Grand Rapids Public Library
Other Postemployment Benefits

Actuarial Valuation Report as of June 30, 2016

Timkovich, Martin

Executive Summary:

This report presents the Actuarial Accrued Liability (AAL) and the Annual Required Contribution (ARC) of the Grand Rapids Public Library Other Post-Employment Benefit Plan (OPEB) as required by the Governmental Accounting Standards Board (GASB) Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*.

The present value of future benefits expected to be paid on behalf of current members at June 30, 2016 was calculated to be $218,870. All plan members had passed the age and service requirements to retire prior to that date, so that amount is also the AAL as the employer will have no future normal cost contributions to reduce that amount. There are no assets set aside to fund this OPEB plan, therefore the Unfunded Actuarial Accrued Liability is equal to the AAL.

The Annual Required Contribution was calculated to be $72,957 for the fiscal year beginning July 1, 2016. The expected employer's portion of required premium payments during the fiscal year was estimated to be $84,456. Actual premiums paid in excess of member contributions are considered employer contributions with respect to the ARC and serve to reduce the Net OPEB Obligation (NOO) reported in the employer's financial statements. The NOO reported in the July 30, 2016 City of Grand Rapids Comprehensive Annual Financial Report was $64,577.

Valuation Results:

The below table summarizes expected future Actuarial Accrued Liabilities of and contributions to the Grand Rapids Public Library OPEB Plan:

Fiscal Year Ending June 30,	Beginning Actuarial Accrued Liability	Annual Required Contribution	Retiree Contributions (nominal dollars)	Employer Contributions (nominal dollars)
2017	$ 218,870	$ 72,957	$ 10,301	$ 84,456
2018	124,769	62,385	8,626	58,938
2019	68,697	68,697	5,384	30,457
2020	39,847	-	3,292	9,978
2021	30,916	-	3,523	10,678
2022	21,006	-	3,770	11,428
2023	9,891	-	3,361	10,188
2024	-	-	-	-

These values were calculated using the ***Alternative Measurement Method for Plans with Fewer Than One Hundred Plan Members*** as permitted by GASB Statement Nos. 43 and 74. The plan is closed and unfunded. All plan members have met the requirements to receive the plan benefits. The unfunded actuarial accrued liabilities are being amortized over three years using the level dollar method. All but one member will age out of benefit eligibility before the beginning of fiscal year 2020, as shown by the sharp decline in employer contributions during the next four years.

Plan summary:

The Grand Rapids Public Library offers certain retirees employed prior to July 9, 2009, and their dependents and beneficiaries, a post-retirement health care benefit plan (OPEB), including health, pharmacy, dental, and vision benefits, between the employee's retirement date and the month they turn 65. The premium for employees retired prior to July 1, 2010 is paid by the employer. Members retiring after July 1, 2010 contribute the same dollar amount each month as current employees for the insurance coverage. The current contribution rate is 20% of the blended composite premium rate for the library's combined active and retired employees with no adjustment for family size. The OPEB plan provides no benefits after a member is 65 years of age.

Plan provisions and benefits are identical for active and retired members. No coverage options exist. Health plan premiums are individually charged to the employer based on the age of the covered individuals. Plan premiums do not decrease for spouses with Medicare coverage. The plan is funded on a pay-as-you-go basis.

At July 1, 2016 the plan had 9 members with a total of 14 covered individuals, including dependents. Four members will age out of the plan in fiscal year 2017. Four of the remaining members will age out of the plan in fiscal year 2019. All plan members have met the minimum age and service requirements to receive benefits. One plan member was still an active employee on the valuation date. This valuation is prepared using the **Alternative Measurement Method for Plans with Fewer Than One Hundred Plan Members**.

Assumptions:

- Active members were assumed to retire on the earlier of the month they reached 30 years of service, or when they had both 8 years of service and were 62 years of age.
- Active members that had reached one of the above milestones prior to the valuation date are assumed to retire at their next birthday.
- The member's marital status is assumed to remain constant between the measurement date and age 65.
- All members are assumed to live until age 65.
- Spouses are assumed to live until the member is age 65.
- Future premium increases are assumed to be 7.0%, primarily reflecting health care cost inflation as well as increasing premiums due to the aging of the population.
- The unfunded actuarial liability is amortized over 3 years.
- The discounting calculation assumed a single mid-year cash flow.
- Future costs are discounted at 3.0%, approximately the recent financing cost of the employer's liabilities and the mid-point of the range of rates in municipal bond 20 year indexes in 2016.
- No adjustments have been made for any future changes in benefits or costs as a result of future changes in legislation or in labor contracts.

Demographic summary:

The composition of the active member population at June 30, 2016 is shown below:

Attained Age	Years of Service to Valuation Date			Total Members
	20 - 24	**25 - 29**	**30 Plus**	
55 - 59	0	0	1	1
60 - 64	0	0	0	0
Totals	0	0	1	1

The composition of the retired member population at June 30, 2016 is shown below:

Attained Age	**Number of retirees**
Under 60	0
60 - 64	8
Totals	8

Since the plan is closed to new entrants, the plan will cease to exist when the current youngest member reaches age 65 in fiscal year 2023.

Retiree rate development:

Initial premium rates were based on the September 2017 health insurance billing which first utilized individual age-graded rates for all covered individuals. This methodology eliminates any implicit rate subsidy in the premiums for retirees. In the new premium rates the premium for a 60 year old retiree is more than double the premium for a 30 year old employee. The actual retiree monthly rates ranged from $963 for the youngest member's single coverage to $2,011 for the oldest couple's coverage. These rates include amounts related to the Michigan Health Insurance Claims Tax and Federal Annual Fee on Health Insurance Carriers which are calculated as a percent of premium along with the Transitional Reinsurance Fee and Patient-Centered Outcomes Research Institute Fee which are calculated as a per member per month rate.

Single and dual dental premiums were assumed to be $40.21 and $73.94 based on recent insurer invoices, a slight decrease for the rates used in the 2013 valuation.

Single and dual vision premiums were assumed to be $8.39 and $14.14 based on recent provider invoices, a slight increase from the rates used in the 2013 valuation.

Comments:

1. It may be worthwhile to see if costs can be reduced by having the insurance provider make Medicare the prime insurer for the Medicare-eligible spouses of retirees. Post-65 city retirees that pay Medicare Advantage premiums for coverage from the same insurer are paying only a third of premiums under this plan.
2. The amortization of the ARC is done over three years, consistent with the six year amortization used in the valuation three years earlier. The lower ARC in this valuation is primarily a result of the lower population size from retired members aging out of benefit eligibility and active members leaving employment prior to becoming eligible for the benefit.
3. Because of the short life of the plan, the selection of different rates for health care cost trends or discount rates have little impact on the valuation results as illustrated on page 7.
4. No mortality factors were applied to the population because of the low probability that <u>any</u> of the covered individuals in the population will die in <u>any</u> year prior to the covered member reaching 65 years of age and becoming ineligible for the benefit.
5. GASB Statement No. 74 applies to plan years beginning after June 15, 2016 (fiscal year 2017). It was reviewed but because no assets are being accumulated to fund future OPEB benefits other than in the choice of the discount rate discussed below, it was judged to be largely inapplicable to this valuation.
6. For plans without sufficient assets to fund future benefits, GASB Statement No. 74 requires the use of a discount rate that is based on the yield of 20-year general obligation municipal debt rated AA or higher. The *S&P Municipal Bond 20-year High Grade Rate Index* seems appropriate to meet this requirement. As of the valuation date of June 30, 2016 yields were near a low of 2.5% and rose during the remainder of the year to 4.0% before beginning to decline again. A rate of 3.0% was used in this valuation to normalize the rate by disregarding the recent extremes and to reflect actual interest rates on short term debt issued by the City of Grand Rapids. Selection of the discount rate in conformity with GASB 74 should be discussed with the auditor. One of the tables on page 7 illustrates the effect of a change in the discount rate.
7. GASB Statement No. 75 will become effective for plan sponsor reporting in financial statements for years beginning after June 15, 2017 (fiscal 2018). Paragraph 29 of that statement requires actuarial valuations not less than biennially (GASB 43 allowed triennial valuations). Prior to including the expanded financial disclosures for this plan in the fiscal year 2018 financial statements, the materiality of the amounts to the primary government's financial statements should be considered. If not in fiscal year 2018, the materiality of the amounts in fiscal year 2019 should be reviewed when a new valuation is required and the plan will only have one member. In addition to the issue of the amounts being immaterial, many of the required disclosures consist of information such as service cost and actuarial gains and losses that was never gathered in the past.

GASB Required Disclosures:

Valuation date	June 30, 2016
Actuarial cost method	Individual entry age
Amortization method	Level dollar closed
Amortization Period	3 Years
Asset Valuation Method	n/a
Liability discount rate	3.0%
Health care cost trend rate	7.0%
Salary increases	n/a
Retirement age	All members have passed the expected retirement age.
Mortality	Social Security Administration 2013 Period Life Table

Required Supplementary Information:

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Plan Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a Percentage of Covered Payroll
	(a)	(b)	(b - a)	(a / b)	(c)	((b - a) / c)
Library Retiree Plan						
June 30, 2010	$ -	$ 1,042,078	$ 1,042,078	0.0%	$ 387,393	269%
June 30, 2013	-	807,530	807,530	0.0%	310,351	260%
June 30, 2016	-	218,870	218,870	0.0%	43,300	505%

Schedule of Actuarial Required Employer Contributions (ARC) and Related Information

Valuation Date	Year Ended	Annual Required Contribution	Annual OPEB Cost	Contributions Made Toward the ARC	Net OPEB Obligation
6/30/2010	June 30, 2011	$ 137,896	$ 137,896	$ 116,876	$ 21,020
	June 30, 2012	137,514	135,534	134,988	21,566
	June 30, 2013	137,333	135,004	127,866	28,704
6/30/2013	June 30, 2014	163,038	158,748	123,222	64,230
	June 30, 2015	161,626	149,890	141,091	73,029
	June 30, 2016	160,724	143,738	152,190	64,577
6/30/2016	June 30, 2017	72,957	tbd	tbd	tbd

Additional financial note disclosures required by GASB Statement Nos. 74 and 75 showing the change in liabilities under different assumptions.

1% Decrease	Current Discount Rate Assumption	1% Increase
2.0%	3.0%	4.0%
$222,696	$218,870	$215,202

1% Decrease	Health Care Cost Trend Rate Assumption	1% Increase
6.0%	7.0%	8.0%
$216,311	$218,870	$221,454

Appendix:

Annual required contribution (ARC) of the employer is the amount that the employer would contribute if the employer's method of financing the benefits was to systematically fund the plan on an ongoing basis using an actuarial methodology. There is no funding requirement in the accounting standard or in Michigan law. In this case the ARC is used as the foundation to calculate the employer's annual OPEB cost (expense) when converting governmental fund statements to full-accrual financial statements.

Amortization method is the method used to allocate the unfunded actuarial liability to future periods. With no continuing active population payroll, the only available method is the level dollar method.

Amortization period is the period over which the Actuarial Accrued Liability is amortized. Three years is used in this valuation, consistent with the prior valuation report and the year that the covered population eligible for future benefits is reduced to a single individual member.

Discount rate is the interest rate used in the discounting of future cash flows to the present. That rate has been reduced to 3.0% from a rate of 3.5% used in prior valuations. GASB 74 specifies the use of a 20-year index rate. The index reached a multi-year low point of 2.5% on approximately the valuation date. It was judged inappropriate to choose that single reference point to measure the present value of future liabilities in recognition of the rapid increase thereafter and the recent interest rates the primary government has paid on its new short-term debt issuances.

Government Accounting Standards Board (GASB) establishes uniform financial reporting standards for state and local governmental units in the United States of America.

Health care inflation has historically been above the consumer price inflation rate. This valuation assumes future cost increases averaging seven percent consisting of a five percent underlying increase in the cost of health care with the additional cost related to the apparent one to three percent increase in insurance premiums for the health and pharmacy benefits related to the increasing age of the insured individual.

Member contributions are made only after retirement in a fixed monthly amount that adjusts once a year. The current contribution amount is assumed to grow at the same percentage as the assumed health care inflation rate above. That estimated contribution is deducted from the total monthly premium to determine the future employer costs.

Mortality assumptions have not been incorporated into the estimates for this population. Based on the 2013 Period Life Table published by the U.S. Social Security Administration there is roughly a one in eight chance that a member or beneficiary will die during fiscal year 2017, but over half of the covered population will lose benefit eligibility prior to year end due to age. Based on these population characteristics, any adjustments for mortality within the covered population was considered immaterial.

The Net OPEB Obligation (NOO) is a required disclosure under GASB Statement No. 45. The calculation of the change in the NOO during the year can only occur after the end of the fiscal year when the employer’s actual contributions are known. In simple terms it is the beginning NOO plus the ARC adjusted for prior over or under funding less actual employer contributions.

Normal cost, frequently called service cost, is the amount that if contributed annually to the plan, with all other assumptions being realized, would result in sufficient assets being accumulated during the employee’s period of employment to fund the post-retirement benefits. Paragraph 63, of GASB 74 defines normal cost of a plan as, “The portion of this actuarial present value [of the projected benefits of each individual included in an actuarial value] allocated to a valuation year … .” Applying the assumptions in the Alternative Measurement Method, all plan members are assumed to be retired, therefore in this valuation the present value of future benefits is assumed to relate entirely to past service costs. In fact for the one member still working, the present value of the liability for their future benefits declines for each month they continue working.

Pay-as-you-go plans, such as this plan, do not pre-fund any of the covered benefits and therefore have no assets. Because no assets have been accumulated to fund future benefits, this plan falls outside most of the new reporting requirements of GASB Statement No. 74, which is effective for fiscal years beginning after June 15, 2016.