Valuation Data

Counts

The following table summarizes the counts, ages, and coverage as of 07/01/2018, for those currently enrolled in Medical/Drug coverage.

07/01/2018 – Enrolled in Medical/Drug Coverage

		HMO	PPO	Total
(1)	Number of Participants			
	(a) Employees	1,043	1,307	2,350
	(b) Retirees (Pre-Medicare)	186	136	322
	(c) Retirees (Post-Medicare)	479	610	1,089
(2)	Employee Statistics			
	(a) Average Age	45.14	49.22	47.41
	(b) Average Service[1]	10.41	15.78	13.40
(3)	Retiree Statistics			
	(a) Average Age (Pre-Medicare)	57.53	58.18	57.80
	(b) Average Age (Post-Medicare)	74.20	73.97	74.07

Retiree Statistics and Age Distribution

The table below shows the distribution based on age for retirees with medical coverage.

Age	Medical/Drug Individual	Medical/Drug P/C	Medical/Drug H/W	Medical/Drug Family	Medical/Drug Total
Less Than 50	24	3	1	8	36
50 – 54	20	1	4	7	32
55 – 59	54	8	16	13	91
60 – 64	109	3	32	19	163
65 – 69	192	7	96	14	309
70 – 74	185	8	114	15	322
75 - 79	129	1	118	5	253
80 – 84	67	0	47	1	115
85 and above	61	2	27	0	90
Total	**841**	**33**	**455**	**82**	**1,411**

[1] Includes a load of 0.4 years of service to account for sick leave conversion and prior military time.

Section III. Valuation Data

Employee Age - Service Distribution

Shown below is a distribution, based on age and service of active participants who are currently receiving medical and drug benefits from the Maryland Transit Administration.

	Years of Service as of 07/01/2018									
Age	**Under 1**	**01-04**	**05-09**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35+**	**Total**
Under 25	2	16	0	0	0	0	0	0	0	18
25 – 29	9	80	23	0	0	0	0	0	0	112
30 – 34	16	127	87	52	0	0	0	0	0	282
35 – 39	9	77	59	92	24	1	0	0	0	262
40 – 44	0	63	53	57	65	12	0	0	0	250
45 – 49	4	71	53	59	77	44	3	0	0	311
50 – 54	1	38	48	62	88	58	37	21	1	354
55 – 59	0	22	44	76	86	61	50	50	10	399
60 – 64	0	9	27	40	52	37	35	31	38	269
65 - 69	0	3	7	8	12	9	10	9	20	78
70+	0	0	1	3	1	2	2	0	6	15
Totals	**41**	**506**	**402**	**449**	**405**	**224**	**137**	**111**	**75**	**2,350**

The following table shows averages in total for the above participants.

	Averages
Age:	47.41
Service:	13.40

Section IV. Valuation Methods and Assumptions

Cost Method
This valuation uses entry age normal cost method to value the Plan's liabilities and normal cost.

Coverage Status and Age of Spouse
50% of active participants are assumed to be married. Actual coverage status is used for retirees. Females are assumed to be 3 years younger than their male spouse.

Retired participants with individual coverage are assumed to elect individual coverage upon decrement. Retired participants with spousal coverage are assumed to elect spousal coverage upon decrement. Retired participants currently waiving coverage are assumed to continue to waive coverage upon decrement.

All participants are assumed to elect to continue in the same plan (HMO or PPO) as they have currently elected.

Salary Scale
Salaries are assumed to increase for individuals by 3.20% per year due to inflation, plus the following service based percentages due to merit and longevity:

Years of Service	Management	Maintenance/ Operators	All Others
0 – 5	0.50%	6.00%	4.00%
6 – 20	0.50%	0.25%	3.00%
21 – 29	0.50%	0.25%	1.00%
30+	0.50%	0.00%	0.50%

Election Percentage
The following percentages of participants are assumed to elect coverage in the future:

- 94% of future retirees are assumed to elect medical coverage
- 88% of future retirees are assumed to elect drug coverage
- 89% of future retirees are assumed to elect dental and vision coverage
- 50% of future and current retirees are assumed to elect life insurance coverage

Interest Assumptions

- 3.62% for FYE 2019

Section IV. Valuation Methods and Assumptions

Trend Assumptions

The following increases are assumed for the total plan cost:

Medical, Drug, and Medicare Part B Increase Assumption		
Year	**Pre-Medicare**	**Post-Medicare**
2019	5.40%	5.40%
2020	5.40%	5.40%
2025	6.30%	5.20%
2030	6.10%	5.20%
2040	5.80%	5.20%
2050	5.30%	4.90%
2060	5.00%	4.70%
2070	4.50%	4.30%
2080	4.10%	3.90%
2090	4.00%	3.90%
2097	4.00%	3.90%

Dental/Vision costs are assumed to increase at 4.50% per annum.

The retiree premiums are assumed to increase as follows:

- Medical premiums are assumed to increase at 4.50% per annum
- Drug, dental, and vision premiums are assumed to increase at 0.00% per annum

Section IV. Valuation Methods and Assumptions

Decrement Assumptions

Below is a summary of decrements used in this valuation.

Mortality Decrements		Description
(1)	Healthy – Pre-Retirement	RP-2014 fully generational headcount weighted blue collar mortality table projected from 2014 using scale MP-2018
(2)	Healthy – Post Retirement	RP-2014 fully generational headcount weighted blue collar mortality table projected from 2014 using scale MP-2018
(3)	Disabled	RP-2014 fully generational headcount weighted disabled mortality table projected from 2014 using scale MP-2018

Disability

Disability Rates are shown below:

Age	Annual Percentage of Disablement
20	0.19%
30	0.27%
40	0.46%
50	0.65%
60	1.98%

Section IV. Valuation Methods and Assumptions

Decrement Assumptions

Retirement

Retirement Rates are shown below:

Age	Management	Maintenance	All Others
52	15.00%	5.00%	8.00%
53	15.00%	5.00%	8.00%
54	15.00%	5.00%	8.00%
55	15.00%	5.00%	8.00%
56	15.00%	5.00%	8.00%
57	20.00%	5.00%	8.00%
58	20.00%	5.00%	8.00%
59	20.00%	5.00%	8.00%
60	20.00%	10.00%	10.00%
61	20.00%	10.00%	20.00%
62	25.00%	15.00%	20.00%
63	25.00%	15.00%	20.00%
64	25.00%	20.00%	20.00%
65	25.00%	25.00%	20.00%
66	25.00%	25.00%	25.00%
67	25.00%	25.00%	25.00%
68	25.00%	25.00%	25.00%
69	25.00%	25.00%	25.00%
70	100.00%	25.00%	25.00%
71	100.00%	25.00%	15.00%
72	100.00%	20.00%	15.00%
73	100.00%	20.00%	15.00%
74	100.00%	20.00%	15.00%
75	100.00%	100.00%	100.00%

Section IV. Valuation Methods and Assumptions

Decrement Assumptions

Termination
Withdrawal Rates are shown below:

Years of Service	Management	Maintenance	Operators	All Others
0	33.00%	15.00%	17.00%	20.00%
1	25.00%	7.00%	12.00%	20.00%
2	18.00%	5.00%	5.50%	15.00%
3	15.00%	5.00%	5.50%	10.00%
4	12.50%	5.00%	5.00%	6.00%
5	10.00%	4.00%	3.50%	6.00%
6	5.50%	3.00%	2.50%	6.00%
7	5.50%	0.50%	2.50%	6.00%
8	5.50%	0.50%	2.50%	4.00%
9	5.50%	0.50%	2.50%	4.00%
10	5.50%	0.50%	1.50%	4.00%
11	5.50%	0.00%	1.50%	4.00%
12	5.50%	0.00%	1.50%	4.00%
13	5.50%	0.00%	1.50%	2.00%
14	5.50%	0.00%	1.50%	2.00%
15	3.50%	0.00%	1.50%	2.00%
16	3.50%	0.00%	1.50%	2.00%
17	3.50%	0.00%	1.50%	2.00%
18	3.50%	0.00%	1.50%	2.00%
19	3.50%	0.00%	1.50%	2.00%
20	1.50%	0.00%	1.00%	0.00%
21	1.50%	0.00%	1.00%	0.00%
22	1.50%	0.00%	1.00%	0.00%
23	1.50%	0.00%	1.00%	0.00%
24	1.50%	0.00%	1.00%	0.00%
25+	0.00%	0.00%	1.00%	0.00%

Claims Assumption

To determine the assumed cost and the retiree contributions, we weighted the FYE 2019 premium rates by the current enrollment.

Gross claims are based on enrollment and medical and prescription drug claims for employees and retirees paid from July 1, 2018 to June 30, 2019. The claims were age adjusted and projected to July 1, 2019. Medical claims were projected assuming 5% increases per annum, and prescription drugs were projected assuming 7% increases per annum.

Section IV. Valuation Methods and Assumptions

Claims Assumption

Administrative costs are $540 Pre-Medicare and $355 Post-Medicare.

Dependent coverage is assumed to be 2.59 times the cost of individual coverage Pre-Medicare and 2.00 times the cost of individual coverage Post-Medicare.

The following table shows dental/vision and explicit costs (based on published rates) and combined total medical and drug costs by age and tier.

FYE 2019 Claims		
Total Costs	**Medical**	**Drug**
1. Assumed Medical and Drug Costs		
a. Pre-Medicare	$ 6,930	$ 2,033
b. Post-Medicare	$ 4,258	$ 4,389
2. Total Medical and Drug Costs		
a. Under 50	$ 6,785	$ 2,331
b. Age 50-54	$ 8,149	$ 2,971
c. Age 55-59	$ 9,461	$ 3,519
d. Age 60-64	$ 11,298	$ 4,022
e. Age 65-69	$ 2,868	$ 4,570
f. Age 70-74	$ 3,479	$ 5,164
g. Age 75-79	$ 3,974	$ 4,844
h. Age 80-84	$ 4,556	$ 4,661
i. Age 85 and over	$ 4,876	$ 4,113
3. Dental/Vision		
a. Explicit and Total Costs	$ 280	$ 280

Section IV. Valuation Methods and Assumptions

Other Assumptions

An additional 0.4 years of service is assumed for all members to account for sick leave conversion and prior military time.

Part-time members are assumed to accrue 0.5 years of service credit each year.

The Medicare Part B premium is assumed to be $135.50/month for current retirees and future retirees.

Changes in Methods and Assumptions since Prior Valuation

The trend and decrement assumptions were updated to the proposed assumptions described in the experience study dated August 16, 2019.

The mortality assumption was updated to RP-2014 fully generational headcount weighted blue collar mortality table projected from 2014 using scale MP-2018.

The discount rate was changed from 3.58% to 3.62% as required by GASB 75 for plans that are unfunded.

The claims assumption was updated to include the most recent plan experience.

Section V. Glossary

Actuarially Determined Contribution:
For Plans with irrevocable trusts, the recommended contribution to the Plan (determined in conformity with Actuarial Standards of Practice) that is projected to result in assets equaling the actuarial accrued liability within a period of time.

Covered Group:
Plan members included in an actuarial valuation.

Discount Rate:
The rate used to adjust a series of future payments to reflect the time value of money.

Election Rate:
The percentage of retiring employees assumed to elect coverage.

Employer's Contributions:
Contributions made in relation to the actuarially determined contributions of the employer. An employer has made a contribution in relation to the actuarially determined contribution if the employer has (a) made payments of benefits directly to or on behalf of a retiree or beneficiary, (b) made premium payments to an insurer, or (c) irrevocably transferred assets to a trust, or an equivalent arrangement, in which plan assets are dedicated to providing benefits to retirees and their beneficiaries in accordance with the terms of the plan and are legally protected from creditors of the employer(s) or plan administrator.

Entry Age Normal Funding Method:
A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit.

Funded Ratio:
The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Healthcare Cost Trend Rate:
The rate of change in per capita health claim costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.

OPEB Plan:
An OPEB plan having terms that specify the amount of benefits to be provided at or after separation from employment. The benefits may be specified in dollars (for example, a flat dollar payment or an amount based on one or more factors such as age, years of service, and compensation), or as a type or level of coverage (for example, prescription drugs or a percentage of healthcare insurance premiums).

Other Post-Employment Benefits:
Post-employment benefits other than pension benefits. Other post-employment benefits (OPEB) include post-employment healthcare benefits, life insurance, regardless of the type of plan that provides them, and all post-employment benefits provided separately from a pension plan, excluding benefits defined as termination offers and benefits.

Section V. Glossary

Pay-as-you-go (PAYGO):
A method of financing a benefit plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.

Payroll Growth Rate:
An actuarial assumption with respect to future increases in total covered payroll attributable to inflation; used in applying the level percentage of projected payroll amortization method.

Plan Liabilities:
Obligations payable by the plan at the reporting date, including, primarily, benefits and refunds due and payable to plan members and beneficiaries, and accrued investment and administrative expenses. Plan liabilities do not include actuarial accrued liabilities for benefits that are not due and payable at the reporting date.

Plan Members:
The individuals covered by the terms of an OPEB plan. The plan membership generally includes employees in active service, terminated employees who have accumulated benefits but are not yet receiving them, and retired employees and beneficiaries currently receiving benefits.

Post-employment:
The period between termination of employment and retirement as well as the period after retirement.

Post-employment Healthcare Benefits:
Medical, dental, vision, and other health-related benefits provided to terminated or retired employees and their dependents and beneficiaries.

Select and Ultimate Rates:
Actuarial assumptions that contemplate different rates for successive years. Instead of a single assumed rate with respect to, for example, the investment return assumption, the actuary may apply different rates for the early years of a projection and a single rate for all subsequent years. For example, if an actuary applies an assumed investment return of 8% for year 2000, 7.5% for 2001, and 7% for 2002 and thereafter, then 8% and 7.5% are select rates, and 7% is the ultimate rate.

Service Cost:
That portion of the Actuarial Present Value of plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.

Valuation Date:
The as-of date for employee census data. Under GASB 75, the valuation date must be within 30 months of the last day of the fiscal year.

Appendix 1. The Actuarial Valuation Process

Step 1 – Determining the Present Value of Benefits

The first step of the actuarial valuation process is to determine the Present Value of Benefits (PVB). The PVB represents the estimated amount needed to provide all future OPEB benefits.

For a retiree it is based on the following assumptions:

- The current cost of medical benefits
- How fast medical costs will increase (medical trend)
- Mortality

For an employee it *also* considers the following assumptions:

- How many employees will leave before becoming eligible for the benefit
- At what age will employees retire
- What percentage of eligible retirees will elect coverage
- What percent of eligible retirees will have spouse coverage

Based on these assumptions, the actuary estimates a payment stream for each year in the future.

The streams of payments are discounted to the valuation date using a discount rate. The discount rate is similar to the rate of return you would expect to earn on funds in a bank or other investment vehicle. The sum of the discounted payment stream is the PVB.

Step 2 – The Actuarial Funding Method

If the entire present value of benefits was deposited into a trust when every new employee was hired, there would be (in the absence of actuarial losses caused by experience different than that assumed) no cost after the first year. The goal of an actuarial funding method is to spread the present value of benefits throughout the employee's career.

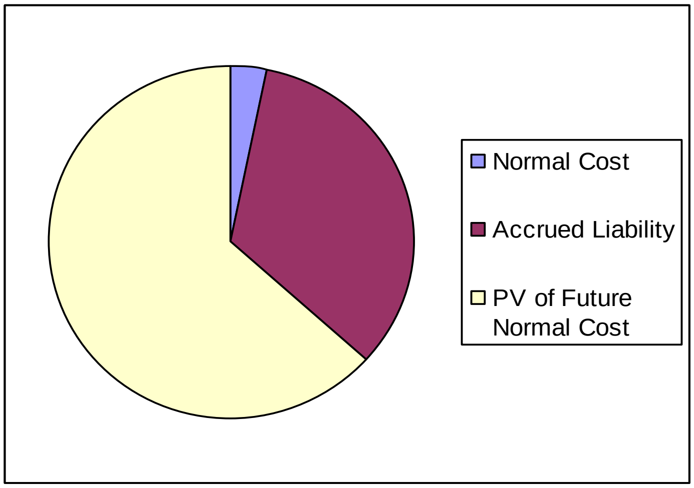
Accordingly, the second step of an actuarial valuation is to divide the Present Value of Benefits into three components:

- The normal cost (the liability accrual for the year)
- The accrued liability (the liability amount allocated for past service)
- The present value of future normal costs (the liability amount allocated to the future)

Appendix 1 - The Actuarial Valuation Process

Step 2 – The Actuarial Funding Method

The following chart illustrates the 3 components of the Present Value of Benefits:



For a retired employee, the present value of benefits equals the accrued liability.

Under the GASB 45 accounting standard we typically used the Projected Unit Credit Actuarial Funding method. The GASB 75 accounting standard requires the use of the Entry Age Normal Actuarial Funding Method.

The Projected Unit Credit (PUC) Actuarial Funding Method

The PUC method allocates the present value of benefits by the service at valuation date divided by the service at retirement. So, for an employee with 10 years of service who is expected to retire in 20 years with 30 years of service, the actuarial accrued liability would be one third (10 divided by 30) of the present value of benefits.

The Entry Age Normal (EAN) Actuarial Funding Method

The goal of the EAN method is that the annual accrual (or normal cost) be a level percent of pay throughout an employee's career. This method requires a salary increase assumption. The normal cost percentage is equal to the present value of benefits divided by the present value of future salary determined when the employee was hired. The actuarial accrued liability is equal to the present value of benefits minus the normal cost percentage times the present value of future salaries at the valuation date.

While it depends upon the discount rate and the salary increase assumption generally the EAN method has a higher actuarial accrued liability than the PUC Method.

Appendix 2 – Expected Benefit Payments

The table below summarizes the expected benefit payouts for the next fifteen years.

Fiscal Year Ending	Expected Benefit Payments
2020	$19,632,000
2021	$21,402,000
2022	$23,161,000
2023	$24,680,000
2024	$26,242,000
2025	$27,934,000
2026	$29,665,000
2027	$31,504,000
2028	$33,384,000
2029	$35,410,000
2030	$37,565,000
2031	$39,619,000
2032	$41,631,000
2033	$43,818,000
2035	$45,936,000

Appendix 3. GASB 75 Disclosure

Change in Net OPEB Liability

	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) - (b)
Balance as of June 30, 2017 for FYE 2018	$833,289,231	$0	$833,289,231
Changes for the Year			
Service Cost	41,137,567		41,137,567
Interest	29,486,571		29,486,571
Changes of Benefit Terms	0		0
Experience Losses/(Gains)	(14,073,053)		(14,073,053)
Trust Contribution - Employer		15,617,475	(15,617,475)
Net Investment Income		0	0
Changes in Assumptions	(145,355,632)		(145,355,632)
Benefit Payments (net of retiree contributions)	(15,617,475)	(15,617,475)	0
Administrative Expense		0	0
Net Changes	(104,422,022)	0	(104,422,022)
Balance as of June 30, 2018 for FYE 2019	**$728,867,209**	**$0**	**$728,867,209**
Funded status		0.00%	

Appendix 3. GASB 75 Disclosure

OPEB Expense - Required by GASB 75

1. Service Cost	$ 41,137,567
2. Interest	29,486,571
3. Projected Earnings on OPEB Trust	0
4. OPEB Administrative Expense	0
5. Changes in Benefit Terms	0
6. Differences Between Expected and Actual Earnings	
In Current Fiscal Year Recognized in Current Year	0
From Past Years Recognized in Current Year	0
Total	0
7. Differences Between Expected and Actual Experience	
In Current Fiscal Year Recognized in Current Year	(1,759,132)
From Past Years Recognized in Current Year	0
Total	(1,759,132)
8. Changes in Assumptions	
In Current Fiscal Year Recognized in Current Year	(18,169,454)
From Past Years Recognized in Current Year	(14,232,945)
Total	(32,402,399)
9. Total OPEB Expense	**$ 36,462,607**

Sensitivity of Total and Net OPEB Liability - Required by GASB 75

The following table presents Maryland Transit Administration's Total and Net OPEB liability. We also present the Total and Net OPEB liability if it is calculated using a discount rate that is 1 percentage point lower or 1 percentage point higher.

	1% Decrease	Discount Rate	1% Increase
Discount Rate	**2.62%**	**3.62%**	**4.62%**
Total OPEB Liability	$862,057,834	$728,867,209	$622,800,313
Net OPEB Liability/(Asset)	$862,057,834	$728,867,209	$622,800,313

The following table presents Maryland Transit Administration's Total and Net OPEB liability. We also present the Total and Net OPEB liability if it is calculated using a health care cost trend rate that is 1 percentage point lower or 1 percentage point higher.

	1% Decrease	Medical Trend	1% Increase
Ultimate Trend	**2.90%**	**3.90%**	**4.90%**
Total OPEB Liability	$607,702,093	$728,867,209	$887,375,845
Net OPEB Liability/(Asset)	$607,702,093	$728,867,209	$887,375,845

Appendix 3. GASB 75 Disclosure

Deferred Inflows/Outflows of Resources Related to OPEB - Required by GASB 75

For the fiscal year ended June 30, 2019, Maryland Transit Administration recognized an OPEB expense of $36,462,607. At June 30, 2019, Maryland Transit Administration reported deferred outflows of resources and deferred inflows of resources related to the OPEB plan from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ -	$ 12,313,921
Changes of assumptions	-	212,583,850
Net difference between projected and actual earnings on OPEB plan investments	-	-
Employer contribution subsequent to measurement date	TBD	
Total	**$ -**	**$ 224,897,771**

An amount to be determined will be reported as deferred outflows of resources related to OPEB resulting from employer contributio subsequent to measurement date will be recognized as a reduction of the net OPEB liability in the year ended June 30, 2020.

Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the OPEB plan will be recognized in the expense as follows:

Fiscal Year ended June 30:	
2020	$ (34,161,531)
2021	(34,161,531)
2022	(34,161,531)
2023	(34,161,531)
2024	(34,161,531)
Thereafter	(54,090,116)

Appendix 3. GASB 75 Disclosure

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

In conformity with paragraph 86b of Statement 75, the effects of differences between projected and actual earnings on OPEB plan investments are recognized in collective OPEB 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.

			Increase (Decrease) in OPEB Expense Arising from the Recognition of Differences between Projected and Actual Earnings on OPEB Plan Investments								
Year	Differences between Projected and Actual Earnings on OPEB Plan Investments	Recognition Period (Years)	2015	2016	2017	2018	2019	2020	2021	2022	2023
2015	$ -	5	$ -	-	-	-	-				
2016	-	5		$ -	-	-	-	-			
2017	-	5			$ -	-	-	-	-		
2018	-	5				$ -	-	-	-	-	
2019	-	5					$ -	-	-	-	-
Net increase (decrease) in OPEB expense			**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

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

				Balances at June 30, 2018	
Year	Investment Earnings Less than Projected (a)	Investment Earnings Greater Than Projected (b)	Amounts Recognized in OPEB Expense Through June 30, 2018 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2015	$ -	$ -	$ -	$ -	$ -
2016	-	-	-	-	-
2017	-	-	-	-	-
2018	-	-	-	-	-
2019	-	-	-	-	-
				$ -	$ -

Appendix 3. GASB 75 Disclosure

Schedule of Differences between Expected and Actual Experience

In conformity with paragraph 86a of Statement 75, the effects of differences between expected and actual experience are recognized in collective OPEB 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 OPEB through the OPEB 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 OPEB Expense Arising from the Recognition of Differences between Expected and Actual Experience												
Year	Differences between Expected and Actual Experience	Recognition Period (Years)	Prior	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Thereafter
Prior			$ -	-	-	-	-	-	-	-	-	-	-	-	-
2014	-	1		$ -											
2015	-	1			$ -										
2016	-	1				$ -									
2017	-	1					$ -								
2018	-	8						$ -	-	-	-	-	-	-	-
2019	(14,073,053)	8							$ (1,759,132)	(1,759,132)	(1,759,132)	(1,759,132)	(1,759,132)	(1,759,132)	(3,518,261)
Net increase (decrease) in OPEB expense			**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (1,759,132)**	**$ (1,759,132)**	**$ (1,759,132)**	**$ (1,759,132)**	**$ (1,759,132)**	**$ (1,759,132)**	**$ (3,518,261)**

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

				Balances at June 30, 2018	
Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in OPEB Expense Through June 30, 2018 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
Prior	$ -	$ -	$ -	$ -	$ -
2014	-	-	-	-	-
2015	-	-	-	-	-
2016	-	-	-	-	-
2017	-	-	-	-	-
2018	-	-	-	-	-
2019	-	14,073,053	1,759,132	-	12,313,921
				$ -	$ 12,313,921

Appendix 3. GASB 75 Disclosure

Schedule of Changes of Assumptions

In conformity with paragraph 86a of Statement 75, the effects of changes of assumptions should be recognized in OPEB 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 OPEB through the OPEB 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 OPEB Expense Arising from the Effects of Changes of Assumptions												
Year	Changes of Assumptions	Recognition Period (Years)	Prior	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Thereafter
Prior	$ -		$ -	-	-	-	-	-	-	-	-	-	-	-	-
2014	-	1		$ -											
2015	-	1			$ -										
2016	-	1				$ -									
2017	-	1					$ -								
2018	(113,863,562)	8						$ (14,232,945)	(14,232,945)	(14,232,945)	(14,232,945)	(14,232,945)	(14,232,945)	(14,232,945)	(14,232,947)
2019	(145,355,632)	8							$ (18,169,454)	(18,169,454)	(18,169,454)	(18,169,454)	(18,169,454)	(18,169,454)	(36,338,908)
Net increase (decrease) in OPEB expense			**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (14,232,945)**	**$ (32,402,399)**	**$ (32,402,399)**	**$ (32,402,399)**	**$ (32,402,399)**	**$ (32,402,399)**	**$ (32,402,399)**	**$ (50,571,855)**

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

				Balances at June 30, 2018	
Year	Increases in the Total OPEB Liability (a)	Decreases in the Total OPEB Liability (b)	Amounts Recognized in OPEB Expense Through June 30, 2018 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
Prior	$ -	$ -	$ -	$ -	$ -
2014	-	-	-	-	-
2015	-	-	-	-	-
2016	-	-	-	-	-
2017	-	-	-	-	-
2018	-	113,863,562	28,465,890	-	85,397,672
2019	-	145,355,632	18,169,454	-	127,186,178
				$ -	$ 212,583,850

Appendix 3. GASB 75 Disclosure

Schedule of Changes in the Total Liability and Related Ratios - Required by GASB 75

Changes in Employer's Net OPEB Liability and Related Ratios
Last 10 Fiscal Years

Disclosure for fiscal year ending: Measurement Date:	2019 6/30/2018	2018 6/30/2017	2017 6/30/2016	2016 6/30/2015	2015 6/30/2014	2014 6/30/2013	2013 6/30/2012	2012 6/30/2011	2011 6/30/2010	2010 6/30/2009
Total OPEB liability										
Service Cost	$ 41,137,567	$ 47,907,217								
Interest Cost	29,486,571	25,090,434								
Changes in Benefit Terms	-	-								
Differences Between Expected and Actual Experience	(14,073,053)	-								
Changes of Assumptions	(145,355,632)	(113,863,562)					Information for FYE 2017			
Benefit Payments	(15,617,475)	(12,421,897)					and earlier is not available			
Net Change in Total OPEB Liability	(104,422,022)	(53,287,808)								
Total OPEB liability - Beginning of Year	833,289,231	886,577,039								
Total OPEB Liability - End of Year	728,867,209	833,289,231								

Plan Fiduciary Net Position
Last 10 Fiscal Years

Disclosure for fiscal year ending: Measurement Date:	2019 6/30/2018	2018 6/30/2017	2017 6/30/2016	2016 6/30/2015	2015 6/30/2014	2014 6/30/2013	2013 6/30/2012	2012 6/30/2011	2011 6/30/2010	2010 6/30/2009
Contributions - Employer	$ 15,617,475	$ 13,208,097								
Net Investment Income	-	-								
Benefit Payments (net of retiree contributions)	(15,617,475)	(12,421,897)				Information for FYE 2017				
Administrative Expense	-	(786,200)				and earlier is not available				
Net Change in Fiduciary Net Position	-	-								
Fiduciary Net Position - Beginning of Year	-	-								
Fiduciary Net Position - End of Year	-	-								
Net OPEB Liability	728,867,209	833,289,231								
Fiduciary Net Position as a % of Total OPEB Liability	0.00%	0.00%								
Covered-Employee Payroll[1]										
Net OPEB Liability as a % of Payroll[1]										
Expected Average Remaining Service Years of All Participants	8	8								

Notes to Schedule:

Benefit changes: None.

Changes of assumptions: The discount rate was changed as follows:

Discount Rate:	
6/30/2017	3.58%
6/30/2018	3.62%

1/ Because this OPEB plan does not depend on salary, we do not have salary information.