Office of the City Manager
City Hall • 375 Merrimack Street • Lowell, MA 01852
P: 978.674.4400 • F: 978.970.4007
www.LowellMA.gov

Eileen M. Donoghue
City Manager

September 4, 2018

Mayor William J. Samaras
And
Members of the Lowell City Council

Dear Mayor Samaras and Members of the Lowell City Council,

The City of Lowell recently received an actuarial update to its liability for other post-employment ("OPEB") benefits. These are benefits (other than pensions) that U.S. state and local governments provide to their retired employees. These benefits principally involve health care benefits, but also may include life insurance, disability, legal and other services. As of June 30, 2018, the city's total liability is $618.8 million. According to rules established by the accounting standards bureau (GASB), this liability must be reported by governments on their balance sheet.

In order to position the city to better address this financial challenge, the finance team has developed a policy for approval by the City Council. By utilizing a more effective long-term investment strategy, a more favorable rate of return can be anticipated, while still being prudent with the city's asset. The proposed strategy achieves the delicate balance of making a significant financial commitment towards addressing the outstanding OPEB liability, while keeping in mind the city's existing budgetary challenges.

The policy goals will be achieved by building a dedicated appropriation into the budget, beginning in FY2020 and dedicating 10% of the annual certified free cash total to the OPEB trust. The city's three enterprise funds for parking, water, and wastewater will likewise contribute a portion of their respective funds' retained earnings proportionate to their employees' share of the OPEB liability. Finally, when the city fully funds its pension liability in approximately FY2036, the surplus available funding will be redirected towards OPEB in its entirety. The ratings agencies have encouraged the city to establish a dedicated funding source to OPEB and this would be a positive credit factor.

Enclosed with this letter is a memorandum from the CFO and information compiled by the City Treasurer/Collector.

Sincerely,

Eileen M. Donoghue
City Manager

CC: Conor Baldwin, Chief Financial Officer
Rodney Conley, City Treasurer/ Collector

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Conor Baldwin
Chief Financial Officer

MEMORANDUM

TO: Eileen Donoghue, City Manager

FROM: Conor Baldwin, Chief Financial Officer

CC: Rodney Conley, Treasurer/ Collector

DATE: August 3, 2018

SUBJECT: OPEB Liability Update and Funding Strategy

The city recently received an update to our Other Post-Employment (OPEB) liability, which calculates the city's total liability for benefits- other than pensions- for reporting purposes on our basic financial statements. A copy of the report is enclosed for your reference. The liability as of June 30, 2018 is $618.8 million. Pursuant to the Governmental Accounting Standards Board (GASB) pronouncements numbers 74 and 75, governments must move the OPEB liability from a footnote on the financial statements to the balance sheet, thus reducing the entity's net position. The effective dates for GASB No. 74 and 75 are for fiscal years beginning after June 15, 2016 and June 15, 2017, respectively.

This change has caused the municipal finance community to raise a number of significant questions regarding the fiscal impact of the change in accounting standards. Most notably, as it relates to Lowell, is how the net OPEB liability on the balance sheet will impact the city's credit rating. This matter is especially poignant currently, given the large debt issuance on the horizon to fund the city's local share for the LHS construction project. Throughout the city's various recent debt issuances, both Standard & Poor's (S&P) and Moody's have made it clear that any potential upgrade would be predicated on a multi-pronged funding strategy to address the current OPEB liability. Furthermore, it is likely that a lack of action on the matter could ultimately result in a downgrade in the city's credit rating. Hilltop Securities, the city's financial advisors, has projected various debt schedules based on an upgraded credit rating, as well as a potential downgrade. The results showed that each positive or negative impact to the city's credit rating would result in an impact of approximately +/- 25 basis points. This impact translates to a potential average savings of $7.7 million over the term of the bond (30 years, approximately $257,319 per year) or, conversely, an additional cost resulting from a credit downgrade.

The City of Lowell has not been complacent in addressing the matter, however. An OPEB Trust fund was established by the City Council and currently has a balance of approximately $8.7 million. However, the fund is only growing at the rate of interest and has not seen any principal addition since inception and continues to address OPEB on a pay-as-you-go basis. Dedicating an annual appropriation to an OPEB trust is one of the strategies the ratings agencies look for in a municipality's financing plan, in concert with a formal policy supported by the legislative body.

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Conor Baldwin
Chief Financial Officer

There are a number of reasons, apart from the potential budgetary savings generated from the high school construction bond, to prefund the city's OPEB liability. They include, but are not limited to the following:

- The fund will insulate the city from unexpected fluctuations in benefit costs, economic downturns, natural disasters, and diversion to other uses;
- Assets can be used as a budget stabilization tool so that in future years, rising OPEB costs will not impact key public services;
- In the long term, pay-as-you-go is the most expensive way of paying for benefits;
- For pensions, most assets are accumulated from investment returns not just contributions, as should be the case with for OPEB.

In order to position the city to better address this financial challenge, the finance team has developed a policy for approval by the City Council. By utilizing a more effective long-term investment strategy, we anticipate we will be able to garner a more favorable rate of return while remaining prudent with the city's assets. We believe that the proposed strategy achieves the delicate balance of making a significant financial commitment towards addressing the outstanding OPEB liability, while keeping in mind the city's existing budgetary challenges and not overburdening the annual budget. These goals will be achieved by building a dedicated appropriation into the budget, beginning in FY2020 and dedicating 10% of the annual free cash total to the OPEB trust, beginning with the current year's certification. The city's three enterprise funds for parking, water, and wastewater will likewise contribute a portion of their respective funds' retained earnings proportionate to their employees' share of the OPEB liability. Finally, when the city fully funds its pension liability in approximately FY2036, the surplus available funding will be redirected towards OPEB in its entirety.

Also attached to this memorandum is a worksheet compiled by the City Treasurer/ Collector which details the existing delta between our current projected funding and our needs to fully fund the liability, as well as projects the costs to achieve both 1 and 2 years of pay-go, moving forward. The proposed strategy, if adopted now, should allow the city to achieve a comfortable funding level over the course of time. The finance team is confident that the ratings agencies will interpret these actions as representative of the City Council and the City of Lowell's strong commitment to good financial management and will respond favorably.

Please do not hesitate to let me know if there are any questions.

Exhibit 1 - City of Lowell Funding Stradegy - OPEB

	Projected PAYGO Cost	Plan Fiduciary Net Position	Delta for 1 year of PAYGO	Delta for 2 years of PAYGO	Cost to get to 1 year PAYGO ($585K at 4.5%)	Cost to get to 2 years PAYGO ($1.75M at 4.5%)
FY18	18,831,118	8,716,722	10,114,396	28,945,514	-	-
FY19	19,142,424	9,021,807	10,120,617	29,263,041	585,000	1,750,000
FY20	19,673,362	9,337,570	10,335,792	30,009,154	1,196,325	3,578,750
FY21	19,604,149	9,664,385	9,939,764	29,543,913	1,835,160	5,489,794
FY22	19,817,912	10,002,638	9,815,274	29,633,186	2,502,742	7,486,834
FY23	20,446,681	10,352,730	10,093,951	30,540,632	3,200,365	9,573,742
FY24	20,882,978	10,715,076	10,167,902	31,050,880	3,929,382	11,754,560
FY25	21,517,717	11,090,104	10,427,613	31,945,330	4,691,204	14,033,516
FY26	22,393,563	11,478,258	10,915,305	33,308,868	5,487,308	16,415,024
FY27	23,489,774	11,879,997	11,609,777	35,099,551	6,319,237	18,903,700
FY28	24,488,321	12,295,797	12,192,524	36,680,845	7,188,602	21,504,366
FY29	25,411,963	12,726,150	12,685,813	38,097,776	8,097,090	24,222,063
FY30	26,384,815	13,171,565	13,213,250	39,598,065	9,046,459	27,062,056
FY31	27,367,836	13,632,570	13,735,266	41,103,102	10,038,549	30,029,848
FY32	28,339,312	14,109,710	14,229,602	42,568,914	11,075,284	33,131,191
FY33	29,542,647	14,603,550	14,939,097	44,481,744	12,158,672	36,372,095
FY34	30,360,310	15,114,674	15,245,636	45,605,946	13,290,812	39,758,839
FY35	31,432,382	15,643,688	15,788,694	47,221,076	14,473,899	43,297,987
FY36	32,583,490	16,191,217	16,392,273	48,975,763	15,710,224	46,996,396
FY37	33,746,579	16,757,910	16,988,669	50,735,248	17,002,184	50,861,234

CITY OF LOWELL OPEB FUNDING POLICY

I. **POLICY STATEMENT** The purpose of this policy is to establish guidelines for the management of the impact of the City's Other Post-Employment Benefits (OPEB) liability on the overall budget and credit rating, within the context of the City's long-term obligations to its retirees. The Other Post-Employment Benefits (OPEB) Liability Trust Fund was initially established with the acceptance of Chapter 32B, Section 20, of the Massachusetts General Laws of the Lowell City Council, which requires the segregation of funds to address the City's actuarial liability. The custodian of the OPEB Trust Fund is the City Treasurer. The City of Lowell's OPEB trust fund is currently managed by Bartholomew & Company with the purpose of investing funds that are designated for addressing the City's OPEB liability. Transfers into, and withdrawals from, the OPEB Trust Fund require a vote by the City Council, upon recommendation by the City Manager.

II. **FUNDING SOURCES** The OPEB Trust Fund shall be supported by transfers from multiple funding sources, potentially including taxation, enterprise fund revenue and/or "free cash".

a. At minimum, the City will seek to appropriate $500,000 as part of each fiscal year's operating budget, as well as an amount equivalent to at least 10% of certified General Fund "free cash" for deposit into the OPEB Trust Fund on an annual basis.

b. In addition, funding will be designated from the individual enterprise funds to offset the funds' overall share of assigned liabilities as determined by the most recent actuarial study. All interest proceeds generated by the accumulated deposits shall accrue to the Trust Fund.

c. When the City of Lowell fully funds its pension liability after approximately FY2036, the surplus available funding will be redirected towards OPEB in its entirety. The appropriation will not result in a reduction in the city's other funding commitments as outlined above.

CITY OF LOWELL

OTHER POSTEMPLOYMENT BENEFITS (OPEB)

REPORTING IN ACCORDANCE WITH GASB 75

FISCAL YEAR

JULY 1, 2017 TO JUNE 30, 2018

Prepared by: AQUARIUS CAPITAL SOLUTIONS GROUP LLC
Date: July 21, 2018

July 21, 2018

Mr. Conor Baldwin
Chief Financial Officer
City of Lowell
375 Merrimack Street
Lowell, MA 01852

Re: GASB75 Reporting for OPEB Liabilities for Fiscal Year July 1, 2017 to June 30, 2018

Dear Mr. Baldwin:

As requested, enclosed is a calculation of estimated costs for other postemployment benefits (OPEB) under Government Accounting Standards Board (GASB) No. 75 for the City of Lowell ("City"). This calculation is based on the census, cost information and assumptions for the July 1, 2016 valuation report with issue date of October 17, 2017 with these results updated to reflect GASB 75 for fiscal year ending June 30, 2018. Please note that we documented the formulas and assumptions used for the calculation for ease of review. Results are based on the following:

- Census: Results for this valuation are based on census information provided by your organization in August 2017. This is based on a total of 5,194 active employees and retirees, reflecting the sum of 2,868 active employees and 2,326 retirees, similar to the last full valuation, which was fiscal year July 1, 2016 to June 30, 2017 under GASB 45.

- Assumptions: All assumptions are the same as the prior valuation, including for the starting plan costs health care costs, retiree contribution rates, healthcare inflation, discount rate, decrement tables (e.g., probability of death, turnover, disability and retirement) and other provisions as reported in your prior valuation report with issue date of October 17, 2017. The healthcare inflation assumptions reflect 8.0% beginning 2018 and decrease 0.5% per year until an ultimate trend rate of 5.0% by 2024. This is consistent with the July 1, 2016 valuation under GASB 45.

- Discount Rate: The assumed discount rate is 3.5% for the current fiscal year, which is consistent with the discount rate from the last valuation. The selected discount rate of 3.5% is based on the prescribed discount interest rate methodology under GASB 75 based on an average of three 20-year bond indices (e.g., Bond Buyer-20 Bond GO, S&P Municipal Bond 20 Year High Grade Rate Index, Fidelity GA AA 20 Years) as of June 30, 2018.

- Covered Benefits and Contribution Rates: Employees who retire from the City may be eligible for subsidized postemployment medical, including prescription drug coverage. Dental and life insurance coverage is provided as well. Life insurance is a face amount of $2,000 on a non-contributory basis through Boston Mutual and additional coverages available on an employee pay-all basis for Trustmark. Benefits for vision coverage and reimbursements for Medicare Part B and D premium rates are not subsidized or provided by your organization. Certain employees are eligible for reimbursement for penalties associated with Medicare Part B coverage, which is described further in this document.

  Medical coverage, including prescription drugs as part of the medical plan, is offered to retirees on a fully insured basis through the Commonwealth of Massachusetts Group Insurance Commission (GIC). The GIC contains several plan options offered to pre-65 and post-65 retirees through multiple insurance carriers including Fallon, Harvard Pilgrim, Health New England, Neighborhood Health Plan, Tufts, and the UniCare State plan. A list of the plan offerings and associated costs are in the prior year valuation report.

  The City contributes 75% of costs of medical benefits for pre-65 and post-65 retirees and their covered spouses and survivors for all plan options, employee groups and coverage tiers. The City contributes up to 75% of the basic dental option. Retirees electing the high dental option pay the difference in addition to their 25% of the basic option.

- Actuarial Cost Method and Aging Requirement under GASB 75: The actuarial cost method is the entry age normal as a percentage of payroll, which is prescribed under GASB 75. This cost method was used in the prior valuation. Similarly, there is an aging requirement under GASB 75 to value an additional implicit subsidy, which was also reflected in the prior valuation under GASB 45.

- Purpose of Report: The roll forward calculation is done for the sole purpose of reporting GASB 75 results for the audited financial statements, and may not be appropriate for use for any other purposes other than GASB 75 reporting. This fiscal year is the first year of implementation of GASB 75, which will replace GASB 45 for reporting purposes for OPEB liabilities. This valuation will not reflect reporting requirements for pension plan benefits, consistent with the prior valuations under GASB 45.

- GASB 74: The City maintains assets in an OPEB trust and these amounts are reflected in the attached report for disclosure reporting purposes under GASB 74.

- Actuarial Certification: I am an Associate of the Society of Actuaries, Fellow of Conference of Consulting Actuaries, and Member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The attached report was completed in accordance with generally accepted actuarial principles and practices.

- Independent Certification: Our organization and its employees are independent of the City and do not have any conflicts of interest as it relates to the services performed on behalf of the City in the preparation of this report.

- Summary of Report Exhibits: Below is a summary of report exhibits under GASB 75.

  - Section I-A: Reported OPEB Liability as of Year End June 30, 2018

  - Section I-B: Projected Expense Calculation as of Year End June 30, 2018

  - Section I-C: Reconciliation of Net OPEB Liability as of Year End June 30, 2018

  - Section I-D: Discount (Interest) Rate Sensitivity as of Year End June 30, 2018

  - Section I-E: Healthcare Cost Inflation (Trend) Rate Sensitivity as of Year End June 30, 2018

  - Section II: Twenty (20) Year Forecast of Pay-As-You-Go and Total Net OPEB Liability

All other information (e.g., census information, cost information, contribution rates, other assumptions) in the report are consistent with the prior valuation report with issue date of October 17, 2017. In general, the liabilities illustrated in the report will be greater than those results reported under GASB 45 for the prior fiscal year. This is due to the recognition of the full liability. Other prescribed methodologies for GASB 75 were previously reflected under GASB 45 (e.g., prescribed discount rate, change in actuarial cost method, aging, etc.), so the liability did not change for those items.

- Reported OPEB Liability as of Year End June 30, 2018: The projected Net OPEB Liability as of June 30, 2018 is $610,047,305. This calculation is based on the requirements under GASB 75. The illustrated payroll in the report is illustrated as of fiscal year July 1, 2016 to June 30, 2017 valuation. This calculation is illustrated on the top of page 1 of the report.

- Projected Expense Calculation as of Year End June 30, 2018: The projected Expense as of June 30, 2018 is $30,990,200. This calculation is based on the requirements under GASB 75 for fiscal year July 1, 2017 to June 30, 2018 valuation. This calculation is illustrated on the bottom of page 1 of the report.

- Reconciliation of Net OPEB Liability as of Year End June 30, 2018: This reflects the liability balances at the beginning and end of year for fiscal year July 1, 2017 to June 30, 2018. The balances at the beginning of year will be different from the prior year balance as of June 30, 2017 since the prior yearend is based on GASB 45 reporting. This calculation is illustrated on page 2 of the report. This reflects reported assets consistent with reporting from the prior yearend, i.e., assets reported as "ending cash value" in the report. This is $8,716,722 as of June 30, 2018 based on reporting provided by the City on July 9, 2018.

- Discount (Interest) Rate Sensitivity as of Year End June 30, 2018: This exhibit illustrates the current discount rate of 3.5% plus two scenarios of discount rates as prescribed under GASB 75. The two scenarios reflect a 1% increase (increase to 4.5%) and 1% decrease (decrease to 2.5%) of the current valuation rate. Results are illustrated as of June 30, 2018. This calculation is illustrated on the top of page 3 of the report.

- Healthcare Cost Inflation (Trend) Rate Sensitivity as of Year End June 30, 2018: This exhibit illustrates the current healthcare cost inflation (trend) rates plus two scenarios of changes for trend rates as prescribed under GASB 75. The two scenarios reflect a 1% increase and 1% decrease of the current valuation trend rates. Results are illustrated as of June 30, 2018. This calculation is illustrated on the bottom of page 3 of the report.

- Reported Salary (Compensation): For the GASB75 calculation, the assumed payroll amount is $185,336,939 based on salary from the prior valuation census file. As a result, this census amount will not match the July 1, 2017 to June 30, 2018 audited financial statements.

- Projections of Pay-As-You-Go: As part of the report, we included the projection of the pay-as-you-go amounts for twenty (20) years based on the most current census population available to our organization, which was census information provided for the prior year valuation. We also included a projection of the Net OPEB Liability for twenty (20) years in this exhibit. See Section II, page 4 of the report for details.

We hope that this information is beneficial. If you have any questions or require additional information for yearend June 30, 2018 reporting, including disclosure requirements and additional background information for GASB 75, then please contact me at (914) 933-0063 or alternatively email me at michael.frank@aquariuscapital.com.

We look forward to continuing working with you.

Sincerely,

Michael L. Frank, A.S.A., M.A.A.A., F.C.A.
President & Actuary
American Academy of Actuaries ID No. 21342

Cc: Donald Rusconi – Aquarius Capital

Enclosure (4 pages)

SECTION I: GASB NO. 75 REPORTING TO YEAR END JUNE 30, 2018
(First Year of Implementation of GASB No. 75)

Section A: Reported OPEB Liability as of Year End June 30, 2018

1	Discount Rate		3.50%
2	Present Value of Future Benefits as of Year End June 30, 2018	$	792,461,804
3	OPEB Liability as of Year End June 30, 2018	$	618,764,027
4	Plan Fiduciary Net Position as of Year End June 30, 2018	$	8,716,722
5	Net OPEB Liability as of Year End June 30, 2018: (3) - (4)	$	610,047,305
6	Plan Fiduciary Net Position as a Percentage of OPEB Liability: (4) / (3)		1.41%
7	Total Annual Salary (Compensation) based on Valuation Census	$	185,336,939
8	Net OPEB Liability as a Percentage of Annual Salary: (5) / (7)		329.16%
9	Total Employee Census Counts for Valuation		
	a. Active Employees		2,868
	b. Retired Employees		2,326
	c. Subtotal: (8a) + (8b)		5,194

Section B: Projected Expense Calculation as of Year End June 30, 2018

1	Service Cost with Interest to Year End - Period July 1, 2017 to June 30, 2018	$	10,498,112
2	Interest Cost - Period July 1, 2017 to June 30, 2018		
	a. Discount Rate: (1)		3.50%
	b. OPEB Liability as of July 1, 2017: (2)	$	606,209,254
	c. Actual Benefit Payments - Illustrated as Project for Period July 1, 2017 to June 30, 2018	$	18,831,118
	d. Interest Cost: (2a) x [(2b) - (2c) / 2]	$	20,887,779
3	Investment Return - Period July 1, 2017 to June 30, 2018	$	(395,691)
4	Employee Contributions - Period July 1, 2017 to June 30, 2018 (Amount is illustrated as zero since employer contributions are illustrated net of employee contributions)	$	-
5	Administrative Expenses	$	-
6	Plan Changes	$	-
7	Amortization of Unrecognized Amounts		
	a. Liability (Gain)/Loss	$	-
	b. Asset (Gain)/Loss	$	-
	c. Net (Gain)/Loss: (a) - (b)	$	-
8	Total Expense - Period July 1, 2017 to June 30, 2018	$	30,990,200

SECTION I: GASB NO. 75 REPORTING TO YEAR END JUNE 30, 2018 (CONTINUED)
(First Year of Implementation of GASB No. 75)

Section C: Reconciliation of Net OPEB Liability as of Year End June 30, 2018

	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability
1 Balance Recognized as of Beginning of Year (End of Prior Year)	$ 606,209,254	$ 8,321,031	$ 597,888,223
2 Changes Recognized for Fiscal Year			
a. Service Cost: Section B, Line 1	$ 10,498,112	$ -	$ 10,498,112
b. Interest on Total OPEB Liability: Section B, Line 2d	$ 20,887,779	$ -	$ 20,887,779
c. Change in Benefit Terms	$ -	$ -	$ -
d. Change in Expected to Actual	$ -	$ -	$ -
e. Changes in Assumptions	$ -	$ -	$ -
f. Benefit Payments: Section B, Line 2c	$ (18,831,118)	$ (18,831,118)	$ -
g. Contributions from Employer	$ -	$ 18,831,118	$ (18,831,118)
h. Contributions from Employees	$ -	$ -	$ -
i. Net Investment Income	$ -	$ 395,691	$ (395,691)
j. Administrative Expenses: Section B, Line 5	$ -	$ -	$ -
k. Net Changes: (a) + … + (j)	$ 12,554,773	$ 395,691	$ 12,159,082
3 Balance Recognized as of End Year - June 30, 2018 (1) + (2k)	$ 618,764,027	$ 8,716,722	$ 610,047,305

Note: Employee Contributions are illustrated above as zero since employer contributions are illustrated net of employee contributions.

SECTION I: GASB NO. 75 REPORTING TO YEAR END JUNE 30, 2018 (CONTINUED)

(First Year of Implementation of GASB No. 75)

Section D: Discount (Interest) Rate Sensitivity as of Year End June 30, 2018

	Current Valuation Discount Rate 3.50%	Discount Rate Less 1% 2.50%	Discount Rate Plus 1% 4.50%
1 OPEB Liability as of Year End June 30, 2018			
a. OPEB Liability	$ 618,764,027	$ 767,268,779	$ 493,206,787
b. Ratio to Current Valuation Assumptions	n/a	124.00%	79.71%
2 Plan Fiduciary Net Position as of Year End June 30, 2018			
a. Plan Fiduciary Net Position	$ 8,716,722	$ 8,716,722	$ 8,716,722
b. Ratio to Current Valuation Assumptions	n/a	100.00%	100.00%
3 Net OPEB Liability as of Year End June 30, 2018			
a. OPEB Liability: (1a) - (2a)	$ 610,047,305	$ 758,552,057	$ 484,490,065
b. Ratio to Current Valuation Assumptions	n/a	124.34%	79.42%

Note: Sensitivity analysis for discount (interest) rate is illustrated as of end of year.

Section E: Healthcare Cost Inflation (Trend) Rate Sensitivity as of Year End June 30, 2018

	Current Valuation Discount Rate	Trend Rate Less 1%	Trend Rate Plus 1%
1 OPEB Liability as of Year End June 30, 2018			
a. OPEB Liability	$ 618,764,027	$ 492,092,522	$ 783,299,999
b. Ratio to Current Valuation Assumptions	n/a	79.53%	126.59%
2 Plan Fiduciary Net Position as of Year End June 30, 2018			
a. Plan Fiduciary Net Position	$ 8,716,722	$ 8,716,722	$ 8,716,722
b. Ratio to Current Valuation Assumptions	n/a	100.00%	100.00%
3 Net OPEB Liability as of Year End June 30, 2018			
a. OPEB Liability: (1a) - (2a)	$ 610,047,305	$ 483,375,800	$ 774,583,277
b. Ratio to Current Valuation Assumptions	n/a	79.24%	126.97%

Note: Sensitivity analysis for healthcare cost inflation (trend) rate is illustrated as of end of year.

SECTION II: TWENTY (20) YEAR FORECAST OF PAY-AS-YOU-GO COSTS AND TOTAL NET OPEB LIABILITY FOR CURRENT POPULATION

Fiscal Year				Total OPEB Liability at Beginning of Year	Annual Service Cost with Interest	Annual Projected PAYGO	Annual Interest Cost	Total OPEB Liability at End of Year	Plan Fiduciary Net Position at End of Year	Net OPEB Liability at End of Year
1 Fiscal Year	July 1, 2017	to	June 30, 2018	$ 606,209,254	$ 10,498,112	$ 18,831,118	$ 20,887,779	$ 618,764,027	$ 8,716,722	$ 610,047,305
2 Fiscal Year	July 1, 2018	to	June 30, 2019	618,764,027	10,813,055	19,142,424	21,321,749	631,756,407	9,021,807	622,734,600
3 Fiscal Year	July 1, 2019	to	June 30, 2020	631,756,407	11,137,447	19,673,362	21,767,190	644,987,682	9,337,570	635,650,112
4 Fiscal Year	July 1, 2020	to	June 30, 2021	644,987,682	11,471,570	19,604,149	22,231,496	659,086,599	9,664,385	649,422,214
5 Fiscal Year	July 1, 2021	to	June 30, 2022	659,086,599	11,815,717	19,817,912	22,721,218	673,805,622	10,002,638	663,802,984
6 Fiscal Year	July 1, 2022	to	June 30, 2023	673,805,622	12,170,189	20,446,681	23,225,380	688,754,510	10,352,730	678,401,780
7 Fiscal Year	July 1, 2023	to	June 30, 2024	688,754,510	12,535,295	20,882,978	23,740,956	704,147,783	10,715,076	693,432,707
8 Fiscal Year	July 1, 2024	to	June 30, 2025	704,147,783	12,911,354	21,517,717	24,268,612	719,810,032	11,090,104	708,719,928
9 Fiscal Year	July 1, 2025	to	June 30, 2026	719,810,032	13,298,695	22,393,563	24,801,464	735,516,628	11,478,258	724,038,370
10 Fiscal Year	July 1, 2026	to	June 30, 2027	735,516,628	13,697,656	23,489,774	25,332,011	751,056,521	11,879,997	739,176,524
11 Fiscal Year	July 1, 2027	to	June 30, 2028	751,056,521	14,108,586	24,488,321	25,858,433	766,535,219	12,295,797	754,239,422
12 Fiscal Year	July 1, 2028	to	June 30, 2029	766,535,219	14,531,844	25,411,963	26,384,023	782,039,123	12,726,150	769,312,973
13 Fiscal Year	July 1, 2029	to	June 30, 2030	782,039,123	14,967,799	26,384,815	26,909,635	797,531,742	13,171,565	784,360,177
14 Fiscal Year	July 1, 2030	to	June 30, 2031	797,531,742	15,416,833	27,367,836	27,434,674	813,015,413	13,632,570	799,382,843
15 Fiscal Year	July 1, 2031	to	June 30, 2032	813,015,413	15,879,338	28,339,312	27,959,601	828,515,040	14,109,710	814,405,330
16 Fiscal Year	July 1, 2032	to	June 30, 2033	828,515,040	16,355,718	29,542,647	28,481,030	843,809,141	14,603,550	829,205,591
17 Fiscal Year	July 1, 2033	to	June 30, 2034	843,809,141	16,846,390	30,360,310	29,002,015	859,297,236	15,114,674	844,182,562
18 Fiscal Year	July 1, 2034	to	June 30, 2035	859,297,236	17,351,782	31,432,382	29,525,337	874,741,973	15,643,688	859,098,285
19 Fiscal Year	July 1, 2035	to	June 30, 2036	874,741,973	17,872,335	32,583,490	30,045,758	890,076,576	16,191,217	873,885,359
20 Fiscal Year	July 1, 2036	to	June 30, 2037	890,076,576	18,408,505	33,746,579	30,562,115	905,300,617	16,757,910	888,542,707
21 Subtotal:	(1) + … + (20)					$ 495,457,333				

Notes:

1. Projections are based on the current census population and valuation assumptions. Group is assumed to be closed group with no new hires.
2. The above costs are net of retiree contribution rates.
3. Service cost is assumed for illustrative purposes to increase based on the assumed salary increase assumption on a year-over-year basis.
4. Plan fiduciary net position (assets) are reflected and assumed to increase at the current annual investmet rate of return of 3.50%, consistent with the discount rate for illustrative purposes.