GASB 45 Actuarial Valuation of Postemployment Benefits Other than Pensions for TriMet

As of January 1, 2016

Prepared by:

Nina M. Lantz, FSA, EA, MAAA
Principal and Consulting Actuary

William H. Clark-Shim, FSA, EA, MAAA
Principal and Consulting Actuary

April 27, 2016

111 SW Fifth Avenue
Suite 3700
Portland, OR 97204
USA

Tel +1 503 227 0634
Fax +1 503 227 7956

milliman.com

April 27, 2016

Ms. Dee Brookshire
Executive Director, Finance & Administration
TriMet

Re: GASB 45 Actuarial Valuation of Postemployment Benefits as of January 1, 2016

At the request of TriMet, we have completed an actuarial valuation of TriMet's postemployment benefits as of January 1, 2016.

The purpose of this report is to determine the Annual Required Contribution and provide required financial disclosures under the Governmental Accounting Standards Board Statement No. 45 – *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions* (GASB 45). Our determinations reflect the procedures and methods prescribed in GASB 45.

In preparing our report, we relied on accounting and benefits information and employee data furnished to us by TriMet. While Milliman has not audited the benefits information and census data, we reviewed them for reasonableness and they are, in our opinion, sufficient and reliable for the purposes of our calculations. If any of the information summarized in this report is inaccurate or incomplete, the results could be materially affected and this report may need to be revised.

The results contained in this report do not reflect all potential changes in future health costs due to the passage of the Patient Protection and Affordable Care Act. The impact on future health care costs due to this legislation will depend on a number of factors, including future regulations that are not yet known. An analysis of the impact of health care reform on future plan costs was beyond the scope of this report.

Actuarial computations under GASB 45 are for purposes of fulfilling financial accounting requirements. The calculations reported herein have been made on a basis consistent with our understanding of GASB 45. Determinations for purposes other than meeting financial accounting requirements may be significantly different from the results reported herein. Accordingly, additional determinations are needed for other purposes.

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); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

This valuation report is only an estimate of the Plan's financial condition as of a single date. It cannot predict the Plan's future condition. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement.

Milliman's work is prepared solely for the use and benefit of TriMet.

Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. No third party recipient of Milliman's work product should rely upon this report. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We further certify that all costs, liabilities, rates of interest, and other factors in this valuation have been determined on the basis of actuarial assumptions and methods which, taking into account the experience of TriMet and reasonable expectations, are reasonable both individually and in combination. TriMet has reviewed and approved these assumptions and methods.

We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully Submitted,

Nina M. Lantz, FSA, EA, MAAA
Principal and Consulting Actuary

William H. Clark-Shim, FSA, EA, MAAA
Principal and Consulting Actuary

NML:WHC:wp

TABLE OF CONTENTS

Introduction

Milliman, Inc. ("Milliman") has been retained by TriMet to provide a GASB 45 actuarial valuation of its postemployment benefits (OPEB). In our valuation we:

- Project expected payouts for the next 10 years
- Calculate the present value of benefits
- Calculate the actuarial accrued liability (present value of benefits attributable to past service)
- Reconcile January 1, 2015 actuarial results to January 1, 2016 actuarial results
- Determine the Annual Required Contribution (ARC) and Annual OPEB Cost under GASB 45, for the fiscal year ending June 30, 2016 and project the ARC and Annual OPEB Cost for the fiscal year ending June 30, 2017
- Prepare draft financial statement disclosures relating to the funded status of the plan

In June 2015, the Governmental Accounting Standards Board issued GASB Statements No. 74 and 75, which replace Statements 43 and 45 effective for fiscal years beginning after June 15, 2016 and June 15, 2017 respectively. The effects of these accounting changes have not been included in this valuation report.

Results of Study

The valuation results are summarized in the following exhibit and compared with the results of the prior valuation.

	January 1, 2016	*January 1, 2015*
Active Employees	2,789	2,652
Retirees	1,444	1,353
Surviving Spouses	149	140
Total Participants	4,382	4,145
Spouses of Retirees	860	792
Present Value of Benefits	$ 1,145,854,892	$ 1,121,560,930
Actuarial Accrued Liability	$ 760,727,353	$ 711,180,701
Assets	401,008	400,968
Unfunded Actuarial Accrued Liability	$ 760,326,345	$ 710,779,733
Normal Cost	$ 35,207,555	$ 36,619,504

The results of the January 1, 2016 valuation will be used to prepare GASB 45 accounting results for the fiscal year ending June 30, 2016 and a projection of the GASB 45 accounting results for the fiscal year ending June 30, 2017. Accounting results are developed in Exhibits 2, 4 and 5.

The summary exhibit above uses the following terms:

The **Present Value of Benefits** is the present value of projected benefits (projected costs less retiree contributions) discounted at the valuation discount rate.

The Present Value of Benefits is allocated over the service for each active employee from their date of hire to their expected retirement age, as a level percent of the employee's pay. This level percent times pay is referred to as the **Normal Cost**, and is that portion of the Present Value of Benefits attributable to an employee's service in the current year. The Normal Cost equals $0 for retired members.

The **Actuarial Accrued Liability (AAL)** is the Present Value of Benefits less the actuarial present value of future Normal Costs and represents the liabilities allocated to service up to the valuation date. For retirees, the Actuarial Accrued Liability is equal to the Present Value of Benefits.

The **Unfunded Actuarial Accrued Liability (UAAL)** is the Actuarial Accrued Liability offset by any assets set aside to provide retiree health benefits.

Background

GASB 45 is a governmental accounting standard released in June 2004 which requires public-sector employers to apply accrual accounting to OPEB offerings to its retirees and their dependents.

The accounting applies to two broad classifications of benefits, which are discussed in greater detail in Appendix A for Union members and Appendix F for Non-Union members. First, GASB 45 requires that future employer-paid OPEB, such as an employer contribution towards retiree medical insurance, be recognized over the working lifetime of an employee – that is, the cost is recognized prior to the employee's retirement. GASB also requires that, under certain circumstances, an employer must recognize an implicit subsidy arising from allowing retirees to continue medical coverage, even if the retirees pay the "full" premium charged by the insurance carrier. This implicit subsidy arises from the fact that health care premiums do not increase with age, whereas health care costs do increase with age.

The actuarial valuation process involves projecting the costs of retiree benefits in years following the valuation date, based upon the active and retired membership as of the valuation date. Exhibit 1 shows the projection of these costs over the next ten years. These costs are then assigned to past service and future service, as shown in Exhibit 2. The ARC – which is the accrual cost for accounting purposes – is developed in Exhibit 5 as the sum of the Normal Cost and an amortized portion of the Unfunded Actuarial Accrued Liability. The Annual OPEB Cost is the ARC, plus accounting adjustments required under GASB 45. Finally, the change in the Net OPEB Obligation is calculated by netting the Annual OPEB Cost against the cost of benefits actually paid in the current fiscal year. In other words, the accrual cost is netted against the current cost, and the difference is the remaining accrual to be paid in future years. The Net OPEB obligation accumulates over time as the sum of annual accrual costs, less current year costs, with interest.

Assuming TriMet does not increase funding of its OPEB benefits through its trust fund, GASB 45 essentially recognizes the Unfunded Actuarial Accrued Liability over time on the District's balance sheet.

Assumptions

With any valuation of future benefits, assumptions of anticipated future events are required. TriMet approved the assumptions used herein which were developed in consultation with Milliman.

Discount Rate. GASB 45 requires that the interest rate used to discount future benefit payments back to the present day be based on the expected rate of return on any investments set aside to pay for these benefits. If no funds are set aside for this purpose, the discount rate would be based on the expected return on TriMet's operating funds. Although the District established a separate, irrevocable trust dedicated to OPEB costs valued at about $400,000, the plan is funded on a pay-as-you-go basis. We have, therefore, used a discount rate of 3.50% based on long-term expectations of investment return for the Oregon Local Government Investment Pool or similar investments, which are representative of TriMet's general financial assets.

Health Cost Trend. In future years, the medical cost trend varies from 4.25% to 8.25% depending upon the timing of the excise tax scheduled to affect health care benefits beginning in 2020. The trend then settles to an ultimate rate of 4.50%. Appendices D and I display the complete trends for the Union and Non-Union Plans respectively. In addition, dental and costs are assumed to increase 5.00% per year. These trends were developed based upon a model circulated by the Society of Actuaries. A separate trend for Medicare Part B was used to reflect the expected premium increases.

Demographic Assumptions. With limited exceptions, we followed the demographic assumptions used for the actuarial valuation of the TriMet Defined Benefit Retirement Plan for Management and Staff Employees (Non-Union) and the actuarial valuation of the Pension Plan for Bargaining Unit Employees of TriMet (Union).

Complete summaries of the actuarial assumptions are presented in Appendix D for the Union Plan and Appendix I for the Non-Union Plan.

Variability of Results

The results contained in this report represent reasonable estimates. However, variation from these or any other estimates of future retiree medical costs is not only possible but probable. Actual future costs may vary significantly from estimates in this report.

Valuation results are particularly sensitive to the assumptions used to project future health care cost increases (health care cost trend). Exhibit 7 shows a comparison of valuation results based on valuation assumptions and based on a one percent change in the health care cost trend.

Exhibit 3 reconciles the Actuarial Accrued Liability measured in the prior valuation to the amount calculated for this valuation and estimates the amount and source of unexpected changes. Significant differences between actual and expected liability can come from health cost trend or demographic experience which differ from expectations. Changes to benefits offered or to valuation assumptions can also affect liabilities.

The District should note that liabilities for implicit subsidies are calculated as the difference between expected claims and premiums. A relatively small percentage change to expected claims or premiums can affect the net liability by a larger percentage. This is one of several reasons why GASB 45 implicit subsidy liabilities tend to be more volatile than pension liabilities.

Exhibit 1. Projected Benefit Payments – Union Members

The table below illustrates the projected pay-as-you-go costs of providing retiree OPEB for Union members. The projections only consider the current group of employees and retirees and their current benefit structure.

Year Ending Dec 31,	*Projected Costs*	*Retiree Premiums*	*Retiree Life Insurance*	*Total Benefits*
2016	$ 19,789,057	$ (798,212)	$ 357,488	$ 19,348,333
2017	21,898,586	(873,844)	385,493	21,410,235
2018	24,085,315	(968,388)	414,077	23,531,004
2019	26,057,347	(1,052,580)	443,877	25,448,644
2020	28,097,515	(1,140,233)	473,167	27,430,449
2021	29,890,657	(1,215,045)	502,271	29,177,883
2022	31,637,295	(1,287,032)	530,832	30,881,095
2023	33,512,768	(1,359,873)	560,901	32,713,796
2024	35,376,986	(1,437,337)	591,442	34,531,091
2025	38,200,890	(1,542,954)	623,705	37,281,641

Exhibit 1. Projected Benefit Payments – Non-Union Members

The table below illustrates the projected pay-as-you-go costs of providing retiree OPEB for the Non-Union members. The projections only consider the current group of employees and retirees and their current benefit structure.

Year Ending Dec 31,	*Projected Costs*	*Retiree Premiums*	*Retiree Life Insurance*	*Total Benefits*
2016	$ 2,089,383	$ (104,578)	$ 24,545	$ 2,009,350
2017	2,300,018	(117,949)	26,845	2,208,914
2018	2,702,762	(138,034)	29,362	2,594,090
2019	2,885,249	(150,762)	31,872	2,766,359
2020	3,088,106	(163,809)	34,670	2,958,967
2021	3,254,540	(177,937)	37,642	3,114,245
2022	3,536,299	(202,599)	40,817	3,374,517
2023	3,909,901	(226,511)	44,171	3,727,561
2024	4,165,565	(253,543)	47,918	3,959,940
2025	4,528,609	(285,937)	51,672	4,294,344

Exhibit 2. Liabilities and Normal Cost

The **Present Value of Benefits** is the actuarial present value of projected benefits (projected costs less retiree contributions) expected to be paid for all current retirees and current covered employees who are expected to retire and become eligible for OPEB in the future.

The Present Value of Benefits is allocated over the service for each active employee from their date of hire to their expected retirement age, as a level percent of the employee's pay. This level percent times pay is referred to as the **Normal Cost**, and is that portion of the Present Value of Benefits attributable to an employee's service in the current year. The Normal Cost equals $0 for retired members. Normal costs are increased from the valuation dates to the fiscal year end dates using a combination of the discount rate and health care cost trend assumptions.

The normal cost for the fiscal year ending June 30, 2017 assumes a constant active population and reflects the expected shift in the active population to Tier 3. The normal cost per individual in Tier 3 is smaller than the normal cost under the other Tiers.

The **Actuarial Accrued Liability (AAL)** is the Present Value of Benefits less the actuarial present value of future Normal Costs and represents the liabilities allocated to service up to the valuation date. For retirees, the Actuarial Accrued Liability is equal to the Present Value of Benefits.

	Valuation Date			
	January 1, 2016			***January 1, 2015***
	Union	Non-Union	Total	Total
Present Value of Benefits				
Actives	$ 701,701,379	$ 101,935,656	$ 803,637,035	$ 819,518,268
Retirees	306,427,138	35,790,719	342,217,857	302,042,662
Total	$1,008,128,517	$ 137,726,375	$1,145,854,892	$1,121,560,930
Actuarial Accrued Liability				
Actives	$ 348,962,174	$ 69,547,322	$ 418,509,496	$ 409,138,039
Retirees	306,427,138	35,790,719	342,217,857	302,042,662
Total	$ 655,389,312	$ 105,338,041	$ 760,727,353	$ 711,180,701
Normal Cost				
As of Valuation Date	$ 32,034,852	$ 3,172,703	$ 35,207,555	$ 36,619,504
FYE June 30, 2015				$ 37,254,834
FYE June 30, 2016	$ 32,590,641	$ 3,227,748	$ 35,818,389	
FYE June 30, 2017	$ 31,086,695	$ 3,061,391	$ 34,148,086	

Exhibit 3. Reconciliation of Valuation Results

This exhibit reconciles the results of the January 1, 2015 valuation with the results of the January 1, 2016 valuation. The January 1, 2015 Actuarial Accrued Liability (AAL) and Normal Cost are brought forward in time with interest and reduced by benefits expected to have been received.

Union Members

Expected January 1, 2016 AAL			
(1)	January 1, 2015 AAL	$612,104,082	
(2)	January 1, 2015 Normal Cost	33,367,971	
(3)	Expected Benefits Received, January 1, 2015 – December 31, 2015	20,207,570	
(4)	Interest on Items (1) through (3) at 3.50%	22,240,931	
(5)	Expected January 1, 2016 AAL = (1) + (2) - (3) + (4)	$647,505,414	
Reconciliation to Actual January 1, 2016 AAL			***As a Percent of Expected AAL***
(6)	Demographic (Gain) / Loss	$ 9,512,716	1%
(7)	Health Cost (Gain) / Loss	(5,685,135)	-1%
(8)	Changes in Other Assumptions	4,056,317	1%
(9)	Actual January 1, 2016 AAL = (5) + (6) + (7) + (8)	$655,389,312	

Non-Union Members

Expected January 1, 2016 AAL			
(1)	January 1, 2015 AAL	$ 99,076,619	
(2)	January 1, 2015 Normal Cost	3,251,533	
(3)	Expected Benefits Received, January 1, 2015 – December 31, 2015	1,869,922	
(4)	Interest on Items (1) through (3) at 3.50%	3,549,043	
(5)	Expected January 1, 2016 AAL = (1) + (2) - (3) + (4)	$104,007,273	
Reconciliation to Actual January 1, 2016 AAL			***As a Percent of Expected AAL***
(6)	Demographic (Gain) / Loss	$ (1,326,170)	-1%
(7)	Health Cost (Gain) / Loss	3,430,334	3%
(8)	Changes in Other Assumptions	(773,396)	-1%
(9)	Actual January 1, 2016 AAL = (5) + (6) + (7) + (8)	$105,338,041	

Actuarial gains and losses result from differences between the expectations of the prior valuation and the remeasurement of the current valuation.

Demographic gains and losses come from many sources, such as actual rates of termination, retirement, and election of health care benefits that differ from the actuarial assumptions. New entrants into the population generate demographic losses. Liabilities for Union Tier 2 post-65 retirees who chose the stipend and Tier 3 actives who will receive the stipend only until age 65 (in addition to life insurance) were reflected for the first time in this valuation.

Health cost gains and losses result from differences in projected health care costs as of January 1, 2016 compared with projections based on the January 1, 2015 valuation. In many cases, these gains and losses may be the largest source of gain or loss from one valuation to the next. It captures changes in health care coverages offered by TriMet or elected by retirees as well as changes to assumptions about future health care costs.

The changes in other assumptions reflect changes in demographic assumptions and other health care related assumptions, such as the new health care cost trend, the new mortality assumption for Union, and spouse coverage assumptions for Non-Union. Appendix D and Appendix I describe the changes in assumptions since the prior valuation for the Union and Non-Union Plans respectively.

Exhibit 4. Unfunded Actuarial Accrued Liability

The Unfunded Actuarial Accrued Liability (UAAL) is the Actuarial Accrued Liability offset by any assets set aside to provide retiree health benefits. This is equal to the value of the retiree health benefits accrued to date that has not been funded. The UAAL is amortized over a fixed number of years and included in the ARC amount (shown in Exhibit 5).

The amortization of UAAL was calculated as a level percent of pay over a closed period of 30 years beginning January 1, 2008. The amortization period as of January 1, 2016 is 22 years. Amortization amounts are expected to increase at the same rate as total pay increases each year. TriMet's total payroll is assumed to increase 2.00% per year.

UAAL amortization payments are increased from the valuation dates to the fiscal year end dates using the discount rate assumption. The UAAL amortization payment for the fiscal year end June 30, 2017 is based upon the amortization of projected UAAL as of January 1, 2017.

	January 1, 2016			*January 1, 2015*
	Union	Non-Union	Total	Total
Unfunded Actuarial Liability (UAAL)				
Actuarial Accrued Liability	$ 655,389,312	$ 105,338,041	$ 760,727,353	$ 711,180,701
Actuarial Value of Assets	401,008	0	401,008	400,968
Unfunded Actuarial Accrued Liability	$ 654,988,304	$ 105,338,041	$ 760,326,345	$ 710,779,733
Amortization of UAAL for ARC				
Amortization Factor	18.9545	18.9545	18.9545	19.6798
Amortization Amount as of				
Valuation Date	$ 34,555,821	$ 5,557,416	$ 40,113,237	$ 36,117,223
June 30, 2015				$ 36,743,839
June 30, 2016	$ 35,155,347	$ 5,653,834	$ 40,809,181	
June 30, 2017	$ 38,608,016	$ 6,157,337	$ 44,765,353	
Discount Rate	3.50%	3.50%	3.50%	3.50%
Amortization Period	22 years	22 years	22 years	23 years

Exhibit 5. Projected Financial Statement Disclosures

The following tables show the estimated Annual Required Contribution and Net OPEB Obligation for the fiscal years ending June 30, 2016 and June 30, 2017.

		Fiscal Year Ending June 30, 2016		
		Union	Non-Union	Total
Determination of Annual Required Contribution				
(1)	Normal Cost at year end	$ 32,590,641	$ 3,227,748	$ 35,818,389
(2)	Amortization of UAAL	35,155,347	5,653,834	40,809,181
(3)	Annual Required Contribution (ARC) (1) + (2)	$ 67,745,988	$ 8,881,582	$ 76,627,570
Determination of Net OPEB Obligation				
(4)	Annual Required Contribution	$ 67,745,988	$ 8,881,582	$ 76,627,570
(5)	Interest on prior year Net OPEB Obligation	15,117,308	1,508,000	16,625,308
(6)	Adjustment to ARC *	(23,182,713)	(2,312,550)	(25,495,263)
(7)	Annual OPEB Cost (4) + (5) + (6)	59,680,583	8,077,032	67,757,615
(8)	Explicit Benefit Payments **	15,557,581	1,506,154	17,063,735
	Implicit Benefit Payments	4,694,955	349,735	5,044,690
(9)	Increase in Net OPEB Obligation (7) - (8)	$ 39,428,047	$ 6,221,143	$ 45,649,190
(10)	Net OPEB Obligation – beginning of year	$ 431,923,096	$ 43,085,723	$ 475,008,819
(11)	Net OPEB Obligation – end of year (9) + (10)	$ 471,351,143	$ 49,306,866	$ 520,658,009

* *Based upon beginning of year Net OPEB Obligation divided by ARC amortization factor shown in Exhibit 4, and given interest to end of year.*

** *For projection purposes, employer contributions are equal to expected explicit benefit payments plus implicit benefit payments during a given fiscal year. GASB 45 defines contributions for this purpose to be actual benefit payments during the year and contributions made to a separate, irrevocable trust. These GASB 45 contributions can be accounted for by reflecting actual (or estimated) explicit benefit payments for the fiscal year, plus estimated implicit benefit payments shown above. Life insurance benefits are recognized under the explicit benefit payments.*

Exhibit 5. Projected Financial Statement Disclosures (continued)

		Fiscal Year Ending June 30, 2017		
		Union	Non-Union	Total
Determination of Annual Required Contribution				
(1)	Normal Cost at year end	$ 31,086,695	$ 3,061,391	$ 34,148,086
(2)	Amortization of UAAL	38,608,016	6,157,337	44,765,353
(3)	Annual Required Contribution (ARC) (1) + (2)	$ 69,694,711	$ 9,218,728	$ 78,913,439
Determination of Net OPEB Obligation				
(4)	Annual Required Contribution	$ 69,694,711	$ 9,218,728	$ 78,913,439
(5)	Interest on prior year Net OPEB Obligation	16,497,290	1,725,740	18,223,030
(6)	Adjustment to ARC *	(26,320,984)	(2,753,372)	(29,074,356)
(7)	Annual OPEB Cost (4) + (5) + (6)	59,871,017	8,191,096	68,062,113
(8)	Explicit Benefit Payments **	15,193,029	1,765,433	16,958,462
	Implicit Benefit Payments	5,186,255	343,699	5,529,954
(9)	Increase in Net OPEB Obligation (7) - (8)	$ 39,491,733	$ 6,081,964	$ 45,573,697
(10)	Net OPEB Obligation – beginning of year	$ 471,351,143	$ 49,306,866	$ 520,658,009
(11)	Net OPEB Obligation – end of year (9) + (10)	$ 510,842,876	$ 55,388,830	$ 566,231,706

* *Based upon beginning of year Net OPEB Obligation divided by ARC amortization factor of 18.2185, and given interest to end of year.*

** *For projection purposes, employer contributions are equal to expected explicit benefit payments plus implicit benefit payments during a given fiscal year. GASB 45 defines contributions for this purpose to be actual benefit payments during the year and contributions made to a separate, irrevocable trust. These GASB 45 contributions can be accounted for by reflecting actual (or estimated) explicit benefit payments for the fiscal year, plus estimated implicit benefit payments shown above. Life insurance benefits are recognized under the explicit benefit payments.*

Exhibit 5. Projected Financial Statement Disclosures (continued)

The following table shows historical Annual OPEB Cost and Net OPEB Obligation. For a given fiscal year end disclosure, results for the current year and the preceding two years are required to be shown.

Fiscal Year Ended		*Annual OPEB Cost*	*Percentage of OPEB Cost Contributed*	*Net OPEB Obligation*
6/30/2014		$91,093,472	18%	$430,866,926
6/30/2015	Union			$431,923,096
	Non-Union			43,085,723
	Total	$61,758,534*	29%	$475,008,819
6/30/2016	Union	$59,680,583	34%**	$471,351,143
	Non-Union	8,077,032	23%**	49,306,866
	Total	$67,757,615	33%**	$520,658,009
6/30/2017	Union	$59,871,017	34%**	$510,842,876
	Non-Union	8,191,096	26%**	55,388,830
	Total	$68,062,113	33%**	$566,231,706

* *The June 30, 2015 Annual OPEB Cost was supplied by TriMet and differs from the previous valuation report.*

*** Based upon Expected Benefit Payments.*

Funded Status and Funding Progress. As of January 1, 2016, the most recent actuarial valuation date, the plan was 0.05% percent funded. The Actuarial Accrued Liability was $760,727,353, and the value of assets was $401,008, resulting in an Unfunded Actuarial Accrued Liability of $760,326,345.

Exhibit 6. Required Supplementary Information

The following table shows a schedule of Funding Progress required under GASB 45.

Actuarial Valuation Date	*Actuarial Value of Assets*	*Actuarial Accrued Liability (AAL)*	*Unfunded AAL (UAAL)*	*Funded Ratio*	*Covered Payroll*	*UAAL as a Percentage of Covered Payroll*
01/01/2014	$400,928	$ 949,993,362	$ 949,592,434	0%	$ 145,468,672	653%
01/01/2015	400,968	711,180,701	710,779,733	0%	154,966,472	459%
01/01/2016	401,008	760,727,353	760,326,345	0%	167,369,116	454%

Exhibit 7. Valuation Results – Sensitivity of Economic Assumptions

The following exhibit shows the results of the valuation based on alternate health care cost trend assumptions to illustrate the sensitivity of changes of the valuation results to changes in the health care cost trend. The alternate health care cost trend assumptions are 1% higher or 1% lower than the valuation assumptions in all future years.

Discount Rate	***3.50%***	***3.50%***	***3.50%***
Ultimate Trend Rate	***4.50%***	***3.50%***	***5.50%***
Actuarial Accrued Liability (AAL)	$ 760,727,253	$ 651,783,526	$ 898,007,609
Change in AAL		$ (108,943,827)	$ 137,280,256
Normal Cost	$ 35,207,555	$ 28,448,836	$ 44,222,005
Change in Normal Cost		$ (6,758,719)	$ 9,014,450

SUMMARY OF BENEFITS VALUED

The following summary is intended only to describe our understanding of the essential features of the postemployment benefits other than pensions (OPEB) provided to current and future Union retirees of TriMet as of January 1, 2016. All eligibility requirements and benefit amounts shall be determined in strict accordance with the relevant documents, including collective bargaining agreements. To the extent that this summary does not accurately reflect any OPEB provisions, the results of this valuation may need to be revised.

There are two categories of OPEB valued under GASB 45: explicit employer benefits and implicit employer subsidies. Explicit employer benefits are paid from the employer to the retiree or from the employer to a benefits provider on behalf of the retiree. Implicit employer subsidies arise from offering benefits to retirees.

Explicit employer benefits under GASB 45 include retiree medical, dental and life insurance coverage, where the employer pays for all or a portion of such coverage. Termination benefits, such as payout of unused sick leave or conversion of such payout to an individual account, are not accounted for under GASB 45.

Implicit employer subsidies under GASB 45 represent the difference between the premiums charged for coverage and the expected claims resulting from that coverage. One common implicit subsidy in Oregon comes from offering pre-Medicare health care insurance coverage to retirees based on the same gross premium rates as are charged to active employees. Health care premiums, priced only for retirees who on average incur higher health care claims costs than younger active employees, would be more expensive than health care premiums that are priced to cover the average costs of both actives and retirees combined. GASB 45 states that this implicit subsidy must be included in the liabilities and costs reported on the entity's financial statements. The liability from the explicit employer benefits plus the implicit employer subsidies equals the total Actuarial Accrued Liability (AAL) under GASB 45.

Beginning in 2020, an excise tax of 40% is scheduled to apply to the portion of group health care plan costs that exceeds thresholds set under law. While many details of this excise tax are still unknown, its overall structure is clear enough that actuaries are generally making an estimate of its potential impact when performing OPEB valuations. We have modeled the impact of the excise tax in this valuation. The effect of the excise tax can be observed by the increase in trend rates beginning in 2019 for pre-65 medical benefits, and in 2041 for post-65 medical benefits.

To our knowledge, the summary below covers all OPEB for Union retirees of TriMet which result in material AAL under GASB 45. If additional retiree benefits may result in AAL under GASB 45, the results of this valuation may need to be revised.

Eligibility

Retirees who were employees immediately prior to retirement after attaining age 55 and 10 years of continuous service or who became disabled after 10 years of continuous service are eligible for OPEB benefits.

Health Care Benefits

Tier 1 – Retirees who retired prior to February 1, 1992

Medical, prescription drug, and dental benefits are provided to all covered retirees, spouses and domestic partners. Dependents receive all benefits except dental. Retirees also get reimbursed for Medicare Part B premiums.

Benefits are payable over the life of the retiree and spouse or domestic partner while both are alive. Following the retiree's death, benefits continue to the surviving spouse or domestic partner until the earlier of the survivor's death or 16 years after the retiree's death.

Retirees and their dependents under age 65 may continue to receive the same health care coverage received prior to retirement, subject to plan changes made by insurers from time to time.

Retirees do not contribute to the cost of health care insurance coverage.

Tier 2 – Retirees who retired on or after February 1, 1992 and hired on or before October 24, 2014

Medical, prescription drug, and dental benefits are provided to all covered retirees, spouses and domestic partners until the age of 65. Dependents receive all benefits except dental.

Retirees & dependents who become Medicare eligible must enroll in a Medicare Advantage plan and maintain Medicare Parts A & B. Instead of electing coverage under a Medicare Advantage & dental plan, a retiree may elect to receive a monthly stipend. If the retiree elects the monthly stipend, the retiree is required to maintain Medicare Parts A & B. Once the stipend election is made, the retiree has no right to revert back to enrolling in a Medicare Advantage plan and dental plan. The monthly stipend increases annually with inflation. Retirees that maintain Medicare Part B will receive reimbursement for the Medicare Part B premiums.

Benefits are payable over the life of the retiree and spouse or domestic partner while both are alive. Following the retiree's death, benefits continue to the surviving spouse or domestic partner until the earlier of the survivor's death or 16 years after the retiree's death.

Retirees and their dependents under age 65, and non Medicare may continue to receive the same health care coverage received prior to retirement. Health insurance premiums for retirees who are not eligible for one of TriMet's Medicare Advantage plans are underwritten together with active employees.

Retirees pay a portion of the health care premium according to the following table.

Provider / Covered Group	Percent of Premium
Regence PPO 90/10	Varies*
Regence HDHP/HSA	0%**
All Other Medical and Dental	5%

* Retiree pays the difference between the provider premium and the premium TriMet pays for the Regence PPO 80/20. For 2016, it is 10.47%.

** The HSA deposit by TriMet on behalf of the retiree is equal to the difference between the HDHP premium and TriMet's portion of the Regence PPO 80/20 plan premium.

<u>Tier 3 – Retirees hired on or after October 25, 2014</u>

A monthly stipend is provided to the retiree until the age of 65. The monthly stipend increases annually with inflation. Retiree health benefits cease when the employee turns 65. There are no benefits for the spouse, domestic partner or dependents.

The implicit employer subsidy is measured as the expected health care cost per retiree and dependent, less the gross premiums charged by the insurance carrier for that coverage.

We are not aware of any additional implicit employer OPEB subsidies which result in GASB 45 AAL.

Life Insurance Benefits

Eligible retirees in all tiers are provided a $10,000 whole life insurance benefit fully paid by TriMet.

Changes since the Prior Valuation

As of January 1, 2016, United Healthcare HMO plans have been replaced by the United Healthcare PPO plan. This plan, when combined with Medicare Parts A&B is intended to provide substantially similar coverage as the active employee healthcare plan designs. An estimated impact of this change was reflected in the prior valuation report.

OPEB COSTS AND PREMIUMS

The following methods were used to establish costs and premiums for purposes of measuring the OPEB liability.

Health Care Premiums per Month

Current monthly health insurance premiums charged by providers are shown below. Premiums are the same for full-time and mini-run operators.

Provider / Covered Group	January – December 2016		
	Retired after 1991		Retired prior to 1992
Regence PPO			
Retiree Only	N/A		$ 777.18
Retiree & Spouse/Domestic Partner	N/A		1,557.78
Retiree & Child(ren)	N/A		N/A
Family	N/A		N/A
Regence PPO 80/20			
Retiree Only	$ 812.76		N/A
Retiree & Spouse/Domestic Partner	1,706.80		N/A
Retiree & Child(ren)	1,422.40		N/A
Family	2,275.84		N/A
Regence PPO 90/10			
Retiree Only	$ 862.40		N/A
Retiree & Spouse/Domestic Partner	1,811.08		N/A
Retiree & Child(ren)	1,509.30		N/A
Family	2,414.84		N/A
Regence HDHP/HSA	HDHP	HSA	
Retiree Only	$ 653.78	$ 118.34	N/A
Retiree & Spouse/Domestic Partner	1,372.92	248.54	N/A
Retiree & Child(ren)	1,144.14	207.14	N/A
Family	1,830.54	331.50	N/A
United Healthcare PPO	$ 425.06		N/A

Provider / Covered Group	January – December 2016	
	Retired after 1991	Retired prior to 1992
Kaiser Permanente		
Retiree Only	$ 691.94	$ 1,084.02
Retiree & Spouse/Domestic Partner	1,383.86	N/A
Retiree & Child(ren)	1,245.48	N/A
Family	2,075.78	N/A
Medicare, Single*	386.76	520.06
Moda Dental		
Retiree Only	$ 59.32	$ 59.32
Retiree & Spouse/Domestic Partner	112.12	112.12
Kaiser Dental		
Retiree Only	$ 38.82	$ 38.82
Retiree & Spouse/Domestic Partner	70.80	70.80

** Over age 65 members with Medicare Part A and B coverage*

Stipend

Covered Group	2016 Monthly Stipend
Tier 1	N/A
Tier 2	
Retiree Only	$ 422.79
Retiree & Spouse/Domestic Partner	839.24
Tier 3	
Retiree Only	$ 810.40

Medicare Part B

The standard Part B premium for individuals earning $85,000 or less (or $170,000 or less if married filing jointly) was $104.90 per month for 2015, $104.90 per month for continuing retirees in 2016, and 121.80 per month for new retirees in 2016.

For the valuation, $104.90 will be valued for all retirees and a higher trend will be applied so the premium catches up with the projected premium for new retirees.

Expected Health Care Costs Per Person per Month

Expected health care costs were developed using a composite of the premiums due for active and retired members electing coverage as of December 31, 2015 except as noted below. The effective date of the premiums provided as of the valuation date was January 1, 2016.

- Expected heath care costs for pre-65 retirees who retired before 1992 and are covered under Regence or Kaiser were developed based on the coverage of pre-65 retirees who retired after 1991 and pro-rated by the relative level of premiums.
- Expected dental costs for Moda Dental and Kaiser Dental were blended based on the current covered population. The blended premium rates were $53.44 per employee per month and $104.62 per month for employee and spouse coverage.

Milliman's Health Cost Guidelines were used to allocate costs by age and gender. Retirees' costs include a load for expected health status of retirees relative to active employees and spouses.

Jeff Bradley, FSA and health consultant with Milliman, assisted in the development of the per capita claims costs.

For the period January 1, 2016 – December 31, 2016:

Regence – Retired after 1991				
	Retiree		Spouse	
Age	Male	Female	Male	Female
55	$1,064.94	$1,122.72	$ 989.32	$1,084.33
60	1,301.15	1,272.20	1,180.91	1,228.77
64	1,626.18	1,469.23	1,437.84	1,392.30

Kaiser – 65 and Older – Retired after 1991				
	Retiree		Spouse	
Age	Male	Female	Male	Female
65	$311.15	$309.57	$311.15	$309.57
70	367.83	348.09	367.83	348.09
75	419.55	386.44	419.55	386.44
80	455.65	415.50	455.65	415.50
85	469.38	424.35	469.38	424.35
90+	471.52	423.41	471.52	423.41

Kaiser – Under 65 – Retired after 1991				
	Retiree		Spouse	
Age	Male	Female	Male	Female
55	$ 977.04	$1,030.05	$ 907.88	$ 995.06
60	1,193.75	1,167.19	1,083.66	1,127.57
64	1,491.95	1,347.96	1,319.39	1,277.61

United Healthcare and Regence – Retired before 1992				
	Retiree		Spouse	
Age	Male	Female	Male	Female
65	$ 340.81	$ 339.08	$ 340.81	$ 339.08
70	402.89	381.27	402.89	381.27
75	459.54	423.27	459.54	423.27
80	499.08	455.10	499.08	455.10
85	514.12	464.79	514.12	464.79
90+	516.46	463.77	516.46	463.77

Dental				
	Retiree		Spouse	
Age	Male	Female	Male	Female
55	$47.55	$50.30	$49.36	$52.10
60	52.76	54.18	54.57	55.99
65	57.03	56.20	58.84	58.01
70+	59.86	56.24	61.67	58.04

Expected Carrier Elections for Tier 2 Retirees

Medical and prescription drug costs for current retirees are valued based on the retiree's elected plan. For active members and retirees under age 65, post-65 coverage is valued assuming the member elects a carrier according to the percentages as shown in the following table. In the case where a retiree and spouse are on separate pre-65 and post-65 plans ("split coverage"), the pre-65 member is assumed to elect the same plan as the post-65 member at age 65.

Medical and prescription drug costs for future retirees and post-65 coverage for members currently under age 65 are valued assuming the member elects a carrier according to the percentages as shown in the following table, except in the case of split pre-65 and post-65 coverage as noted above.

Carrier	Pre-65	Carrier	Post-65
Regence PPO	48%	Kaiser Senior Advantage	49%
Regence HSA	2%	United Healthcare 2016: National PPO 100%	49%
Kaiser HMO	50%	Stipend	2%

Life Insurance

Life insurance for current and future retirees was valued at its face amount under the valuation assumptions.

Administrative Expenses

No administrative expenses were valued.

ACTUARIAL COST METHOD

The method used for this valuation is the **Entry Age Normal Actuarial Cost Method** with Normal Cost expressed as a level percent of pay.

The **Present Value of Benefits** is the present value of projected benefits (projected costs less retiree contributions) discounted at the valuation discount rate.

The Present Value of Benefits is allocated over the service for each active employee from their date of hire to their expected retirement age, as a level percent of the employee's pay. This level percent times pay is referred to as the **Normal Cost**, and is that portion of the Present Value of Benefits attributable to an employee's service in the current year. The Normal Cost equals $0 for retired members.

The **Actuarial Accrued Liability (AAL)** is the Present Value of Benefits less the actuarial present value of future Normal Costs and represents the liabilities allocated to service up to the valuation date. For retirees, the Actuarial Accrued Liability is equal to the Present Value of Benefits.

The **Annual Required Contribution (ARC)** is the amount TriMet would be required to report as an expense for a given fiscal year under GASB 45. The ARC is equal to the Normal Cost plus an amount to amortize the unfunded AAL as a level percentage of payroll over 22 years as of December 31, 2015 on a closed basis. Note, the ARC represents an accounting expense, but TriMet is not required to contribute the ARC to a separate trust. If TriMet does not set aside funds equal to the ARC each year, then the ARC (less actual benefit payments) will accumulate as a liability (Net OPEB Obligation) on its balance sheet.

ACTUARIAL ASSUMPTIONS

This section of the report describes the assumptions used for the Union Plan. These assumptions have been chosen on the basis of recent experience of the Plan, published actuarial tables and on current and future expectations. Please see the Plan's 2013 Experience Study dated February 14, 2014, and letter regarding the assumptions for the 2015 Actuarial Valuation for the Pension Plan for Bargaining Unit Employees of TriMet dated May 12, 2015 for additional detail regarding the development of the demographic assumptions not related to Plan coverage.

The assumptions are intended to estimate the future experience of the participants of the Plan and of the Plan itself in areas which affect the projected benefit flow and anticipated investment earnings. Any variations in future experience from that expected from these assumptions will result in corresponding changes in the estimated costs of the Plan's benefits.

ECONOMIC ASSUMPTIONS

1. **Discount Rate**

   3.50%. The discount rate is based on long-term expectations of investment return for the Oregon Local Government Investment Pool or similar investments, which are representative of TriMet's general financial assets. In our professional judgment the selected discount rate is reasonable and is not expected to have any significant bias.

2. **Inflation**

   2.50% per annum compounded annually.

3. **Health Care Cost Trend**

   Health care cost trend affects both the projected health care costs as well as the projected health care premiums. Jeff Bradley, FSA and health consultant with Milliman, assisted in the development of the trend rates.

   Dental: 5.0% per year.

Medicare and Prescription Drugs				Medicare Part B	
Pre-65		Post-65		Post-65	
Year	Trend Rate	Year	Trend Rate	Year	Trend Rate
2016	4.50%	2016	4.50%	2016	17.25%
2017	7.75%	2017	8.25%	2017-2019	1.00%
2018	5.25%	2018-2039	5.25%	2020-2029	5.50%
2019	5.50%	2040	5.00%	2030-2039	5.00%
2020	5.25%	2041	5.50%	2040+	4.50%
2021	5.50%	2042	5.75%		
2022	5.75%	2043-2052	5.50%		
2023-2024	6.25%	2053-2060	5.75%		
2025	6.00%	2061-2063	5.50%		
2026-2027	6.25%	2064-2065	5.25%		

Medicare and Prescription Drugs				Medicare Part B	
Pre-65		Post-65		Post-65	
Year	Trend Rate	Year	Trend Rate	Year	Trend Rate
2028-2031	6.00%	2066-2068	5.00%		
2032-2033	6.25%	2069-2076	4.75%		
2034-2037	6.00%	2077+	4.50%		
2038-2042	5.75%				
2043-2052	5.50%				
2053-2062	5.25%				
2063-2065	5.00%				
2066-2068	4.75%				
2069+	4.50%				

4. **Annual Salary Increases**

   2.75%, compounded annually for purposes of attributing individual costs under the Entry Age Normal Actuarial Cost Method.

5. **Annual Payroll Increases**

   2.00%, compounded annually for purposes of amortizing the unfunded AAL.

DEMOGRAPHIC ASSUMPTIONS

1. **Healthy Mortality**

   RP-2014 Annuitant and Non-Annuitant Mortality Tables with Blue Collar Adjustment set forward 1 year for males and set forward 2 years for females. This assumption includes a margin for future mortality improvement based on recent plan experience.

2. **Disabled Mortality**

   RP-2014 Disability Mortality Tables for males and females. This assumption includes a margin for future mortality improvement based on recent plan experience.

3. **Withdrawal**

   The rates of assumed future withdrawal from active service for reasons other than death, disability or retirement at select ages are shown below.

	Annual Rates	
Years of Service	Male	Female
Less than 1	5.0%	14.0%
1-6	2.5%	3.0%
7-9	1.5%	3.0%
10+	0.5%	1.0%

4. **Retirement**

All active employees are assumed to retire by age 70. A certain percentage of active employees are assumed to elect retirement beginning at age 55. The rates of retirement are as follows:

Age	Annual Rates	Age	Annual Rates
55-56	4.0%	63	20.0%
57	7.5%	64	25.0%
58-60	11.0%	65	30.0%
61	20.0%	66-69	40.0%
62	35.0%	70+	100.0%

5. **Disablement**

The rates of disablement used in this valuation are 70% of the 1985 Pension Disability Table, Class 3, Unisex (for nonhazardous light manual workers). Rates at select ages are shown below.

Age	Annual Rates
30	0.2%
35	0.3%
40	0.4%
45	0.6%
50	0.9%
55	1.5%
60	2.2%

6. **Future Retiree and Spouse Coverage**

All active members eligible for health care coverage are assumed to elect coverage upon retirement or disability. 58% of male members and 32% of female members who elect coverage upon retirement are assumed to elect spouse coverage.

7. **Spouse Age**

Females are assumed to be two years younger than males.

DATA PROCESSING

The census data provided by TriMet was essentially complete. Data deficiencies, if any, which we deemed could be material to the overall valuation results were reported to TriMet with a request to fix the deficiencies.

CHANGES TO ASSUMPTIONS SINCE THE PRIOR VALUATION

The following items have changed since our prior valuation:

- Healthy mortality: The previous tables were the RP-2000 Combined Healthy Mortality Table with Blue Collar Adjustment for males and females, projected to 2010 using Scale AA.
- Disabled mortality: The previous tables were blended, 75% of the Post-1994 Disability Mortality developed by the IRS (in IRS Revenue Ruling 96-7) for participants who become eligible for Social Security disability benefits, plus 25% of the RP 2000 Combined Healthy Mortality Table with Blue Collar Adjustment for males and females.
- Health care claims costs and trend rates were updated.
- Carrier elections were updated.

SUMMARY OF PARTICIPANT DATA

The following is a summary of participant data used in our analysis as of January 1, 2016, and is based on information provided by TriMet. All data for valuation purposes was accepted without audit.

	Count	Average Age
Active	2,371	49.1
Healthy Retiree – Under 65	245	62.3
Healthy Retiree – Over 65	823	72.4
Disabled Retiree – Under 65	148	57.7
Disabled Retiree – Over 65	79	68.8
Surviving Spouse – Under 65	38	54.5
Surviving Spouse – Over 65	106	77.1
Total	3,810	
Spouses of Retirees	766	65.6

Average Service – Actives

Service to Valuation Date	10.8
Expected Future Service	12.3

DISTRIBUTION OF ACTIVE MEMBERS BY AGE AND SERVICE

	Years of Service							
AGE	0 TO 4	5 TO 9	10 TO 14	15 TO 19	20 TO 24	25 TO 29	30 & Up	Total
Under 25	29	0	0	0	0	0	0	29
25 to 29	101	6	0	0	0	0	0	107
30 to 34	129	36	3	0	0	0	0	168
35 to 39	118	50	23	13	0	0	0	204
40 to 44	142	61	22	41	10	0	0	276
45 to 49	140	72	44	67	42	8	0	373
50 to 54	124	72	52	71	52	27	10	408
55 to 59	100	64	41	73	59	38	39	414
60 to 64	52	43	38	62	34	18	36	283
65 & Up	10	20	17	24	16	4	18	109
Total	945	424	240	351	213	95	103	2,371

SUMMARY OF BENEFITS VALUED

The following summary is intended only to describe our understanding of the essential features of the postemployment benefits other than pensions (OPEB) provided to current and future Non-Union retirees of TriMet as of January 1, 2016. All eligibility requirements and benefit amounts shall be determined in strict accordance with the relevant plan documents. To the extent that this summary does not accurately reflect any OPEB provisions, the results of this valuation may need to be revised.

There are two categories of OPEB valued under GASB 45: explicit employer benefits and implicit employer subsidies. Explicit employer benefits are paid from the employer to the retiree or from the employer to a benefits provider on behalf of the retiree. Implicit employer subsidies arise from offering benefits to retirees.

Explicit employer benefits under GASB 45 include retiree medical, dental, vision and life insurance coverage, where the employer pays for all or a portion of such coverage. Termination benefits, such as payout of unused sick leave or conversion of such payout to an individual account, are not accounted for under GASB 45.

Implicit employer subsidies under GASB 45 represent the difference between the premiums charged for coverage and the expected claims resulting from that coverage. One common implicit subsidy in Oregon comes from offering pre-Medicare health care insurance coverage to retirees based on the same gross premium rates as are charged to active employees. Health care premiums, priced only for retirees who on average incur higher health care claims costs than younger active employees, would be more expensive than health care premiums that are priced to cover the average costs of both actives and retirees combined. GASB 45 states that this implicit subsidy must be included in the liabilities and costs reported on the entity's financial statements. The liability from the explicit employer benefits plus the implicit employer subsidies equals the total Actuarial Accrued Liability (AAL) under GASB 45.

Beginning in 2020, an excise tax of 40% is scheduled to apply to the portion of group health care plan costs that exceeds thresholds set under law. While many details of this excise tax are still unknown, its overall structure is clear enough that actuaries are generally making an estimate of its potential impact when performing OPEB valuations. We have modeled the impact of the excise tax in this valuation. The effect of the excise tax can be observed by the increase in trend rates beginning in 2026 for pre-65 medical benefits, and in 2041 for post-65 medical benefits.

To our knowledge, the summary below covers all OPEB for Non-Union retirees of TriMet which result in material AAL under GASB 45. If additional retiree benefits may result in AAL under GASB 45, the results of this valuation may need to be revised.

Eligibility

Retirees who were employees immediately prior to retirement at or after attaining age 55 are eligible for OPEB benefits after they meet the following requirements:

- Tier 1 – Hired prior to April 27, 2003
  - 5 years of credited service as a Non-Union employee
- Tier 2 – Hired from April 27, 2003 through April 30, 2009
  - 10 years of credited service as a Non-Union employee
- Tier 3 – hired on or after May 1, 2009
  - 10 years of credited service as a Non-Union employee

Health Care Benefits

Medical, prescription drug, dental and vision benefits are provided to all covered retirees, spouses and domestic partners. Dependents receive all benefits.

Benefits are payable over the life of the retiree and spouse or domestic partner while both are alive. Following the retiree's death, benefits continue to the surviving spouse or domestic partner and qualified dependent(s) until the earlier of the survivor's death or 10 years after the retiree's death.

Retirees and their dependents under age 65, and non-Medicare may continue to receive the same health care coverage received prior to retirement. Health insurance premiums for retirees who are not eligible for one of TriMet's Medicare companion plans are underwritten together with active employees. Retirees must enroll in a Medicare companion plan upon reaching Medicare eligibility.

Retiree health benefits cease for Tier 3 retirees when the employee becomes eligible for coverage under Medicare.

Retirees pay a portion of the health care premium according to the following table.

Employee Class	Percent of Premium
Grandfathered Retiree (retired prior to January 1, 1988)	0%
Hired before May 1, 2009	
Full-time active or retiree	6%
Part-time active or retiree (worked 30-37.4 hours/week)	10%
Part-time active or retiree (worked 20-29 hours/week)	25%
Hired on or after May 1, 2009	100%

The implicit employer subsidy is measured as the expected health care cost per retiree and dependent, less the gross premiums charged by the insurance carrier for that coverage.

We are not aware of any additional implicit employer OPEB subsidies which result in GASB 45 AAL.

Life Insurance Benefits

Eligible retirees are provided a $10,000 whole life insurance benefit fully paid by TriMet.

Changes since the Prior Valuation

None.

OPEB COSTS AND PREMIUMS

The following methods were used to establish costs and premiums for purposes of measuring the OPEB liability.

Health Care Premiums per Month

Current total health insurance premiums charged by providers are shown below. Premiums are the same for full-time and part-time employees.

Provider / Covered Group	January – December 2016		
	Retired after 1987		Retired prior to 1988
Regence PPO			
Retiree Only	$ 694.36		$ 777.18
Retiree & Spouse/Domestic Partner	1,458.08		1,557.78
Retiree & Child(ren)	1,215.08		1,392.70
Family	1,944.08		2,108.02
Regence HDHP/HSA PPO	HDHP	HSA	
Retiree Only	$ 537.44	$ 62.50	N/A
Retiree & Spouse/Domestic Partner	1,128.60	125.00	N/A
Retiree & Child(ren)	940.64	125.00	N/A
Family	1,504.82	125.00	N/A
United Healthcare PPO	$ 425.06		N/A
Kaiser Permanente			
Retiree Only	$ 534.34		$1,189.94
Retiree & Spouse/Domestic Partner	1,068.68		2,379.89
Retiree & Child(ren)	961.82		2,141.90
Family	1,603.02		3,569.82
Medicare, Single*	386.50		518.70
Moda Dental			
Retiree Only	$ 69.82		$ 69.82
Retiree & Spouse/Domestic Partner	131.94		131.94
Retiree & Child(ren)	132.68		132.68
Family	199.00		199.00
Kaiser Dental			
Retiree Only	$ 48.98		$ 48.98
Retiree & Spouse/Domestic Partner	92.56		92.56
Retiree & Child(ren)	93.04		93.04
Family	139.58		139.58

** Over age 65 members with Medicare Part A and B coverage*

Expected Health Care Costs Per Person per Month

Expected health care costs were developed using a composite of the premiums due for active and retired members electing coverage as of December 31, 2015 except as noted below. The effective date of the premiums provided as of the valuation date was January 1, 2016.

- Expected dental costs for Moda Dental and Kaiser Dental were blended based on the current covered population. The blended premium rates were $69.15 per employee per month and $128.81 per month for employee and spouse coverage.

Milliman's Health Cost Guidelines were used to allocate costs by age and gender. Retirees' costs include a load for expected health status of retirees relative to active employees and spouses.

Jeff Bradley, FSA and health consultant with Milliman, assisted in the development of the per capita claims costs.

For the period January 1, 2016 – December 31, 2016:

Regence – Retired after 1987				
	Retiree		Spouse	
Age	Male	Female	Male	Female
55	$ 906.33	$ 955.50	$ 767.68	$ 848.65
60	1,107.36	1,082.72	930.54	971.47
64	1,383.98	1,250.41	1,148.81	1,110.58

Kaiser – Under 65 – Retired after 1987				
	Retiree		Spouse	
Age	Male	Female	Male	Female
55	$ 791.34	$ 834.27	$ 767.53	$ 838.10
60	966.86	945.35	909.98	945.47
64	1,208.39	1,091.77	1,101.07	1,067.01

Kaiser – 65 and Older – Retired after 1987				
	Retiree		Spouse	
Age	Male	Female	Male	Female
65	$311.15	$309.57	$311.15	$309.57
70	367.83	348.09	367.83	348.09
75	419.55	386.44	419.55	386.44
80	455.65	415.50	455.65	415.50
85	469.38	424.35	469.38	424.35
90+	471.52	423.41	471.52	423.41

United Healthcare and Regence – Retired prior to 1988				
	Retiree		Spouse	
Age	Male	Female	Male	Female
65	$340.81	$339.08	$340.81	$339.08
70	402.89	381.27	402.89	381.27
75	459.54	423.27	459.54	423.27
80	499.08	455.10	499.08	455.10
85	514.12	464.79	514.12	464.79
90+	516.46	463.77	516.46	463.77

Dental				
	Retiree		Spouse	
Age	Male	Female	Male	Female
55	$63.50	$67.17	$67.37	$71.03
60	70.47	72.36	74.33	76.23
65	76.17	75.06	80.03	78.92
70+	79.94	75.10	83.80	78.96

Expected Carrier Elections

Medical and prescription drug costs for current retirees are valued based on the retiree's elected plan. For active members and retirees under age 65, post-65 coverage is valued assuming the member elects a carrier according to the percentages as shown in the following table. In the case where a retiree and spouse are on separate pre-65 and post-65 plans ("split coverage"), the pre-65 member is assumed to elect the same plan as the post-65 member at age 65.

Medical and prescription drug costs for future retirees and post-65 coverage for members currently under age 65 are valued assuming the member elects a carrier according to the percentages as shown in the following table, except in the case of split pre-65 and post-65 coverage as noted above.

Carrier	Pre-65	Carrier	Post-65
Regence PPO	70%	Kaiser Senior Advantage	30%
Regence HSA PPO	0%	United Healthcare	70%
Kaiser HMO	30%		

Life Insurance

Life insurance for current and future retirees was valued at its face amount under the valuation assumptions.

Administrative Expenses

No administrative expenses were valued.

ACTUARIAL COST METHOD

The method used for this valuation is the **Entry Age Normal Actuarial Cost Method** with Normal Cost expressed as a level percent of pay.

The **Present Value of Benefits** is the present value of projected benefits (projected costs less retiree contributions) discounted at the valuation discount rate.

The Present Value of Benefits is allocated over the service for each active employee from their date of hire to their expected retirement age, as a level percent of the employee's pay. This level percent times pay is referred to as the **Normal Cost**, and is that portion of the Present Value of Benefits attributable to an employee's service in the current year. The Normal Cost equals $0 for retired members.

The **Actuarial Accrued Liability (AAL)** is the Present Value of Benefits less the actuarial present value of future Normal Costs and represents the liabilities allocated to service up to the valuation date. For retirees, the Actuarial Accrued Liability is equal to the Present Value of Benefits.

The **Annual Required Contribution (ARC)** is the amount TriMet would be required to report as an expense for a given fiscal year under GASB 45. The ARC is equal to the Normal Cost plus an amount to amortize the unfunded AAL as a level percentage of payroll over 22 years as of December 31, 2015 on a closed basis. Note, the ARC represents an accounting expense, but TriMet is not required to contribute the ARC to a separate trust. If TriMet does not set aside funds equal to the ARC each year, then the ARC (less actual benefit payments) will accumulate as a liability (Net OPEB Obligation) on its balance sheet.

ACTUARIAL ASSUMPTIONS

This section of the report describes the assumptions used for the Non-Union Plan. These assumptions have been chosen on the basis of recent experience of the Plan, published actuarial tables and on current and future expectations. Please see our letter regarding the assumptions for the 2015 Actuarial Valuation for the TriMet Defined Benefit Retirement Plan for Management and Staff Employees dated May 14, 2015 for additional detail regarding the development of the demographic assumptions not related to Plan coverage.

The assumptions are intended to estimate the future experience of the participants of the Plan and of the Plan itself in areas which affect the projected benefit flow. Any variations in future experience from that expected from these assumptions will result in corresponding changes in the estimated costs of the Plan's benefits.

ECONOMIC ASSUMPTIONS

1. **Discount Rate**

   3.50%. The discount rate is based on long-term expectations of investment return for the Oregon Local Government Investment Pool or similar investments, which are representative of TriMet's general financial assets. In our professional judgment the selected discount rate is reasonable and is not expected to have any significant bias.

2. **Inflation**

   2.50% per annum compounded annually.

3. **Health Care Cost Trend**

   Health care cost trend affects both the projected health care costs as well as the projected health care premiums. Jeff Bradley, FSA and health consultant with Milliman, assisted in the development of the trend rates.

   Dental: 5.0% per year.

   Medical and prescription drugs:

Pre-65		Post-65	
Year	Trend Rate	Year	Trend Rate
2016	4.50%	2016	4.25%
2017	7.75%	2017	8.25%
2018-2025	5.25%	2018-2039	5.25%
2026-2029	5.50%	2040	5.00%
2030-2036	6.25%	2041-2045	5.50%
2037-2039	6.00%	2046-2052	5.25%
2040-2045	5.75%	2053-2061	5.75%
2046-2058	5.50%	2062-2063	5.50%
2059-2063	5.25%	2064-2065	5.25%
2064-2066	5.00%	2066-2068	5.00%
2067-2069	4.75%	2069-2077	4.75%
2070+	4.50%	2078+	4.50%

4. Annual Salary Increases

2.75%, compounded annually for purposes of attributing individual costs under the Entry Age Normal Actuarial Cost Method.

5. Annual Payroll Increases

2.00%, compounded annually for purposes of amortizing the unfunded AAL.

DEMOGRAPHIC ASSUMPTIONS

6. Healthy and Disabled Mortality

For healthy participants, RP-2014 Healthy Annuitant Mortality Table with White Collar adjustment for males and females, projected 10 years past the valuation date using Scale BB. This assumption includes a margin for future mortality improvement.

For disabled participants, RP-2014 Disability Mortality table for males and females, projected 10 years past the valuation date using Scale BB. This assumption includes a margin for future mortality improvement.

No pre-retirement mortality is assumed.

7. Withdrawal

Rates are shown below:

Years of Service	Annual Rates Male & Female	Years of Service	Annual Rates Male & Female
0-2	12.0%	7-10	3.5%
3-4	9.0%	11-15	2.5%
5-6	5.0%	16+	1.0%

8. Retirement

Rates are shown below:

Age	Annual Rates	Age	Annual Rates
55-57	2%	62	35%
58-60	7%	63-66	30%
61	15%	67	100%

9. Disablement

None.

11. Future Retiree and Spouse Coverage

All active members hired before May 1, 2009 and eligible for health care coverage are assumed to elect coverage upon retirement or disability. 79% of male members and 56% of female members who elect coverage upon retirement are assumed to elect spouse coverage.

50% of active members hired on or after May 1, 2009 and eligible for health care coverage are assumed to elect coverage upon retirement or disability. 70% of male members and 35% of female members who elect coverage upon retirement are assumed to elect spouse coverage.

12. Spouse Age

Males are assumed to be 3 years older than their spouses or domestic partners and female participants are assumed to be 2 years younger than their spouses or domestic partners.

13. Lapse Rates

Members hired before May 1, 2009 are not assumed to subsequently decline coverage after retirement. The probability of members hired on or after May 1, 2009 to decline renewal of coverage after retirement is 3% per year.

DATA PROCESSING

The census data provided by TriMet was essentially complete. Data deficiencies, if any, which we deemed could be material to the overall valuation results were reported to TriMet with a request to fix the deficiencies.

CHANGES TO ASSUMPTIONS SINCE THE PRIOR VALUATION

The following items have changed since our prior valuation:

- Health care claims costs and trend rates were updated.
- Spouse coverage assumptions for future retirees were updated.

SUMMARY OF PARTICIPANT DATA

The following is a summary of participant data used in our analysis as of January 1, 2016, and is based on information provided by TriMet. All data for valuation purposes was accepted without audit.

	Count	Average Age
Active	418	48.8
Healthy Retiree – Under 65	34	62.6
Healthy Retiree – Over 65	110	72.9
Disabled Retiree – Under 65	4	60.5
Disabled Retiree – Over 65	1	65.0
Surviving Spouse – Under 65	1	62.0
Surviving Spouse – Over 65	4	80.8
Total	572	
Spouses of Retirees	94	67.6

Average Service – Actives

Service to Valuation Date	12.0
Expected Future Service	12.9

DISTRIBUTION OF ACTIVE MEMBERS BY AGE AND SERVICE

	Years of Service							
	Hired after	Hired 4/27/03 to	Hired prior to 4/27/03					
AGE	5/1/09	4/30/09	11 TO 14	15 TO 19	20 TO 24	25 TO 29	30 & Up	Total
Under 25	1	0	0	0	0	0	0	1
25 to 29	9	0	0	0	0	0	0	9
30 to 34	29	4	0	0	0	0	0	33
35 to 39	27	19	4	5	0	0	0	55
40 to 44	22	13	4	9	3	0	0	51
45 to 49	24	19	6	14	10	2	0	75
50 to 54	15	13	5	8	13	10	1	65
55 to 59	17	4	4	12	8	5	10	60
60 to 64	11	5	4	8	11	5	11	55
65 & Up	2	4	1	1	3	2	1	14
Total	157	81	28	57	48	24	23	418