

February 2, 2018

Personal and Confidential

Mr. Tom Evans
Executive Director
Cambridge Redevelopment Authority
255 Main Street, 4th Floor
Cambridge, MA 02142

Re: GASB 74 and 75 - Summary of Results

Dear Mr. Evans:

The purpose of this letter is to summarize our actuarial valuation of the Cambridge Redevelopment Authority Other Postemployment Benefits Plan (the "Plan") for the Reporting Date and fiscal year ending December 31, 2018 with a Valuation Date of December 31, 2017 and a Measurement Date of December 31, 2017 in accordance with Statement Nos. 74 and 75 of the Governmental Accounting Standards Board ("GASB 74/75").

What caused plan liabilities to change from FY 15 to FY 18?

Plan experience was in line with expectation - for the year ending on the Measurement Date of December 31, 2017, the Plan saw an experience loss of \$19,806 or 2.23%. The slight loss was due to the identification of an employee with several years of service not on the prior valuation. This was mostly offset by premiums for Medicare integrated plans increasing less than the expected 16%. The actuarial experience loss is amortized into the net OPEB expense over time until fully recognized.

Over the three year period, the Total OPEB Liability ("TOL") went from \$934,045 as of December 31, 2014 to \$900,917 as of December 31, 2017 for a decrease of \$33,128. The Net OPEB Expense was \$5,853 for the fiscal year December 31, 2018. As this is the first year using GASB 75 methodology, there is no baseline for comparison. For a 30-year projection of future costs and liabilities refer to Exhibit C of our GASB 75 report.

If you or your auditors have questions on this report, feel free to give us a call.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Elmore', with a long horizontal flourish extending to the right.

Parker E. Elmore, ASA, EA, FCA, MAAA
President, CEO & Actuary

**Cambridge Redevelopment
Authority Other
Postemployment Benefits Plan**

GASB 74 Required Supplementary Information

With a Valuation Date of December 31, 2017

For the Reporting Date of December 31, 2017

Delivered February 2018

February 2, 2018

ACTUARIAL CERTIFICATION

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the Cambridge Redevelopment Authority other postemployment benefit programs with a Valuation Date of December 31, 2017 for the Reporting Date & fiscal year ending December 31, 2018 in accordance with generally accepted actuarial principles and practices. The actuarial calculations presented in this report have been made on a basis consistent with our understanding of GASB Statement Number 74 for the determination of the liability for postemployment benefits other than pensions.

The actuarial data is based on the plan of benefits verified by the Authority and on participant claims or premium data provided by the Authority and/or vendors employed by the Authority.

The actuarial computations made are for purposes of fulfilling plan accounting requirements. Determinations for purposes other than meeting financial accounting requirements may yield results significantly different than those reported here. As such, additional determinations may be needed for other purposes including determining the benefit security at termination and/or adequacy of the funding of an ongoing plan.

To the best of our knowledge, this report is complete and accurate and in our opinion represents the information necessary to comply with GASB Statement Number 74 with respect to the benefit obligations addressed. The signing actuaries are members of the Society of Actuaries, the American Academy of Actuaries and other professional actuarial organizations and meet their "General Qualification Standards for Statements of Actuarial Opinion" to render the actuarial opinion contained herein. Further, in our opinion, the assumptions as approved by the Authority are reasonably related to the experience and expectations of the postemployment benefits programs.



Parker E. Elmore, ASA, EA, FCA, MAAA
President, CEO & Actuary

GASB 74 & 75 Required Supplementary Information
(Liabilities As of December 31, 2017)

1. EFFECT OF 1% CHANGE IN HEALTHCARE TREND

For the Reporting Date December 31, 2018, in the event that healthcare trend rates were 1% higher than forecast and employee contributions were to increase at the forecast rates, the Net OPEB Liability would increase to \$1,042,310 or by 17.7% and the corresponding Service Cost would increase to \$29,792 or by 40.0%. If such healthcare trend rates were 1% less than forecast and employee contributions were to increase at the forecast rate, the Net OPEB Liability would decrease to \$761,578 or by 14.0% and the corresponding Service Cost would decrease to \$15,100 or by 29.0%.

Impact of a 1% Change in the Healthcare Trend Rate as of the December 31, 2017 Reporting Date

	<u>1% Decrease (4.00%)</u>	<u>Current Trend Rate (5.00%)</u>	<u>1% Increase (6.00%)</u>
Net OPEB Liability	761,578	885,407	1,042,310
Service Cost	15,100	21,279	29,792

2. EFFECT OF 1% CHANGE IN DISCOUNT RATES

For the Reporting Date December 31, 2018, if the discount rate were 1% higher than what was used in this valuation, the Net OPEB Liability would decrease to \$ 786,639 or by 11.2% and the corresponding Normal Cost would decrease to \$16,692 or by 21.6%. If the discount rate were 1% lower than was used in this valuation, the Net OPEB Liability would increase to \$1,007,818 or by 13.8% and the corresponding Normal Cost would increase to \$27,502 or by 29.2%.

Impact of a 1% Change in the Discount Rate as of the December 31, 2017 Reporting Date

	<u>1% Decrease (3.50%)</u>	<u>Current Discount Rate (4.50%)</u>	<u>1% Increase (5.50%)</u>
Net OPEB Liability	1,007,818	885,407	786,639
Service Cost	27,502	21,279	16,692

GASB 74 & 75 Required Supplementary Information
(Liabilities As of December 31, 2017)

3. INVESTMENT POLICY

The chart below shows how the long-term rate of return on assets is developed based on the Authority's Investment Policy Statement.

Investment Target Allocation & Expected Long-Term Real Rate of Return			
Asset Class	Target Allocation	Asset Class	Long-Term Expected Real Rate of Return
Domestic Equity - Large Cap	62.00%	Domestic Equity - Large Cap	4.00%
Domestic Equity - Small/Mid Cap	0.00%	Domestic Equity - Small/Mid Cap	6.00%
International Equity - Developed Market	0.00%	International Equity - Developed Market	4.50%
International Equity-Emerging Market	0.00%	International Equity-Emerging Market	7.00%
Domestic Fixed Income	0.00%	Domestic Fixed Income	2.00%
International Fixed Income	0.00%	International Fixed Income	3.00%
Alternatives	0.00%	Alternatives	6.50%
Real Estate	0.00%	Real Estate	6.25%
Cash	38.00%	Cash	0.00%
Total	<u>100.00%</u>		
		I. Real Rate of Return	2.48%
		II. Inflation Assumption	2.75%
		III. Total Nominal Return [I. + II.]	5.23%
		IV. Investment Expense	0.25%
		V. Net Investment Return [III.-IV.]	4.98%

GASB 74 & 75 Required Supplementary Information
(Liabilities As of December 31, 2017)

4. SCHEDULE OF NET OPEB LIABILITY CHANGE

Schedule of Changes in the Authority's Net OPEB Liability and Related Ratios	
	<u>December 31, 2017</u>
Total OPEB Liability	900,917
I. Service Cost	19,251
II. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	39,355
III. Changes in Benefit terms	0
IV. Difference between Expected & Actual Plan Experience	20,678
V. Changes of assumptions	0
VI. Benefit Payments Excluding Implicit Cost	N/A
VII. Implicit Cost Amount	N/A
VIII. Total Benefit payments including Implicit Cost [VI.+VII.]	<u>(66,619)</u>
IX. Net Change in OPEB liability [I.+II.+III.+IV.+V.+VIII.]	12,665
X. Total OPEB liability - beginning of period	888,252
XI. Total OPEB liability - end of period [IX.+X.]	900,917
Plan Fiduciary Net Position	15,510
XII. Interest on Fiduciary Net Position	0
XIII. Earning from Plan Investments	<u>1,510</u>
XIV. Net investment gain/(loss) [XII.+XIII.]	1,510
XV. Employer Contribution to trust	80,619
XVI. Benefit payments from trust, including refunds of member contributions	<u>(66,619)</u>
XVII. Administrative expense	0
XVIII. Other	<u>0</u>
XIX. Net change in plan fiduciary net position [XIV.+XV.+XVI.+XVII.+XVIII.]	15,510
XX. Plan fiduciary net position - beginning of period	0
XXI. Plan fiduciary net position - end of period [XIX.+XX.]	15,510
XXII. Net OPEB Liability [XI.-XXI.]	885,407
XXIII. Plan fiduciary net position as % of total OPEB liability [XXI. / XI.]	1.72%
XXIV. Covered employee payroll	391,450
XXV. Plan NOL as % of covered employee payroll [XXI. / XI.]	226.19%
Single Discount Rate to calculate Plan Liabilities	4.50%

GASB 74 & 75 Required Supplementary Information
(Liabilities As of December 31, 2017)

5. ACTUARIALLY DETERMINED CONTRIBUTION (ADC)

Actuarially Determined Contribution - Deficiency / (Excess)	
<u>For the Fiscal Year Ending December 31, 2017</u>	
I. Service Cost	19,251
II. 30 year amortization of NOL at 4.50%	<u>52,183</u>
III. Actuarial Determined Contribution [I. + II.]	71,434
IV. Contributions in relation to the actuarially determined contribution	<u>(80,619)</u>
V. Contribution deficiency / (excess) [III. + IV.]	<u>(9,185)</u>
Covered employee payroll	391,450
Contributions as a % of covered employee payroll	20.59%

GASB 74 & 75 Required Supplementary Information
(Liabilities As of December 31, 2017)

Notes to Required Supplementary Information:

Valuation Date: Actuarially Determined Contribution was calculated as of December 31, 2017.

Actuarial Cost Method: Individual Entry Age Normal

Asset-Valuation Method: Market Value of Assets as of the Reporting Date, December 31, 2017.

Plan Membership

Plan Membership: At December 31, 2017, OPEB plan membership consisted of the following

Inactive employees or beneficiaries currently receiving benefits:	12
Active Employees:	<u>5</u>
Total:	17

Actuarial Assumptions:

Investment Rate of Return: 4.98%, net of OPEB plan investment expense, including inflation.

Municipal Bond Rate: 3.16% as of December 31, 2017 (source: S&P Municipal Bond 20-Year High Grade Index - SAPIHG)

Single Equivalent Discount Rate: 4.50%, net of OPEB plan investment expense, including inflation. Using a blend of the Municipal Bond Index Rate for unfunded periods and the Investment Rate of Return for funded periods, based on GASB No. 74 Implementation Guide Exposure Draft; IG ED 4.136.

Inflation: 2.75% as of December 31, 2017 and for future periods

Salary Increases: 3.00% annually as of December 31, 2017 and for future periods

Cost of Living Adjustment: Not Applicable

GASB 74 & 75 Required Supplementary Information
(Liabilities As of December 31, 2017)

Actuarial Assumptions (Continued):

Pre-Retirement Mortality:	RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 for males and females
Post-Retirement Mortality:	RP-2000 Healthy Annuitant Mortality Table projected generationally with scale BB and a base year 2009 for males and females
Disabled Mortality:	RP-2000 Healthy Annuitant Table projected generationally with Scale BB and a base year 2012 for males and females
Mortality Experience Study:	The mortality assumptions reflect PERAC's recent experience analysis published in 2014 (based on the years 2006-2011), updated to reflect data through January 1, 2015 for post-retirement mortality, and professional judgement. As such, mortality assumptions reflect observed current mortality as well as expected mortality improvements.

Changes in Assumptions:
2017

Effective for the Fiscal Year ending December 31,

- Discount rate is 4.50% previously 4.00%
- The assumed pre-retirement mortality table is the RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 for males and females- previously RP-2000 Mortality Table projected to 2017
- The assumed post-retirement mortality table is the RP-2000 Healthy Annuitant Mortality Table projected generationally with scale BB and a base year 2009 for males and females- previously RP-2000 Mortality Table projected to 2017
- The actuarial cost method is Individual Entry Age Normal

GASB 74 & 75 Required Supplementary Information
Projection Exhibits
(Liabilities As of December 31, 2017)

Projection of OPEB Plan's Fiduciary Net Position using a December 31, 2017 Valuation Date

Fiscal Year	I. Projected Beginning Fiduciary Net Position	II. Portion of Employer Contributions for Current Plan Members	III. Total Projected Benefit Payments	IV. Projected Administrative Expense	V. Total Contributions to Trust	VI. Contributions to Trust for Current Plan Members	VII. Projected Investment Earnings
2017	0	66,619	66,619	0	14,000	14,000	1,510
2018	15,510	53,183	53,183	0	7,000	6,438	945
2019	22,893	53,909	53,909	0	7,000	6,004	1,312
2020	30,209	53,631	53,631	0	7,000	5,623	1,677
2021	37,509	53,413	53,413	0	7,000	5,323	2,040
2022	44,872	53,230	53,230	0	7,000	5,079	2,407
2023	52,358	53,062	53,062	0	7,000	4,854	2,780
2024	59,992	47,920	47,920	0	7,000	4,706	3,160
2025	67,858	49,022	49,022	0	7,000	3,284	3,552
2026	74,694	52,622	52,622	0	7,000	3,161	3,892
2027	81,747	52,357	52,357	0	7,000	3,067	4,243
2028	89,057	51,987	51,987	0	7,000	2,976	4,607
2029	96,640	51,479	51,568	0	7,000	2,895	4,985
2030	104,431	52,015	52,234	0	7,000	2,733	5,373
2031	112,318	53,071	53,477	0	7,000	2,510	5,766
2032	120,188	54,609	55,255	0	7,000	2,258	6,158
2033	127,958	55,617	56,549	0	7,000	2,085	6,544
2034	135,655	55,664	56,870	0	7,000	1,955	6,928
2035	143,332	53,660	55,161	0	7,000	1,769	7,310
2036	150,910	53,359	55,252	0	7,000	1,639	7,688
2037	158,344	54,300	56,761	0	7,000	1,474	8,058
2038	165,415	52,530	55,509	0	7,000	1,263	8,410
2039	172,109	54,410	58,040	0	7,000	990	8,743
2040	178,212	56,548	60,965	0	7,000	858	9,047
2041	183,700	57,031	62,332	0	7,000	765	9,320
2042	188,484	51,868	58,116	0	7,000	644	9,559
2043	192,439	51,423	58,882	0	7,000	588	9,756
2044	195,324	50,981	59,600	0	7,000	543	9,899
2045	197,147	45,014	54,805	0	7,000	501	9,990
2046	197,847	46,524	57,749	0	7,000	352	10,025
2047	196,999	49,096	61,945	0	7,000	245	9,983
2048	194,378	50,789	65,454	0	7,000	182	9,852
2049	189,747	51,767	68,493	0	7,000	141	9,622
2050	182,784	49,208	68,218	0	7,000	84	9,275
2051	173,133	49,375	70,728	0	7,000	62	8,794
2052	160,636	49,479	73,166	0	7,000	46	8,172
2053	145,167	46,479	72,946	0	7,000	32	7,401
2054	126,133	46,316	75,567	0	7,000	0	6,454
2055	103,336	46,441	78,451	0	7,000	0	5,318
2056	76,644	46,170	81,347	0	7,000	0	3,989

GASB 74 & 75 Required Supplementary Information
Projection Exhibits
(Liabilities As of December 31, 2017)

Projection of OPEB Plan's Fiduciary Net Position using a December 31, 2017 Valuation Date (Continued)

Fiscal Year	I. Projected Beginning Fiduciary Net Position	II. Portion of Employer Contributions for Current Plan Members	III. Total Projected Benefit Payments	IV. Projected Administrative Expense	V. Total Contributions to Trust	VI. Contributions to Trust for Current Plan Members	VII. Projected Investment Earnings
2057	45,456	45,929	84,589	0	7,000	0	2,436
2058	9,232	45,719	88,038	0	7,000	0	632
2059	632	45,482	91,759	0	7,000	0	204
2060	204	45,229	95,804	0	7,000	0	182
2061	182	44,907	100,022	0	7,000	0	181
2062	181	44,523	104,365	0	7,000	0	181
2063	181	44,044	108,998	0	7,000	0	181
2064	181	43,468	113,707	0	7,000	0	181
2065	181	42,724	118,403	0	7,000	0	181
2066	181	41,819	123,231	0	7,000	0	181
2067	181	40,742	128,238	0	7,000	0	181
2068	181	39,487	133,358	0	7,000	0	181
2069	181	38,152	138,810	0	7,000	0	181
2070	181	36,898	144,787	0	7,000	0	181
2071	181	35,447	150,881	0	7,000	0	181
2072	181	33,828	157,103	0	7,000	0	181
2073	181	32,018	163,535	0	7,000	0	181
2074	181	30,062	170,203	0	7,000	0	181
2075	181	27,960	177,011	0	7,000	0	181
2076	181	25,845	184,192	0	7,000	0	181
2077	181	23,639	191,791	0	7,000	0	181
2078	181	21,472	199,891	0	7,000	0	181
2079	181	19,336	208,486	0	7,000	0	181
2080	181	17,238	217,668	0	7,000	0	181
2081	181	15,229	227,465	0	7,000	0	181
2082	181	13,275	237,873	0	7,000	0	181
2083	181	11,420	248,945	0	7,000	0	181
2084	181	9,702	260,758	0	7,000	0	181
2085	181	8,112	273,346	0	7,000	0	181
2086	181	6,668	286,726	0	7,000	0	181
2087	181	5,424	301,047	0	7,000	0	181
2088	181	4,360	316,318	0	7,000	0	181
2089	181	3,477	332,576	0	7,000	0	181
2090	181	2,734	349,849	0	7,000	0	181
2091	181	2,133	368,150	0	7,000	0	181
2092	181	1,624	387,488	0	7,000	0	181
2093	181	1,228	407,910	0	7,000	0	181
2094	181	890	429,441	0	7,000	0	181
2095	181	636	452,137	0	7,000	0	181
2096	181	447	476,030	0	7,000	0	181

GASB 74 & 75 Required Supplementary Information
Projection Exhibits
(Liabilities As of December 31, 2017)

Actuarial Present Values of Projected Benefit Payments using a December 31, 2017 Valuation Date

Fiscal Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments	Present Value of Unfunded Benefit Payments	Present Value of Benefit Payments using Single Discount Rate
2017	0	66,619	0	66,619	0	66,619	66,619
2018	15,510	53,183	15,510	37,673	14,774	36,520	50,970
2019	22,893	53,909	22,893	31,016	20,773	29,147	49,515
2020	30,209	53,631	30,209	23,422	26,111	21,337	47,210
2021	37,509	53,413	37,509	15,904	30,882	14,045	45,061
2022	44,872	53,230	44,872	8,358	35,192	7,155	43,038
2023	52,358	53,062	52,358	704	39,115	584	41,117
2024	59,992	47,920	47,920	0	34,101	0	35,587
2025	67,858	49,022	49,022	0	33,231	0	34,890
2026	74,694	52,622	52,622	0	33,979	0	35,894
2027	81,747	52,357	52,357	0	32,204	0	34,227
2028	89,057	51,987	51,987	0	30,459	0	32,571
2029	96,640	51,479	51,479	0	28,731	0	30,910
2030	104,431	52,015	52,015	0	27,653	0	29,932
2031	112,318	53,071	53,071	0	26,876	0	29,269
2032	120,188	54,609	54,609	0	26,343	0	28,864
2033	127,958	55,617	55,617	0	25,557	0	28,173
2034	135,655	55,664	55,664	0	24,365	0	27,024
2035	143,332	53,660	53,660	0	22,373	0	24,966
2036	150,910	53,359	53,359	0	21,193	0	23,793
2037	158,344	54,300	54,300	0	20,543	0	23,205
2038	165,415	52,530	52,530	0	18,931	0	21,515
2039	172,109	54,410	54,410	0	18,678	0	21,357
2040	178,212	56,548	56,548	0	18,491	0	21,273
2041	183,700	57,031	57,031	0	17,765	0	20,561
2042	188,484	51,868	51,868	0	15,390	0	17,922
2043	192,439	51,423	51,423	0	14,534	0	17,029
2044	195,324	50,981	50,981	0	13,726	0	16,180
2045	197,147	45,014	45,014	0	11,544	0	13,691
2046	197,847	46,524	46,524	0	11,365	0	13,562
2047	196,999	49,096	49,096	0	11,425	0	13,716
2048	194,378	50,789	50,789	0	11,258	0	13,598
2049	189,747	51,767	51,767	0	10,931	0	13,283
2050	182,784	49,208	49,208	0	9,897	0	12,101
2051	173,133	49,375	49,375	0	9,460	0	11,637
2052	160,636	49,479	49,479	0	9,030	0	11,176
2053	145,167	46,479	46,479	0	8,080	0	10,062
2054	126,133	46,316	46,316	0	7,670	0	9,609
2055	103,336	46,441	46,441	0	7,326	0	9,234
2056	76,644	46,170	46,170	0	6,938	0	8,798

GASB 74 & 75 Required Supplementary Information
Projection Exhibits
(Liabilities As of December 31, 2017)

Actuarial Present Values of Projected Benefit Payments using a December 31, 2017 Valuation Date (Continued)

Fiscal Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments	Present Value of Unfunded Benefit Payments	Present Value of Benefit Payments using Single Discount Rate
2057	45,456	45,929	45,456	473	6,506	136	8,388
2058	9,232	45,719	9,232	36,487	1,259	10,207	8,002
2059	632	45,482	632	44,850	82	12,163	7,629
2060	204	45,229	204	45,025	25	11,837	7,271
2061	182	44,907	182	44,725	21	11,398	6,919
2062	181	44,523	181	44,342	20	10,955	6,574
2063	181	44,044	181	43,863	19	10,505	6,233
2064	181	43,468	181	43,287	18	10,050	5,895
2065	181	42,724	181	42,543	18	9,575	5,553
2066	181	41,819	181	41,638	17	9,085	5,210
2067	181	40,742	181	40,561	16	8,579	4,864
2068	181	39,487	181	39,306	15	8,059	4,518
2069	181	38,152	181	37,971	14	7,547	4,184
2070	181	36,898	181	36,717	14	7,075	3,878
2071	181	35,447	181	35,266	13	6,587	3,570
2072	181	33,828	181	33,647	12	6,093	3,265
2073	181	32,018	181	31,837	12	5,588	2,962
2074	181	30,062	181	29,881	11	5,085	2,665
2075	181	27,960	181	27,779	11	4,582	2,376
2076	181	25,845	181	25,664	10	4,104	2,105
2077	181	23,639	181	23,458	10	3,636	1,845
2078	181	21,472	181	21,291	9	3,200	1,606
2079	181	19,336	181	19,155	9	2,790	1,386
2080	181	17,238	181	17,057	8	2,409	1,184
2081	181	15,229	181	15,048	8	2,060	1,003
2082	181	13,275	181	13,094	8	1,738	838
2083	181	11,420	181	11,239	7	1,446	691
2084	181	9,702	181	9,521	7	1,187	562
2085	181	8,112	181	7,931	7	959	451
2086	181	6,668	181	6,487	6	760	355
2087	181	5,424	181	5,243	6	596	277
2088	181	4,360	181	4,179	6	460	213
2089	181	3,477	181	3,296	5	352	163
2090	181	2,734	181	2,553	5	264	123
2091	181	2,133	181	1,952	5	196	92
2092	181	1,624	181	1,443	5	140	67
2093	181	1,228	181	1,047	5	99	49
2094	181	890	181	709	4	65	34
2095	181	636	181	455	4	40	23
2096	181	447	181	266	4	23	16

**Cambridge Redevelopment
Authority Other Postemployment
Benefits Plan**

GASB 74/75 Actuarial Valuation

With a Valuation Date of December 31, 2017

& a Measurement Date of December 31, 2017

For the Reporting Dates of

December 31, 2018

December 31, 2019

Delivered February 2018

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February 2, 2018

Personal and Confidential

Mr. Tom Evans
Executive Director
Cambridge Redevelopment Authority
255 Main Street, 4th Floor
Cambridge, MA 02142

Dear Mr. Evans:

We have performed an actuarial valuation of the Cambridge Redevelopment Authority Other Postemployment Benefits Plan for the Reporting Date & fiscal year ending December 31, 2018 with a Measurement Date of December 31, 2017 and a Valuation Date of December 31, 2017. The figures presented in this report reflect the adoption, by the Cambridge Redevelopment Authority, of Statement Nos. 74 and 75 of the Governmental Accounting Standards Board ("GASB 74/75") effective for the fiscal year ending December 31, 2017 and December 31, 2018 respectively.

The financial results of the actuarial valuation are summarized in the report. The Executive Summaries highlight the results of the valuation. Additional information summarizing census data, actuarial assumptions, claim rates and the methodology for developing them, as well as a glossary of selected terms used in this study, is also included in the report.

All costs, liabilities and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures. In our opinion, the actuarial assumptions used are reasonable, reflecting the experience of the plan and reasonable expectations and, in combination, represent our best estimate of the anticipated experience under the plan.

We refer you to Section I of this report for a detailed summary and commentary on the results of the valuation and a comparison with the prior valuation. Section II is a summary of the plan provisions, and Section III describes the actuarial cost method and assumptions. Details for cost calculations, supporting data, and disclosures are provided in Exhibits A through C.

We will be pleased to answer any questions that you may have regarding this actuarial valuation report.

Very truly yours,

A handwritten signature in black ink, appearing to read 'P. Elmore', written in a cursive style.

Parker E. Elmore, ASA, EA, FCA, MAAA
President, CEO & Actuary

February 2, 2018

ACTUARIAL CERTIFICATION

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the Cambridge Redevelopment Authority other postemployment benefit programs with a Valuation Date of December 31, 2017 with a Measurement Date of December 31, 2017 for the Reporting Date & fiscal year ending December 31, 2018 in accordance with generally accepted actuarial principles and practices. The actuarial calculations presented in this report have been made on a basis consistent with our understanding of GASB Statements Numbers 74 & 75 for the determination of the liability for postemployment benefits other than pensions.

The actuarial data is based on the plan of benefits verified by the Authority and on participant claims or premium data provided by the Authority and/or vendors employed by the Authority.

The actuarial computations made are for purposes of fulfilling plan accounting requirements. Determinations for purposes other than meeting financial accounting requirements may yield results significantly different than those reported here. As such, additional determinations may be needed for other purposes including determining the benefit security at termination and/or adequacy of the funding of an ongoing plan.

To the best of our knowledge, this report is complete and accurate and in our opinion represents the information necessary to comply with GASB Statements Number 74 and 75 with respect to the benefit obligations addressed. The signing actuaries are members of the Society of Actuaries, the American Academy of Actuaries and other professional actuarial organizations and meet their "General Qualification Standards for Statements of Actuarial Opinion" to render the actuarial opinion contained herein. Further, in our opinion, the assumptions as approved by the Authority are reasonably related to the experience and expectations of the postemployment benefits programs.



Parker E. Elmore, ASA, EA, FCA, MAAA
President, CEO & Actuary

Executive Summary

GASB 74 and 75 Impact

The Authority adopted GASB 74 for the fiscal year ending December 31, 2017 and GASB 75 for the fiscal year ending December 31, 2018. The adoption of GASB 74/75 introduces a new actuarial cost method and discount rate as well as new disclosures and methodologies for reporting plan liabilities and OPEB expenses. Significant changes have been made to the recognition of OPEB expenses, which makes the comparison of Net OPEB Expense in the current valuation to the expenses reported under GASB 45 misleading. The liability reported on the Authority's balance sheet is likely to increase dramatically as GASB 74/75 require the recognition of liabilities immediately rather than over a 30 year period as GASB 45 allowed.

What caused plan liabilities to change from FY 15 to FY 18?

Plan experience was in line with expectation - for the year ending on the Measurement Date of December 31, 2017, the Plan saw an experience loss of \$19,806 or 2.23%. The slight loss was due to the identification of an employee with several years of service not on the prior valuation. This was mostly offset by premiums for Medicare integrated plans increasing less than the expected 16%. The actuarial experience loss is amortized into the net OPEB expense over time until fully recognized. Changes in assumptions increased disclosed liabilities by \$60 thousand.

Over the three year period, the Total OPEB Liability ("TOL") went from \$934,045 as of December 31, 2014 to \$900,917 as of December 31, 2017 for a decrease of \$33,128. The Net OPEB Expense was \$5,853 for the fiscal year December 31, 2018. As this is the first year using GASB 75 methodology, there is no baseline for comparison. For a projection of future costs and liabilities refer to Exhibit D.

Executive Summary (continued)

Assumption changes

Some key assumptions have changed since the prior valuation - their impact is detailed below.

- ✓ Based on recommendations by PERAC, the mortality table was updated from the RP-2000 Mortality Table projected to 2017 to RP-2000 Healthy Annuitant Mortality Table projected generationally with scale BB and a base year 2009 for males and females increasing the disclosed liability by \$60 thousand.
- ✓ Due to the GASB 75 standards the discount rate was changed from 4.00% to 4.50% decreasing the disclosed liability by \$50 thousand.
- ✓ GASB 75 requires a change in the actuarial cost method. As such, it has been updated to Entry Age Normal from Projected Unit Credit which increased the disclosed liability by \$60 thousand.
- ✓ Assumption changes caused Normal Cost to increase by \$1 thousand.

It is important to remember that actuarial assumptions or changes in such do not impact the actual cost of the Plan. Rather, they impact the timing of the recognition of such costs.

Key Drivers of Plan Liabilities

Several key drivers of plan costs and liabilities are:

- ✓ Premiums for Post 65 (Medicare Integrated) plans - represent 92% of the total plan liabilities
- ✓ Age at which plan participants retire
- ✓ Percentage of plan participants who elect coverage for themselves and/or a spouse
- ✓ Medical care cost inflation rate
- ✓ Discount Rate
- ✓ Cost Sharing - Under Massachusetts law you may charge retirees up to 50% of premiums for health insurance.

Executive Summary
(continued)

What is Implicit Subsidy? How does it impact us?

The implicit subsidy arises because retirees who are not eligible for Medicare are charged the same premium as active employees, even though their actual medical costs are higher on average. Consequently, a portion of the premiums being paid for active employees are being used to “subsidize” the premiums of retirees. Actuarial Standards of Practice and GASB standards require the liability associated with this implicit subsidy to be valued. The chart below shows a breakdown of how implicit cost impacts reported liabilities.

Impact of Implicit Subsidy		
Impact on Liability	As Of The Measurement Date	
	<u>December 31, 2017</u>	<u>December 31, 2014</u>
I. Actuarial Accrued Liability	900,917	934,045
II. Actuarial Accrued Liability (Excluding Implicit Subsidy)	<u>898,520</u>	<u>N/A</u>
III. Liability from Implicit Subsidy [I. - II.]	2,397	N/A

Executive Summary
(continued)

What are some key plan metrics?

While an actuarial valuation under GASB 74/75 can be very complex with many variables, we find it helpful to look at several key metrics shown below to better allow you to manage your plan.

Representative Plan Statistics

	<u>December 31, 2017</u>	<u>December 31, 2014</u>
Total OPEB Liability	900,917	934,045
Per Eligible Active Plan Participant	30,518	1,808
Per Retiree/Spouse Plan Participant	62,361	54,625
Total Annual Service Cost (annual benefit accrual)	21,279	9,786
Per Eligible Active Plan Participant	4,256	3,262
Expected Employer Share of Retiree Costs	53,183	70,397
Per Retiree/Spouse Plan Participant	4,432	4,141
Net OPEB Liability as a % of Payroll	219.60%	333.60%
Average Annual Medical Plan Premium (Single Coverage)	5,243	4,793
Average Annual Medical Plan Premium (Family Coverage)	21,142	17,972
<u>Projected 2020 Excise Tax Thresholds</u>		
Annual Medical Plan Premium (Single Coverage)	11,850	
Annual Medical Plan Premium (Family Coverage)	30,950	

Executive Summary
(continued)

Liabilities & Benefit Payments in today’s dollars

With the growth of medical care costs over time, the nominal accrued liabilities (“TOL”) and benefit payments can appear daunting. However, it is important to remember that a dollar paid in the future is worth less than a dollar paid today.

Measurement Date	Number of Retirees, Spouses & Surviving Spouses	Present Value at 3.00% of Total OPEB Liability	Present Value at 3.00% of Employer Share of Premiums / Claims including "implicit cost"
December 31, 2017	12	900,917	53,183
December 31, 2022	9	807,799	45,772
December 31, 2027	8	744,005	38,683
December 31, 2032	6	693,647	36,297
December 31, 2037	5	655,083	30,734
December 31, 2042	4	636,471	28,122
December 31, 2047	4	649,947	26,966

A full projection of plan costs and liabilities in today’s dollars is shown in Exhibit E of this report.

We have an “unfunded liability”. How do we fund it? Can we fund it?

If you’re looking to fund your OPEB liability, there are a variety of manner to do so. The amount of funding in combination with your Investment Policy will impact the discount rate and disclosed liabilities. Below are a few sample funding options, but it’s important to develop a funding policy that fits your organization as each situation is different.

	Partial Funding	Full Funding Level Dollar	Full Funding increasing at 3.00% per year
Net OPEB Liability	\$885,407	\$831,388	\$831,388
Required Trust Contribution	\$7,000	\$20,600	\$14,900
Discount Rate	4.50%	5.00%	5.00%

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

Cambridge Redevelopment Authority Assuming Partial Funding - 4.50% discount rate Comparison of Plan Liabilities to Prior Valuation

		As of the Measurement Date	
		<u>December 31, 2017</u>	<u>December 31, 2014</u>
I.	Present Value of Future Benefits		
	A. Actives	361,892	176,360
	B. Retirees/Disabled	<u>748,327</u>	<u>928,620</u>
	C. Total	1,110,219	1,104,980
II.	Present Value of Future Normal Cost	209,302	170,935
III.	Total OPEB Liability (Individual Entry Age Normal)		
	A. Actives	152,590	5,425
	B. Retirees/Disabled	<u>748,327</u>	<u>928,620</u>
	C. Total	900,917	934,045
IV.	Fiduciary Net Position	15,510	0
V.	Net OPEB Liability (Asset) [III. - IV.]	885,407	934,045
VI.	Funded Ratio [IV. / III.]	1.72%	0.00%
VII.	Annual Covered Payroll	403,194	280,000
VIII.	Net OPEB Liability (Asset) as % of Covered Payroll	219.6%	333.6%
IX.	Number of Eligible Participants		
	A. Actives	5	3
	B. Retirees/Disabled	<u>12</u>	<u>17</u>
	C. Total	17	20
For the Reporting Date and Fiscal Year Ending December 31, 2018		<u>December 31, 2018</u>	<u>December 31, 2015</u>
X.	Service Cost	21,279	9,786
XI.	Interest on Net OPEB Liability (Asset), Service Cost, and Benefit Payments	39,619	N/A
XII.	Deferred (Inflows)/Outflows from Plan Design Changes	0	N/A
XIII.	Deferred (Inflows)/Outflows from Expected & Actual Experience	5,559	N/A
XIV.	Deferred (Inflows)/Outflows from Changes in Assumptions	0	N/A
XV.	Projected Earning on OPEB plan investments	(247)	N/A
XVI.	Deferred (Inflows)/Outflows from Earnings on Investments	(174)	N/A
XVII.	Employer Share of Costs	(53,183)	(70,397)
XVIII.	Employer (Payments)/Withdrawals to/from OPEB Trust	(7,000)	0
XIX.	Total Employer Contribution [XVII. + XVIII.]	(60,183)	(70,397)
XX.	Other Changes	0	N/A
XXI.	Net OPEB Expense [X.+XI.+XII.+XIII.+XIV.+XVI.+XIX.+XX.]	5,853	N/A
XXII.	Discount Rate	4.50%	4.00%

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

Cambridge Redevelopment Authority
Comparison of Plan Funding vs. Partial Funding

As of the December 31, 2017 Measurement Date

	<u>Partial Funding - 4.50%</u> <u>discount rate</u>	<u>Funding - 5.00%</u> <u>discount rate</u>
I. Present Value of Future Benefits		
A. Actives	361,892	241,882
B. Retirees/Disabled	748,327	736,161
C. Total	1,110,219	978,043
II. Present Value of Future Normal Cost	209,302	131,145
III. Total OPEB Liability (Individual Entry Age Normal)		
A. Actives	152,590	110,737
B. Retirees/Disabled	748,327	736,161
C. Total	900,917	846,898
IV. Fiduciary Net Position	15,510	15,510
V. Net OPEB Liability (Asset) [III. - IV.]	885,407	831,388
VI. Funded Ratio [IV. / III.]	1.72%	1.83%
VII. Annual Covered Payroll	403,194	403,194
VIII. Net OPEB Liability (Asset) as % of Covered Payroll	219.6%	206.2%
IX. Number of Eligible Participants		
A. Actives	5	5
B. Retirees/Disabled	12	12
C. Total	17	17
For the Reporting Date and Fiscal Year Ending December 31, 2018		
X. Service Cost	21,279	18,632
XI. Interest on Net OPEB Liability (Asset), Service Cost, and Benefit Payments	39,619	41,187
XII. Deferred (Inflows)/Outflows from Plan Design Changes	0	0
XIII. Deferred (Inflows)/Outflows from Expected & Actual Experience	5,559	5,559
XIV. Deferred (Inflows)/Outflows from Changes in Assumptions	0	(14,521)
XV. Projected Earning on OPEB plan investments	(247)	0
XVI. Deferred (Inflows)/Outflows from Earnings on Investments	(174)	(174)
XVII. Employer Share of Costs	(53,183)	(53,183)
XVIII. Employer (Payments)/Withdrawals to/from OPEB Trust	(7,000)	(20,600)
XIX. Total Employer Contribution [XVII. + XVIII.]	(60,183)	(73,783)
XX. Other Changes	0	0
XXI. Net OPEB Expense [X.+XI.+XII.+XIII.+XIV.+XV.+XVI.+XIX.+XX.]	5,853	(23,100)

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

Cambridge Redevelopment Authority
Assuming Partial Funding - 4.50% discount rate
Plan Liabilities as of the December 31, 2017 Measurement Date

	<u>Medical</u>	<u>Dental</u>	<u>Life</u>	<u>Excise Tax</u>	<u>Total</u>
I. Present Value of Future Benefits					
A. Actives	358,172	0	1,469	2,251	361,892
B. Retirees/Disabled	<u>732,054</u>	<u>0</u>	<u>16,272</u>	<u>1</u>	<u>748,327</u>
C. Total	1,090,226	0	17,741	2,252	1,110,219
II. Present Value of Future Normal Cost	207,159	0	885	1,258	209,302
III. Total OPEB Liability					
A. Actives	151,013	0	584	993	152,590
B. Retirees/Disabled	<u>732,054</u>	<u>0</u>	<u>16,272</u>	<u>1</u>	<u>748,327</u>
C. Total	883,067	0	16,856	994	900,917
IV. Fiduciary Net Position	15,203	0	290	17	15,510
V. Net OPEB Liability (Asset) [III. - IV.]	867,864	0	16,566	977	885,407
VI. Annual Covered Payroll	403,194	403,194	403,194	403,194	403,194
VII. Net OPEB Liability (Asset) as % of Covered Payroll	215.2%	0.0%	4.1%	0.2%	219.6%
VIII. Number of Eligible Participants					
IX. A. Actives	5	5	5	5	
B. Retirees/Disabled	<u>12</u>	<u>0</u>	<u>6</u>	<u>12</u>	
C. Total	17	5	11	17	
For the Reporting Date and Fiscal Year Ending December 31, 2018					
X. Service Cost	21,051	0	120	108	21,279
XI. Interest on Net OPEB Liability (Asset), Service Cost, and Benefit Payments	38,851	0	719	49	39,619
XII. Deferred (Inflows)/Outflows from Plan Design Changes	0	0	0	0	0
XIII. Deferred (Inflows)/Outflows from Expected & Actual Experience	5,449	0	104	6	5,559
XIV. Deferred (Inflows)/Outflows from Changes in Assumptions	0	0	0	0	0
XV. Projected Earning on OPEB plan investments	(242)	0	(5)	0	(247)
XVI. Deferred (Inflows)/Outflows from Earnings on Investments	(171)	0	(3)	0	(174)
XVII. Employer Share of Costs	(51,772)	0	(1,411)	0	(53,183)
XVIII. Employer (Payments)/Withdrawals to/from OPEB Trust	(6,861)	0	(131)	(8)	(7,000)
XIX. Total Employer Contribution [XVII. + XVIII.]	(58,633)	0	(1,542)	(8)	(60,183)
XX. Other Changes	0	0	0	0	0
XXI. Net OPEB Expense [X.+XI.+XII.+XIII.+XIV.+XV.+XVI.+XIX.+XX.]	6,305	0	(607)	155	5,853

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

**Cambridge Redevelopment Authority
Plan Liabilities as of the December 31, 2017 Measurement Date
Assuming Partial Funding**

	Authority Employees and Retirees	Total
I. Present Value of Future Benefits		
A. Actives	361,892	361,892
B. Retirees/Disabled	<u>748,327</u>	<u>748,327</u>
C. Total	1,110,219	1,110,219
II. Present Value of Future Normal Cost	209,302	209,302
III. Total OPEB Liability		
A. Actives	152,590	152,590
B. Retirees/Disabled	<u>748,327</u>	<u>748,327</u>
C. Total	900,917	900,917
IV. Fiduciary Net Position	15,510	15,510
V. Net OPEB Liability (Asset) [III. - IV.]	885,407	885,407
VI. Annual Covered Payroll	403,194	403,194
VII. Net OPEB Liability (Asset) as % of Covered Payroll	219.6%	219.6%
VIII. Number of Eligible Participants		
A. Actives	5	5
B. Retirees/Disabled	<u>12</u>	<u>12</u>
C. Total	17	17
For the Reporting Date and Fiscal Year Ending December 31, 2018		
IX. Service Cost	21,279	21,279
X. Interest on Net OPEB Liability (Asset), Service Cost, and Benefit Payments	39,619	39,619
XI. Deferred (Inflows)/Outflows from Plan Design Changes	0	0
XII. Deferred (Inflows)/Outflows from Expected & Actual Experience	5,559	5,559
XIII. Deferred (Inflows)/Outflows from Changes in Assumptions	0	0
XIV. Projected Earning on OPEB plan investments	(247)	(247)
XV. Deferred (Inflows)/Outflows from Earnings on Investments	(174)	(174)
XVI. Employer Share of Costs	(53,183)	(53,183)
XVII. Employer (Payments)/Withdrawals to/from OPEB Trust	(7,000)	(7,000)
XVIII. Total Employer Contribution [XVI. + XVII.]	(60,183)	(60,183)
XIX. Other Changes	0	0
XX. Net OPEB Expense [IX.+X.+XI.+XII.+XIII.+XIV.+XV.+XVIII.+XIX.]	5,853	5,853

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

Cambridge Redevelopment Authority
Detail of Plan Liabilities by Group and Dependency Status
Assuming Partial Funding - 4.50% discount rate
Plan Liabilities as of the December 31, 2017 Measurement Date

	<u>Present Value of Future Benefits</u>	<u>Total OPEB Liability (Individual Entry Age Normal)</u>	<u>Service Cost</u>
Actives			
Under Age 65			
A. Participants	29,138	15,809	1,444
B. Spouses	<u>36,940</u>	<u>19,161</u>	<u>1,951</u>
C. Total	66,078	34,970	3,395
Age 65 and Over			
A. Participants	185,230	65,330	10,373
B. Spouses	<u>110,584</u>	<u>52,290</u>	<u>7,511</u>
C. Total	295,814	117,620	17,884
Actives Total			
A. Participants	214,368	81,139	11,817
B. Spouses	<u>147,524</u>	<u>71,451</u>	<u>9,462</u>
C. Total	361,892	152,590	21,279
Retirees/Disabled			
Under Age 65			
A. Participants	39,996	39,996	0
B. Spouses	<u>0</u>	<u>0</u>	<u>0</u>
C. Total	39,996	39,996	0
Age 65 and Over			
A. Participants	448,840	448,840	0
B. Spouses	<u>259,491</u>	<u>259,491</u>	<u>0</u>
C. Total	708,331	708,331	0
Retirees/Disabled Total			
A. Participants	488,836	488,836	0
B. Spouses	<u>259,491</u>	<u>259,491</u>	<u>0</u>
C. Total	748,327	748,327	0
Total Population			
A. Participants	703,204	569,975	11,817
B. Spouses	<u>407,015</u>	<u>330,942</u>	<u>9,462</u>
C. Total	1,110,219	900,917	21,279

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

Cambridge Redevelopment Authority
Assuming Funding over 30 years at 5.00% discount rate
Plan Liabilities as of the December 31, 2017 Measurement Date

	<u>Medical</u>	<u>Dental</u>	<u>Life</u>	<u>Excise Tax</u>	<u>Total</u>
I. Present Value of Future Benefits					
A. Actives	239,457	0	1,047	1,378	241,882
B. Retirees/Disabled	<u>719,071</u>	<u>0</u>	<u>17,088</u>	<u>2</u>	<u>736,161</u>
C. Total	958,528	0	18,135	1,380	978,043
II. Present Value of Future Normal Cost	128,860	0	1,597	688	131,145
III. Total OPEB Liability (Individual Entry Age Normal)					
A. Actives	110,597	0	(550)	690	110,737
B. Retirees/Disabled	<u>719,071</u>	<u>0</u>	<u>17,088</u>	<u>2</u>	<u>736,161</u>
C. Total	829,668	0	16,538	692	846,898
IV. Fiduciary Net Position	15,194	0	303	13	15,510
V. Net OPEB Liability (Asset) [III. - IV.]	814,474	0	16,235	679	831,388
VI. Annual Covered Payroll	403,194	403,194	403,194	403,194	403,194
VII. Net OPEB Liability (Asset) as % of Covered Payroll	202.0%	0.0%	4.0%	0.2%	206.2%
VIII. Number of Eligible Participants					
A. Actives	5	5	5	5	
B. Retirees/Disabled	<u>12</u>	<u>0</u>	<u>6</u>	<u>12</u>	
C. Total	17	5	11	17	

For the Reporting Date and Fiscal Year Ending December 31, 2018

IX. Service Cost	18,449	0	106	77	18,632
X. Interest on Net OPEB Liability (Asset), Service Cost, and Benefit Payments	40,367	0	782	38	41,187
XI. Deferred (Inflows)/Outflows from Plan Design Changes	0	0	0	0	0
XII. Deferred (Inflows)/Outflows from Expected & Actual Experience	5,446	0	109	5	5,559
XIII. Deferred (Inflows)/Outflows from Changes in Assumptions	(14,226)	0	(284)	(12)	(14,521)
XIV. Projected Earning on OPEB plan investments	0	0	0	0	0
XV. Deferred (Inflows)/Outflows from Earnings on Investments	(170)	0	(3)	(0)	(174)
XVI. Employer Share of Costs	(51,772)	0	(1,411)	0	(53,183)
XVII. Employer (Payments)/Withdrawals to/from OPEB Trust	(20,181)	0	(402)	(17)	(20,600)
XVIII. Total Employer Contribution [XVI. + XVII.]	(71,953)	0	(1,813)	(17)	(73,783)
XIX. Other Changes	0	0	0	0	0
XX. Net OPEB Expense [IX.+X.+XI.+XII.+XIII.+XIV.+XV.+XVIII.+XIX.]	(22,087)	0	(1,104)	91	(23,100)

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

**Cambridge Redevelopment Authority
Plan Liabilities as of the December 31, 2017 Measurement Date
Assuming Funding over 30 years at 5.00% discount rate**

	Authority Employees and Retirees	Total
I. Present Value of Future Benefits		
A. Actives	241,882	241,882
B. Retirees/Disabled	<u>736,161</u>	<u>736,161</u>
C. Total	978,043	978,043
II. Present Value of Future Normal Cost	131,145	131,145
III. Total OPEB Liability		
A. Actives	110,737	110,737
B. Retirees/Disabled	<u>736,161</u>	<u>736,161</u>
C. Total	846,898	846,898
IV. Fiduciary Net Position	15,510	15,510
V. Net OPEB Liability (Asset) [III. - IV.]	831,388	831,388
VI. Annual Covered Payroll	403,194	403,194
VII. Net OPEB Liability (Asset) as % of Covered Payroll	206.2%	206.2%
VIII. Number of Eligible Participants		
A. Actives	5	5
B. Retirees/Disabled	<u>12</u>	<u>12</u>
C. Total	17	17
For the Reporting Date and Fiscal Year Ending December 31, 2018		
IX. Service Cost	18,632	18,632
X. Interest on Net OPEB Liability (Asset), Service Cost, and Benefit Payments	41,187	41,187
XI. Deferred (Inflows)/Outflows from Plan Design Changes	0	0
XII. Deferred (Inflows)/Outflows from Expected & Actual Experience	5,559	5,559
XIII. Deferred (Inflows)/Outflows from Changes in Assumptions	(14,521)	(14,521)
XIV. Projected Earning on OPEB plan investments	0	0
XV. Deferred (Inflows)/Outflows from Earnings on Investments	(174)	(174)
XVI. Employer Share of Costs	(53,183)	(53,183)
XVII. Employer (Payments)/Withdrawals to/from OPEB Trust	(20,600)	(20,600)
XVIII. Total Employer Contribution [XVI. + XVII.]	(73,783)	(73,783)
XIX. Other Changes	0	0
XX. Net OPEB Expense [IX.+X.+XI.+XII.+XIII.+XIV.+XV.+XVIII.+XIX.]	(23,100)	(23,100)

Overview of GASB 74 and 75

Before Statements 74 and 75, GASB statement 45 established the reporting standards for Other Postemployment Benefit (“OPEB”) plans. It was designed to recognize the Other Postemployment Benefits earned by employees throughout their working career vs. when they are paid in retirement – accrual accounting vs. “pay-as-you-go” accounting. Additionally, each eligible active employee earns benefits each year representing benefits to be paid in retirement or a “Service Cost”. These amounts are reflected in your financial statement each year so that OPEB benefits for an eligible employee shall be fully charged to the financial statement when that eligible employee terminates employment.

In 2012 GASB issued GASB Statements 67 and 68 to update and standardize the financial reporting of pension liabilities. This increased the transparency of pension liabilities by moving them to the balance sheet and made financial statement disclosures of pension liabilities more comparable between municipal entities. GASB Statements 74 and 75 are designed to have the same effect on OPEB plans.

GASB 74 and 75 require retiree medical plans to disclose information about asset and liability levels and show historical contribution information. GASB 74 only applies in situations where a separate trust is established to prefund these benefits. GASB 75 requires employers to perform periodic actuarial valuations to determine annual accounting costs and to keep a running tally of the extent to which these amounts are over or under funded.

GASB 74 and 75 apply to those benefits provided after retirement, except for pension benefits, such as medical, dental and life insurance. The philosophy behind the accounting standard is that these post-employment benefits are part of the compensation earned by employees in return for their services, and the cost of these benefits should be recognized while employees are providing those services, rather than after they have retired. This philosophy has already been applied for years to defined benefit pensions; GASB 74 and 75 extend this practice to all other post-employment benefits.

Overview of GASB 74 and 75

(continued)

The process of determining the liability for OPEB benefits is based on many assumptions about future events. The key actuarial assumptions are:

Turnover and retirement rates: How likely is it that an employee will qualify for post-employment benefits and when will they start?

Medical inflation and claims cost assumptions: When an employee starts receiving post-employment benefits many years from now, how much will be paid each year for the benefits and how rapidly will the costs grow?

Mortality assumption: How long is a retiree likely to receive benefits?

Discount rate assumption: What is the present value of those future benefit payments in terms of today's dollars?

Since the liability is being recognized over the employee's whole career with the Authority, the present value is divided into three pieces: the part that is attributed to past years (the "Total OPEB Liability" or "Past Service Liability"), the part that is being earned this year (the "Service Cost"), and the part that will be earned in future years (the "Future Service Liability").

Once the Accrued Liability and the Service Cost have been calculated, the next step is to determine an actuarially determined contribution. This is an amount that if paid annually would fully prefund the benefits for current active and retired employees. This consists of two pieces:

- ✓ Service Cost – because the benefits earned by active employees each year should be paid for each year
- ✓ Past Service Cost – a catch-up payment to fund the Accrued Liability over a period of time determined by an actuary

The final step is to keep track going forward of how much of the contribution is actually paid. There is no requirement to actually fund these benefits, but the cumulative deficiency must be disclosed on the Authority's financial statements as the Net OPEB Liability (NOL). If you decide to fully fund the NOL this will appear in the financial statement as a Net OPEB Asset. In addition, the Discount Rate used to calculate the liabilities must reflect the expected investment income of whatever funds are set aside to prefund the benefits; if there is no prefunding then the Discount Rate will be much lower and the liabilities significantly higher than if the benefits are prefunded.

Commentary on Plan Experience and Contribution Amounts

1. GASB 74/75 – How we got here:

GASB 74 and 75 were designed to recognize the Other Postemployment Benefits (“OPEB”) earned by employees throughout their working career vs. when they are paid in retirement – accrual accounting vs. “pay-as-you-go” accounting while increasing disclosures to better reflect the plan’s liabilities and future funding requirements. Additionally, each eligible active employee earns benefits each year representing benefits to be paid in retirement or a “Service Cost”. These amounts are reflected in your financial statement each year so that OPEB benefits for an eligible employee shall be fully charged to the financial statement when that eligible employee terminates employment. Additionally, GASB 74 and 75 require increased disclosures comparable to those required under GASB 67 and 68 and interest rates used in the valuation are more closely tied to the plan’s underlying investment and funding policy.

2. GASB 74 and 75 Impact

The Authority has adopted GASB 74 for the fiscal year ending December 31, 2017 and GASB 75 for the fiscal year ending December 31, 2018. The adoption of GASB 74/75 introduces a new actuarial cost method and discount rate as well as new disclosures and methodologies for reporting plan liabilities and OPEB expenses. Significant changes have been made to the recognition of OPEB expenses, making the comparison of Net OPEB Expense in the current valuation to the expenses reported under GASB 45 misleading. The liability reported on the Authority’s balance sheet will increase dramatically as GASB 74/75 require the recognition of liabilities immediately rather than recognizing liabilities (Net OPEB Obligation) over a 30 year period as GASB 45 allowed. Please keep these changes in mind when considering any comparison to previously reported liabilities and expenses.

Commentary on Plan Experience and Contribution Amounts
(continued)

3. **Balance Sheet Items as of the Measurement Date**

	December 31, 2017	December 31, 2014
Total OPEB Liability	\$900,917	\$934,045
Fiduciary Net Position	\$15,510	\$0
Net OPEB Liability	\$885,407	\$934,045
Funded Ratio	1.72%	0.00%

5. **Income Statement Items as of the Fiscal Year Ending**

	December 31, 2018	December 31, 2015
Service Cost	\$21,279	\$9,786
Interest Expense	\$39,619	N/A
(Inflow)/Outflow from Plan Design Changes	\$0	N/A
(Inflow)/Outflow from Plan Experience	\$5,559	N/A
(Inflow)/Outflow from Changes in Assumptions	\$0	N/A
Projected Investment Earnings	\$(247)	N/A
(Inflow)/Outflow from Earnings on Investments	\$(174)	N/A
Employer Share of Costs	\$(53,183)	\$(70,397)
Employer Payments (Withdrawals) to/from Trust	\$(7,000)	\$0
Total Employer Payments	\$(60,183)	\$(70,397)
Other Changes	\$0	N/A
Net OPEB Expense	\$5,853	N/A
Interest Rate	4.50%	4.00%

SECTION II

SUMMARY OF PLAN PROVISIONS

<u>Effective Date</u>	GASB 45 is adopted January 1, 2009 GASB 74 is adopted for the fiscal year ending December 31, 2017 GASB 75 is adopted for the fiscal year ending December 31, 2018
<u>Plan Year</u>	January 1 through December 31.
<u>Eligibility</u>	An employee hired before April 2, 2012 shall become eligible to retire under this plan upon attainment of age 55 as an active member and completion of 10 years of service or an employee shall be able to retire with 20 years of service regardless of age. Those hired on or after April 2, 2012 shall be eligible to retire upon attainment of age 60 with 10 years of creditable service.
<u>Creditable Service</u>	Elapsed time from date of hire to termination of service date.
<u>Participant Contributions</u>	20% of premiums for Medical & Life Insurance for participants who retire on or after October 1, 2009, 15% of premiums for Medical & Life Insurance for those who retire between July 1, 1994 and October 1, 2009 and 10% for all others.
<u>Benefits Offered</u>	Comprehensive Medical, Dental & Life Insurance offered through the Group Insurance Commission.
<u>Normal Retirement Date</u>	The normal retirement date is the first day of the month following a participant's 65th birthday.
<u>Early Retirement</u>	Early retirement is available for any participant who has attained benefit eligibility.

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS

A. ACTUARIAL COST METHOD

The actuarial cost method used to calculate the costs and liabilities of the plan is the Individual Entry Age Normal Actuarial Cost Method. Under this method, the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement. The annual normal cost for each active member is a level percent of payroll. The actuarial accrued liability is the actuarial present value of the projected benefit times the ratio of past service to expected total service at retirement/termination.

Actuarial gains and losses are calculated each year and amortized into the OPEB expense. Gains and losses arising from plan design changes are recognized immediately. Gains and losses arising from differences between expected and actual investment returns are amortized over a five (5) year period. Gain and losses arising from differences between expected and actual plan experience and changes in actuarial assumptions are amortized over the remaining lifetime of all active and retired plan participants (3.72 years for the Authority for the 2018 fiscal year).

All employees who are plan participants on the valuation date are included in the actuarial valuation.

B. ASSET VALUATION METHOD

The actuarial value of assets is equal to the Market Value of the Plan's assets as of the measurement date.

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS

(continued)

C. ACTUARIAL ASSUMPTIONS

We used the following assumptions in this year's actuarial valuation:

Pre-Retirement Mortality

It is assumed that pre-retirement mortality is represented by the RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 for males and females

Post-Retirement Mortality

It is assumed that post-retirement mortality is represented by the RP-2000 Healthy Annuitant Mortality Table projected generationally with scale BB and a base year 2009 for males and females

Disabled Mortality

It is assumed that disabled mortality is represented by the RP-2000 Healthy Annuitant Table projected generationally with Scale BB and a base year 2012 for males and females

Mortality Experience Study

The mortality assumptions reflect PERAC's recent experience analysis published in 2014 (based on the years 2006-2011), updated to reflect data through January 1, 2015 for post-retirement mortality, and professional judgement. As such, mortality assumptions reflect observed current mortality as well as expected mortality improvements.

Discount Rate

4.50% per annum (previously 4.00%)

Long Term Rate of Return

4.98% (based on investment policy)

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

C. ACTUARIAL ASSUMPTIONS (continued)

Municipal Bond Rate

3.16% as of December 31, 2017 (source: S&P Municipal Bond 20-Year High Grade Index - SAPIHG)

Employee Termination

It was assumed that employees would terminate employment in accordance with the sample rates shown in the following table:

Non-Public Safety Employees						
<u>Age</u>	<u>0-4 Years of Service (Males)</u>	<u>0-4 Years of Service (Females)</u>	<u>5-9 Years of Service (Males)</u>	<u>5-9 Years of Service (Females)</u>	<u>10+ Years of Service (Males)</u>	<u>10+ Years of Service (Females)</u>
	20	27.00%	27.00%	12.00%	12.00%	6.00%
30	23.00%	23.00%	10.00%	10.00%	5.50%	5.50%
40	16.00%	16.00%	8.00%	8.00%	3.50%	3.50%
50	18.00%	18.00%	6.00%	6.00%	3.00%	3.00%
60	18.00%	18.00%	5.00%	5.00%	3.50%	3.50%

Public Safety Employees		
<u>Service</u>	<u>Public Safety Male</u>	<u>Public Safety Female</u>
0	9.00%	9.00%
5	6.00%	6.00%
10	3.50%	3.50%
15	2.00%	2.00%
20	1.50%	1.50%
25	1.50%	1.50%
30	1.50%	1.50%

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

C. ACTUARIAL ASSUMPTIONS (continued)

Retirement Rates

It was assumed that the following percentage of eligible employees would retire each year:

<u>Age</u>	<u>Non Public Safety Male</u>	<u>Non Public Safety Female</u>	<u>Public Safety</u>
45	0.00%	0.00%	1.00%
46	0.00%	0.00%	1.00%
47	0.00%	0.00%	1.00%
48	0.00%	0.00%	1.00%
49	0.00%	0.00%	1.00%
50	1.00%	1.50%	2.00%
51	1.00%	1.50%	2.00%
52	1.00%	2.50%	2.00%
53	1.00%	2.50%	5.00%
54	2.00%	2.50%	7.50%
55	2.00%	5.50%	15.00%
56	2.50%	6.50%	10.00%
57	2.50%	6.50%	10.00%
58	5.00%	6.50%	10.00%
59	6.50%	6.50%	15.00%
60	12.00%	5.00%	20.00%
61	20.00%	13.00%	20.00%
62	30.00%	15.00%	25.00%
63	25.00%	12.50%	25.00%
64	22.00%	18.00%	30.00%
65	40.00%	15.00%	100.00%
66	25.00%	20.00%	100.00%
67	25.00%	20.00%	100.00%
68	30.00%	25.00%	100.00%
69	30.00%	20.00%	100.00%
70	100.00%	100.00%	100.00%
71	100.00%	100.00%	100.00%
72	100.00%	100.00%	100.00%

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

Disability rates

It was assumed that the following percentage of eligible employees would become permanently disabled each year:

<u>Age</u>	<u>Standard</u>	<u>Teachers</u>	<u>Public Safety</u>
20	0.01%	0.05%	0.20%
25	0.01%	0.06%	0.20%
30	0.01%	0.07%	0.21%
35	0.03%	0.10%	0.40%
40	0.07%	0.21%	0.71%
45	0.10%	0.30%	1.00%
50	0.13%	0.42%	1.10%
55	0.14%	0.50%	0.80%
60	0.12%	0.50%	0.80%

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

C. ACTUARIAL ASSUMPTIONS (continued)

Healthcare Trend

It was assumed that healthcare costs would increase in accordance with the trend rates in the following table:

<u>Year</u>	<u>Medical</u>	<u>Dental</u>
FY 2013	6.0%	5.5%
FY 2014	5.0%	5.0%
FY 2015	5.0%	5.0%
FY 2016	5.0%	5.0%
FY 2017	5.0%	5.0%
FY 2018	5.0%	5.0%
FY 2019	5.0%	5.0%
FY 2020+	5.0%	5.0%

Participation Rate

It was assumed that 80% of employees eligible to receive retirement benefits would enroll in the retiree medical and dental plans upon retirement. For life insurance plans, it was assumed that 80% of eligible employees would elect coverage upon retirement.

Percent Married

It was assumed that 80% of male participants and 70% of female participants who elect retiree healthcare coverage for themselves would also elect coverage for a spouse upon retirement. It was further assumed that a male spouse is three years older than a female spouse and same sex spouses are assumed to be the same age. For current retirees, the actual census information was used.

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

C. ACTUARIAL ASSUMPTIONS (continued)

Compensation Increases

3.00% per year.

Open Group Forecast

It was assumed for projecting plan liabilities in future years that the active population would remain unchanged and that those who terminate employment or retire will be replaced with new employees with the demographics below:

Open Group Forecast Population Demographics

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	8.0%	5.0%
30	7.0%	14.0%
40	20.0%	19.0%
50	10.0%	10.0%
60	<u>3.0%</u>	<u>4.0%</u>
Total	48.0%	52.0%

Additional Comments

The values in this report reflect a closed group and do not reflect any new entrants after the valuation date.

For purposes of this valuation, retiree contributions were assumed to increase with the same trend rate as health care claims.

Medicare Part B Penalties are not reflected

Medicare Part B Reimbursement is not reflected

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS

(continued)

D. DEVELOPMENT OF REPRESENTATIVE MEDICAL PER CAPITA CLAIMS COSTS

As part of the Other Post-Employment Benefits Program, there are situations where the cost is borne partly or entirely on the retirees. In most cases, the premium that is used to split the cost is lower than the true cost of providing the medical benefits, for two reasons:

- ✓ The cost sharing program is usually a fixed amount such as a COBRA premium that does not take into account the age of the retiree and his/her dependents. Since medical costs generally increase with age, the cost sharing premium is often lower than the true cost of the medical benefits:
- ✓ The cost sharing premium is usually a blended rate that takes into account the cost of medical benefits for active employees as well as retirees. Medical costs are generally higher for retirees than for active employees of the same age. This means that, again, the cost sharing premium is often lower than the true cost of the medical benefits.

Because of these two factors, a retiree who is paying 100% of the cost sharing premium is most likely not paying 100% of the true cost of the medical benefits. This situation is known as an "implicit subsidy". GASB 74 and 75 require the plan sponsor to measure the liability for this subsidy; that is, the difference between the true cost of the medical benefits and the cost sharing premiums paid by the retiree. Actuarial Standard of Practice No. 6 ("ASOP 6") requires us to recognize this implicit subsidy while the plan sponsor may only pay the premiums billed by an insurance provider. To do this, our valuation consists of several steps:

First, we calculate the liability for the true cost of medical benefits expected to be received by retirees and their dependents. This liability is based on factors developed by actuaries that reflect how the cost of medical benefits varies by age and gender, as well as the other assumptions discussed on the prior page.

Next, we calculate the liability for the future premiums expected to be paid by the retiree for their own and their dependents' coverage. This liability is based on the current premium rates without adjustment for age or gender. It also is based on the terms of the retiree medical program – different retirees pay different percentages based on their union, date of retirement, age at retirement, and other factors.

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

D. DEVELOPMENT OF REPRESENTATIVE MEDICAL PER CAPITA CLAIMS COSTS

I. CLAIMS COSTS DEVELOPMENT - Based on Active & Retiree Incurred Claims & Premiums

	Number of Participants			
	Single	Two-Person	Family	Total
Fallon Direct				0
Harvard Pilgrim			1	1
Harvard Primary Choice			1	1
NHP Care	1			1
Tufts Navigator			1	1
Unicare Basic w/ CIC				0
Unicare Basic w/o CIC				0
Unicare OME w/ CIC	2	3		5
Unicare OME w/o CIC				0
Harvard Senior		1		1
Fallon Senior				0
Total	3	4	3	10

	Per Contract Costs (monthly) - FY 2018		
	Single	Two-Person	Family
Fallon Direct	552.70	0.00	1,326.60
Harvard Pilgrim	821.40	0.00	2,004.10
Harvard Primary Choice	618.50	0.00	1,509.30
NHP Care	552.10	0.00	1,463.10
Tufts Navigator	726.30	0.00	1,772.20
Unicare Basic w/ CIC	1,035.14		2,422.04
Unicare Basic w/o CIC	988.30		2,313.40
Unicare OME w/ CIC	379.29	758.58	
Unicare OME w/o CIC	368.60	737.20	
Harvard Senior	421.60	843.20	
Fallon Senior	335.00	670.00	

Gross Expected FY 2018 Incurred Premiums	116,583
Adjustment to reflect children's claims	(11,438)
Total Expected FY 2018 Incurred Premiums (adults only)	105,144

II. PRE-65 AND POST-65 PER CAPITA RETIREE ANNUAL CLAIM COSTS

	<u>Employer</u> <u>Primary</u>	<u>Medicare</u> <u>Primary</u>
Age 65	#DIV/0!	#DIV/0!
Average Age	8,792	4,550

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

D. DEVELOPMENT OF REPRESENTATIVE MEDICAL PER CAPITA CLAIMS COSTS

III. BREAKDOWN OF CLAIM COSTS

ALL ACTIVE EMPLOYEES AND SPOUSES

Age Bracket	Female Aging Factor	Male Aging Factor	Aged (F) Average Claims	Aged (M) Average Claims	Age Related Claims
24 & Under	1.312	0.549	#DIV/0!	#DIV/0!	#DIV/0!
25 to 29	1.312	0.591	#DIV/0!	#DIV/0!	#DIV/0!
30 to 34	1.312	0.712	#DIV/0!	#DIV/0!	#DIV/0!
35 to 39	1.312	0.850	#DIV/0!	#DIV/0!	#DIV/0!
40 to 44	1.312	1.000	#DIV/0!	#DIV/0!	#DIV/0!
45 to 49	1.456	1.193	#DIV/0!	#DIV/0!	#DIV/0!
50 to 54	1.599	1.441	#DIV/0!	#DIV/0!	#DIV/0!
55 to 59	1.740	1.753	#DIV/0!	#DIV/0!	#DIV/0!
60 to 64	1.968	2.102	#DIV/0!	#DIV/0!	#DIV/0!
65 to 69	2.168	2.316	#DIV/0!	#DIV/0!	#DIV/0!
70 & Over	2.396	2.557	#DIV/0!	#DIV/0!	#DIV/0!
Total					#DIV/0!

ALL RETIREES AND SPOUSES - NOT MEDICARE ELIGIBLE

Age Bracket	Female Aging Factor	Male Aging Factor	Aged (F) Average Claims	Aged (M) Average Claims	Age Related Claims
44 & Under	1.312	1.000	#DIV/0!	#DIV/0!	#DIV/0!
45 to 49	1.456	1.193	#DIV/0!	#DIV/0!	#DIV/0!
50 to 54	1.599	1.441	#DIV/0!	#DIV/0!	#DIV/0!
55 to 59	1.740	1.753	#DIV/0!	#DIV/0!	#DIV/0!
60 to 64	1.968	2.102	#DIV/0!	#DIV/0!	#DIV/0!
65 to 69	2.168	2.316	#DIV/0!	#DIV/0!	#DIV/0!
70 to 74	2.396	2.557	#DIV/0!	#DIV/0!	#DIV/0!
75 to 79	2.593	2.769	#DIV/0!	#DIV/0!	#DIV/0!
80 to 84	2.724	2.910	#DIV/0!	#DIV/0!	#DIV/0!
85 to 89	2.864	3.059	#DIV/0!	#DIV/0!	#DIV/0!
90 & Over	3.010	3.215	#DIV/0!	#DIV/0!	#DIV/0!
Total					#DIV/0!

ALL RETIREES AND SPOUSES - MEDICARE ELIGIBLE

Age Bracket	Female Aging Factor	Male Aging Factor	Aged (F) Average Claims	Aged (M) Average Claims	Age Related Claims
65 to 69	2.168	2.316	#DIV/0!	#DIV/0!	0
70 to 74	2.396	2.557	#DIV/0!	#DIV/0!	0
75 to 79	2.593	2.769	#DIV/0!	#DIV/0!	0
80 to 84	2.724	2.910	#DIV/0!	#DIV/0!	0
85 to 89	2.864	3.059	#DIV/0!	#DIV/0!	0
90 & Over	3.010	3.215	#DIV/0!	#DIV/0!	0
Total					0
Grand Totals					#DIV/0!

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

E. DEVELOPMENT OF REPRESENTATIVE DENTAL PER CAPITA CLAIMS COSTS

I. CLAIMS COSTS DEVELOPMENT - with Active & Retiree Incurred Premiums

	Per Contract Costs (monthly) - FY 2018		
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>
Dental Plan	29.37		70.75

FY 2018 Expected Per Person Rate 352

EXHIBIT A

Financial Statement Disclosure

(As of the December 31, 2017 Measurement Date)

The GASB Standards for accounting and financial reporting for postemployment benefits other than pensions require the following disclosures in the financial statements related to the retiree medical, dental and life insurance benefits;

1. A DESCRIPTION OF THE RETIREE MEDICAL INSURANCE PROGRAM:

- a. Plan Type: Various offerings via the Group Insurance Commission ("GIC")
- b. Administrator: Cambridge Redevelopment Authority
- c. Eligibility: An employee hired before April 2, 2012 shall become eligible to retire under this plan upon attainment of age 55 as an active member and completion of 10 years of service or an employee shall be able to retire with 20 years of service regardless of age. Those hired on or after April 2, 2012 shall be eligible to retire upon attainment of age 60 with 10 years of creditable service.
- d. Cost Sharing: 20% of premiums for participants who retire on or after October 1, 2009, 15% of premiums for Medical Insurance for those who retire between July 1, 1994 and October 1, 2009 and 10% for all others.

2. A DESCRIPTION OF THE RETIREE DENTAL INSURANCE PROGRAM:

- a. Plan Type: Comprehensive Dental Insurance
- b. Administrator: Cambridge Redevelopment Authority
- c. Eligibility: Same as above
- d. Cost sharing: Retirees shall pay 100% of premiums.

3. A DESCRIPTION OF THE RETIREE LIFE INSURANCE PROGRAM:

- a. Plan Type: Group Term Life Insurance - \$5,000 - offered through the Group Insurance Commission
- b. Administrator: Cambridge Redevelopment Authority
- c. Eligibility: Same as above
- d. Cost sharing: 20% of premiums for participants who retire on or after October 1, 2009, 15% of premiums for Medical & Life Insurance for those who retire between July 1, 1994 and October 1, 2009 and 10% for all others.

EXHIBIT A

Financial Statement Disclosure
(As of the December 31, 2017 Measurement Date)
(continued)

4. RETIREE MEDICAL AND LIFE INSURANCE CONTRIBUTIONS:

Group	Individual	Family
Medical	20% of premiums for participants who retire on or after October 1, 2009, 15% of premiums for Medical & Life Insurance for those who retire between July 1, 1994 and October 1, 2009 and 10% for all others.	20% of premiums for participants who retire on or after October 1, 2009, 15% of premiums for Medical & Life Insurance for those who retire between July 1, 1994 and October 1, 2009 and 10% for all others.
Dental	100%	100%
Life	20% of premiums for participants who retire on or after October 1, 2009, 15% of premiums for Medical & Life Insurance for those who retire between July 1, 1994 and October 1, 2009 and 10% for all others.	N/A

5. FUNDING POLICY

The contribution requirements of plan members and the Authority are established and may be amended through Authority ordinances. For the 2018 fiscal year, total Authority premiums plus implicit costs for the retiree medical program are \$53,183. The Authority is also projected to make a contribution to an OPEB Trust of \$7,000 for the 2018 fiscal year for a total contribution of \$60,183.

EXHIBIT A

Financial Statement Disclosure
(As of the December 31, 2017 Measurement Date)
(continued)

6. INVESTMENT POLICY

The chart below shows how the long-term rate of return on assets is developed based on the Authority's Investment Policy Statement.

Investment Target Allocation & Expected Long-Term Real Rate of Return			
Asset Class	Target Allocation	Asset Class	Long-Term Expected Real Rate of Return
Domestic Equity - Large Cap	62.00%	Domestic Equity - Large Cap	4.00%
Domestic Equity - Small/Mid Cap	0.00%	Domestic Equity - Small/Mid Cap	6.00%
International Equity - Developed Market	0.00%	International Equity - Developed Market	4.50%
International Equity-Emerging Market	0.00%	International Equity-Emerging Market	7.00%
Domestic Fixed Income	0.00%	Domestic Fixed Income	2.00%
International Fixed Income	0.00%	International Fixed Income	3.00%
Alternatives	0.00%	Alternatives	6.50%
Real Estate	0.00%	Real Estate	6.25%
Cash	38.00%	Cash	0.00%
Total	100.00%		
		I. Real Rate of Return	2.48%
		II. Inflation Assumption	2.75%
		III. Total Nominal Return [I. + II.]	5.23%
		IV. Investment Expense	0.25%
		V. Net Investment Return [III.-IV.]	4.98%

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Financial Statement Disclosure

(As of the December 31, 2017 Measurement Date)

(continued)

7. ACTUARIALLY DETERMINED CONTRIBUTION (ADC)

The Authority's Actuarially Determined Contribution (ADC) is an amount actuarially determined in accordance with the parameters of GASB Statement No. 74/75 which represents a level of funding that, if paid on an ongoing basis, is projected to cover the service cost each year and amortize any unfunded actuarial liabilities (or funding excess). The following table shows the components of the Authority's annual ADC for the fiscal year and the amount actually contributed to the plan:

Actuarially Determined Contribution - Deficiency / (Excess)	
<u>For the Fiscal Year Ending December 31, 2018</u>	
I. Service Cost	21,279
II. 30 year amortization of NOL at 4.50%	<u>52,016</u>
III. Actuarial Determined Contribution [I. + II.]	73,295
IV. Contributions in relation to the actuarially determined contribution	<u>(60,183)</u>
V. Contribution deficiency / (excess) [III. + IV.]	<u>13,112</u>
Covered employee payroll	403,194
Contributions as a % of covered employee payroll	14.93%

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Financial Statement Disclosure

(As of the December 31, 2017 Measurement Date)

(continued)

8. FUNDED STATUS AND FUNDING PROGRESS

As of the December 31, 2017 Measurement Date, the plan was 1.72% funded. The Total OPEB Liability (TOL) for benefits was \$900,917, and the Fiduciary Net Position was \$15,510, resulting in a Net OPEB Liability (NOL) of \$885,407. The covered payroll (annual payroll of active employees covered by the plan) was \$ 403,194 and the ratio of the NOL to the covered payroll was 219.6%.

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the actuarially determined contribution of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presented in the required supplementary information following the financial statements, presents multiyear trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the Total OPEB Liabilities for benefits.

Measurement Date	Fiduciary Net Position	Total OPEB Liability	Net OPEB Liability	Funded Ratio	Covered Payroll	NOL as a % of Covered Payroll
12/31/2019 (est.)	\$31,795	\$913,410	\$881,615	3.5%	\$427,749	206.1%
12/31/2018 (est.)	\$23,455	\$909,330	\$885,875	2.6%	\$415,290	213.3%
12/31/2017	\$15,510	\$900,917	\$885,407	1.7%	\$403,194	219.6%
12/31/2016	\$0	\$884,966	\$884,966	0.0%	\$391,450	226.1%
12/31/2015	\$0	\$908,371	\$908,371	0.0%	\$288,400	315.0%
12/31/2014	\$0	\$934,045	\$934,045	0.0%	\$280,000	333.6%

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Financial Statement Disclosure
(As of the December 31, 2017 Measurement Date)
(continued)

9. **FIDUCIARY NET POSITION**

Statement of Fiduciary Net Position		
December 31, 2017 and December 31, 2018		
	<u>December 31, 2018 (Projected)</u>	<u>December 31, 2017</u>
Assets		
I. Cash and cash equivalents	0	0
<u>Receivables & Prepaid expenses:</u>		
II. Contributions	0	0
III. Investment Income	0	0
IV. Receivables from brokers for unsettled trades	0	0
V. Prepaid expenses	0	0
VI. Total Receivables [II.+III.+IV.+V.]	0	0
<u>OPEB Trust Investments:</u>		
VII. Fixed Income	0	0
VIII. Stocks	14,542	9,616
IX. Cash and cash equivalents	8,913	5,894
X. Real estate	0	0
XI. Alternative investments	0	0
XII. Total Investments [VII.+VIII.+IX.+X.+XI.]	23,455	15,510
Invested securities lending cash collateral	0	0
Capital assets, net of accumulated depreciation	0	0
Total Assets	23,455	15,510
Liabilities		
XIII. Accrued expenses and benefits payable	0	0
XIV. Securities lending cash collateral	0	0
XV. Payable to brokers for unsettled trades	0	0
XVI. Total liabilities [XIII.+XIV.+XV.]	0	0
XVII. Net Position restricted for OPEB [XII.-XVI.]	23,455	15,510

EXHIBIT A

Financial Statement Disclosure
(As of the December 31, 2017 Measurement Date)
(continued)

9. **FIDUCIARY NET POSITION (CONTINUED)**

Statement of Changes in Fiduciary Net Position for the Year ended December 31, 2018 (Projected)	
	<u>December 31, 2017</u>
Additions	
<u>Contributions</u>	
Employer Contributions to OPEB Trust	7,000
Total Contributions	7,000
<u>Investment Income / (loss)</u>	
Interest	0
Dividends	192
Equity fund income, net	0
Net increase in fair value of investments	753
Securities lending income	0
Less investment expenses:	
Direct investment expense	0
Securities lending management fees	0
Securities lending borrower rebates	0
Net investment income	945
Other income	0
Total Additions	<u>7,945</u>
Deductions	
Service benefits	0
Disability benefits	0
Death benefits	0
Refunds	0
Administrative expenses	0
Total deductions	<u>0</u>
Net increase (decrease)	7,945
Net Position restricted for OPEB	
Beginning of year	<u>15,510</u>
End of year	23,455

EXHIBIT A

Financial Statement Disclosure
(As of the December 31, 2017 Measurement Date)
(continued)

10. OPEB LIABILITY, OPEB EXPENSE AND ADC

	Fiscal Year Ending December 31, 2018	
	Authority Employees and Retirees	Total
I. Total OPEB Liability	900,917	900,917
II. Fiduciary Net Position as of December 31, 2017	15,510	15,510
III. Net OPEB Liability (Asset) [I.-II.]	885,407	885,407
IV. Service Cost	19,251	19,251
V. Interest on Net OPEB Liability (Asset), Service Cost, and Benefit Payments	39,355	39,355
VI. Change in Deferred (Inflows)/Outflows from Plan Design Changes	-	-
VII. Change in Deferred (Inflows)/Outflows from Plan Experience	20,678	20,678
VIII. Change in Deferred (Inflows)/Outflows from Changes in Assumptions	-	-
IX. Projected Earnings on OPEB plan investments	(638.00)	(638)
X. Change in Deferred (Inflows)/Outflows from Earnings on Investments	(872)	(872)
XI. Employer Share of Costs	(66,619)	(66,619)
XII. Employer Payments (Withdrawals) to/from OPEB Trust	(14,000)	(14,000)
XIII. Total Employer Contribution [X.+XI.]	(80,619)	(80,619)
XIV. Net OPEB Expense [IV.+V.+VI.+VII.+VIII.+IX.+X.+XIII.]	(2,845)	(2,845)
XV. Actuarial Determined Contribution (ADC)	73,295	73,295
XVI. Total Expected Contribution	80,619	80,619
XVII. Percentage of ADC Contributed [XVI./XV.]	110%	110%

	Fiscal Year Ending December 31, 2019	
	Authority Employees and Retirees	Total
I. Total OPEB Liability	909,330	909,330
II. Fiduciary Net Position as of December 31, 2018	23,455	23,455
III. Net OPEB Liability (Asset) [I.-II.]	885,875	885,875
IV. Service Cost	21,279	21,279
V. Interest on Net OPEB Liability (Asset), Service Cost, and Benefit Payments	39,619	39,619
VI. Change in Deferred (Inflows)/Outflows from Plan Design Changes	-	-
VII. Change in Deferred (Inflows)/Outflows from Plan Experience	5,559	5,559
VIII. Change in Deferred (Inflows)/Outflows from Changes in Assumptions	-	-
IX. Projected Earnings on OPEB plan investments	(247)	(247)
X. Change in Deferred (Inflows)/Outflows from Earnings on Investments	(174)	(174)
XI. Employer Share of Costs	(53,183)	(53,183)
XII. Employer Payments (Withdrawals) to/from OPEB Trust	(7,000)	(7,000)
XIII. Total Employer Contribution [X.+XI.]	(60,183)	(60,183)
XIV. Net OPEB Expense [IV.+V.+VI.+VII.+VIII.+IX.+X.+XIII.]	5,853	5,853
XV. Actuarial Determined Contribution (ADC)	73,322	73,322
XVI. Total Expected Contribution	60,183	60,183
XVII. Percentage of ADC Contributed [XVI./XV.]	82%	82%

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Financial Statement Disclosure
(As of the December 31, 2017 Measurement Date)
(continued)

11. OPEB LIABILITY, OPEB EXPENSE AND DEFERRED INFLOW/OUTFLOW

	Net OPEB Liability	
	For the Fiscal Year Ending	
	December 31, 2018	December 31, 2019
Net OPEB Liability at beginning of period	888,252	885,407
Net OPEB Expense - Excluding Payments	57,968	66,036
Total Contributions	(80,619)	(60,183)
Change in Deferred Outflow	20,678	(5,559)
Change in Deferred Inflow	(872)	174
Net OPEB Liability at end of period	885,407	885,875

	Net OPEB Expense	
	For the period ending on the Measurement	
	Date	
	December 31, 2017	December 31, 2018
Service Cost	19,251	21,279
Interest on Net OPEB Liability, Service Cost, and Payments	39,355	39,619
Deferral Amount	59,395	5,385
Expected Investment Income	(638)	(247)
Contributions to Trust	(14,000)	(7,000)
Benefit Payments	(66,619)	(53,183)

	Deferred Inflow/Outflow	
	For the period ending on the Measurement	
	Date	
	December 31, 2017	December 31, 2018
Deferred (Inflow)/Outflow from Actual vs. Expected Experience	20,678	15,119
Deferred (Inflow)/Outflow from Investment Experience	(872)	(698)
Deferred (Inflow)/Outflow from Changes in Benefit Terms	0	0
Deferred (Inflow)/Outflow from Changes in Assumptions	0	0

Measurement Date **December 31, 2017** **December 31, 2018**

EXHIBIT A

Financial Statement Disclosure

(As of the December 31, 2017 Measurement Date)

(continued)

12. EFFECT OF 1% CHANGE IN HEALTHCARE TREND

In the event that healthcare trend rates were 1% higher than forecast and employee contributions were to increase at the forecast rates, the Net OPEB Liability would increase to \$1,042,310 or by 17.7% and the corresponding Service Cost would increase to \$29,792 or by 40.0%. If such healthcare trend rates were 1% less than forecast and employee contributions were to increase at the forecast rate, the Net OPEB Liability would decrease to \$761,578 or by 14.0% and the corresponding Service Cost would decrease to \$15,100 or by 29.0%.

Impact of a 1% Change in the Healthcare Trend Rate as of the December 31, 2017 Measurement Date

	<u>1% Decrease (4.00%)</u>	<u>Current Trend Rate (5.00%)</u>	<u>1% Increase (6.00%)</u>
Net OPEB Liability	761,578	885,407	1,042,310
Service Cost	15,100	21,279	29,792

13. EFFECT OF 1% CHANGE IN DISCOUNT RATES

If the discount rate were 1% higher than what was used in this valuation, the Net OPEB Liability would decrease to \$786,639 or by 11.2% and the corresponding Service Cost would decrease to \$16,692 or by 21.6%. If the discount rate were 1% lower than was used in this valuation, the Net OPEB Liability would increase to \$1,007,818 or by 13.8% and the corresponding Service Cost would increase to \$27,502 or by 29.2%.

Impact of a 1% Change in the Discount Rate as of the December 31, 2017 Measurement Date

	<u>1% Decrease (3.50%)</u>	<u>Current Discount Rate (4.50%)</u>	<u>1% Increase (5.50%)</u>
Net OPEB Liability	1,007,818	885,407	786,639
Service Cost	27,502	21,279	16,692

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Financial Statement Disclosure

(As of the December 31, 2017 Measurement Date)

(continued)

14. ACTUARIAL METHODS AND ASSUMPTIONS

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

Actuarial Cost Method: Individual Entry Age Normal
Discount Rate: 4.50% per annum (previously 4.00%)
Healthcare Trend Rates

<u>Year</u>	<u>Medical</u>	<u>Dental</u>
FY 2013	6.0%	5.5%
FY 2014	5.0%	5.0%
FY 2015	5.0%	5.0%
FY 2016	5.0%	5.0%
FY 2017	5.0%	5.0%
FY 2018	5.0%	5.0%
FY 2019	5.0%	5.0%
FY 2020+	5.0%	5.0%

General Inflation Assumption: 2.75% per annum
Annual Compensation Increases: 3.00% per annum
Actuarial Value of Assets: Market Value

EXHIBIT A

Financial Statement Disclosure

(As of the December 31, 2017 Measurement Date)
(continued)

15. RECOGNITION OF OPEB TRUST ASSETS

The State of Massachusetts has passed legislation allowing municipal entities to establish a Trust for Other Postemployment Benefits (“OPEB”) under M.G.L. Chapter 32B, Section 20 for purposes of accumulating assets to pre-fund the liabilities under GASB 75. This legislation was amended effective November 9, 2016 to clarify who may adopt such a Trust and provide guidance on the ongoing operation of such a Trust. To the best of our knowledge, the Cambridge Redevelopment Authority has established an irrevocable trust for the purposes of prefunding liabilities under GASB 74/75.

16. OPEB EXPENSE DEVELOPMENT

Components of the Authority's OPEB Expenses for the Fiscal Year Ending December 31, 2018	
Description	Amount
I. Service Cost	21,279
II. Interest on Net OPEB Liability (Asset), Service Cost, and Benefit Payments	39,619
III. Deferred (Inflows)/Outflows from Plan Design Changes*	0
IV. Deferred (Inflows)/Outflows from Plan Experience**	5,559
V. Deferred (Inflows)/Outflows from Changes of Assumptions**	0
VI. Projected earnings on OPEB plan investments	(247)
VII. Deferred (Inflows)/Outflows from Earnings on Plan Investments***	(174)
VIII. Total Employer Contributions	(60,183)
IX. OPEB Plan administrative expense	0
X. Other changes in fiduciary net position	0
XI. Net OPEB expense [I.+II.+III.+IV.+V.+VI.+VII.+VIII.+IX.+ X.]	5,853

* Recognized Immediately

** Amortized over 3.72 years

*** Amortized over 5 years

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Financial Statement Disclosure
(As of the December 31, 2017 Measurement Date)
(continued)

17. CHANGES IN NET OPEB LIABILITY

Changes in Net OPEB Liability			
	Increase (Decrease)		
	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability
I. Balances at December 31, 2016 GASB 45	884,966	0	884,966
II. Change in Assumptions for GASB 75	<u>3,286</u>	<u>0</u>	<u>3,286</u>
III. Balances at December 31, 2016 GASB 75 [I. + II.]	888,252	0	888,252
Changes for the year:			
IV. Service Cost	19,251	0	19,251
V. Interest on Net OPEB Liability, Service Cost, and Benefit Payments	39,355	0	39,355
VI. Changes in Benefit terms *	0	0	0
VII. Change in assumptions **	0	0	0
VIII. Differences between actual and expected experience **	20,678	872	19,806
IX. Net Investment Income	0	638	(638)
X. Employer Contributions to Trust	0	80,619	(80,619)
XI. Benefit Payments Withdrawn from Trust	0	(66,619)	66,619
XII. Benefit payments excluding Implicit Cost	N/A	0	N/A
XIII. Implicit Cost amount	N/A	0	N/A
XIV. Total Benefit payments including Implicit Cost [XII. + XIII.]	(66,619)	0	(66,619)
XV. Administrative expense	0	0	0
XVI. Other Charges	0	0	0
XVII. Net Changes [IV.+V.+VI.+VII.+VIII.+IX.+X.+XI.+XIV.+XV.+XVI.]	<u>12,665</u>	<u>15,510</u>	<u>(2,845)</u>
XVII. Balances at December 31, 2017 [III.+XVII.]	900,917	15,510	885,407

* Recognized Immediately

** Amortized over 3.72 years

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Financial Statement Disclosure
(As of the December 31, 2017 Measurement Date)
(continued)

18. MONEY WEIGHTED RATE OF RETURN

Determination of Beginning & Ending Balances of OPEB Plan Investments for Purposes of Calculating the Annual Money-Weighted Rate of Return		
	Ending OPEB Plan Investments *	Beginning OPEB Plan Investments **
Assets		
Cash and cash equivalents	0	0
Receivables:		
Investment income	0	0
Receivables from brokers for unsettled trades	0	0
Investments		
Fixed income	0	0
Stocks	14,542	9,616
Cash and cash equivalents	8,913	5,894
Real estate	0	0
Alternative investments	0	0
Invested securities lending cash collateral	0	0
Liabilities		
Securities lending cash collateral	0	0
Payable to brokers for unsettled trades	0	0
Total OPEB plan investments	23,455	15,510
* From balances at December 31, 2018 (Projected)		
** From balances at December 31, 2017		

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Financial Statement Disclosure
(As of the December 31, 2017 Measurement Date)
(continued)

18. MONEY WEIGHTED RATE OF RETURN (CONTINUED)

	Plan Investments / Net External	Periods Invested	Period Weight
Beginning value - January 1, 2017	0	12	1.0000
Monthly net external cash flows:			
January	14,000	11	0.9167
February	0	10	0.8333
March	0	9	0.7500
April	0	8	0.6667
May	0	7	0.5833
June	0	6	0.5000
July	0	5	0.4167
August	0	4	0.3333
September	0	3	0.2500
October	0	2	0.1667
November	0	1	0.0833
December	0	0	0.0000
Ending value - December 31, 2017	15,510		
Money Weighted Rate of Return	11.82%		
Asset Value - December 31, 2017	15,510		

EXHIBIT A

Financial Statement Disclosure
(As of the December 31, 2017 Measurement Date)
(continued)

19. PLAN CASH FLOWS

Aggregate External (Noninvestment Cash Flows)	
<u>December 31, 2018</u>	
Additions	
<u>Contributions</u>	
Member contributions	0
Employer contributions	7,000
Other income	0
Deductions	
Service benefits	0
Disability benefits	0
Death benefits	0
Refunds	0
Administrative expenses	0
Beginning balances of noninvestment-related assets and liabilities *	
Contribution receivable	0
Prepaid expenses	0
Accrued expenses & benefits payable	0
Ending balances of noninvestment-related assets and liabilities **	
Contribution receivable	0
Prepaid expenses	0
Accrued expenses & benefits payable	0
Change in capital assets - depreciation	0
Aggregate external cash flows	7,000
* From balances at December 31, 2018 (Projected)	
** From balances at December 31, 2017	

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Financial Statement Disclosure

(As of the December 31, 2017 Measurement Date)

(continued)

19. PLAN CASH FLOWS (CONTINUED)

Reconciliation of Beginning & Ending Balances of OPEB Plan Investments, Aggregate External Cash Flows, and Net Investment Income	
	<u>December 31, 2018 (Projected)</u>
I. Total OPEB plan investments, beginning of year	15,510
II. Aggregate external cash flows	7,000
III. Net investment income	<u>945</u>
IV. Total OPEB plan investments, end of year [I.+II.+III.]	<u><u>23,455</u></u>

EXHIBIT A

Financial Statement Disclosure
(As of the December 31, 2017 Measurement Date)
(continued)

20. PLAN PROJECTION DISCLOSURES

Projection of Contributions using a December 31, 2017 Valuation Date

Fiscal Year	I. Payroll for current employees	II. Payroll for future employees	III. Total employee payroll [I.+II.]	IV. Contributions from current employees	V. Employer Payments for current plan members	VI. Employer Payments for future employees	VII. Total Payments [IV.+V.+VI.]
2018	403,194	0	403,194	0	53,183	0	53,183
2019	381,946	33,344	415,290	0	53,909	0	53,909
2020	366,896	60,853	427,749	0	53,631	0	53,631
2021	353,924	86,657	440,581	0	53,413	0	53,413
2022	345,074	108,724	453,798	0	53,230	0	53,230
2023	339,126	128,286	467,412	0	53,062	0	53,062
2024	333,835	147,599	481,434	0	47,920	0	47,920
2025	333,401	162,476	495,877	0	49,022	0	49,022
2026	239,648	271,105	510,753	0	52,622	0	52,622
2027	237,592	288,484	526,076	0	52,357	0	52,357
2028	237,431	304,427	541,858	0	51,987	0	51,987
2029	237,270	320,844	558,114	0	51,479	89	51,568
2030	237,764	337,093	574,857	0	52,015	219	52,234
2031	231,161	360,942	592,103	0	53,071	406	53,477
2032	218,662	391,204	609,866	0	54,609	646	55,255
2033	202,595	425,567	628,162	0	55,617	932	56,549
2034	192,757	454,250	647,007	0	55,664	1,206	56,870
2035	186,094	480,323	666,417	0	53,660	1,501	55,161
2036	173,504	512,906	686,410	0	53,359	1,893	55,252
2037	165,582	541,420	707,002	0	54,300	2,461	56,761
2038	153,385	574,827	728,212	0	52,530	2,979	55,509
2039	135,372	614,686	750,058	0	54,410	3,630	58,040
2040	109,235	663,325	772,560	0	56,548	4,417	60,965
2041	97,502	698,235	795,737	0	57,031	5,301	62,332
2042	89,590	730,019	819,609	0	51,868	6,248	58,116
2043	77,675	766,522	844,197	0	51,423	7,459	58,882
2044	73,069	796,454	869,523	0	50,981	8,619	59,600
2045	69,450	826,159	895,609	0	45,014	9,791	54,805
2046	66,043	856,434	922,477	0	46,524	11,225	57,749
2047	47,809	902,342	950,151	0	49,096	12,849	61,945
2048	34,201	944,455	978,656	0	50,789	14,665	65,454
2049	26,228	981,788	1,008,016	0	51,767	16,726	68,493
2050	20,916	1,017,340	1,038,256	0	49,208	19,010	68,218
2051	12,801	1,056,603	1,069,404	0	49,375	21,353	70,728
2052	9,808	1,091,678	1,101,486	0	49,479	23,687	73,166
2053	7,520	1,127,011	1,134,531	0	46,479	26,467	72,946
2054	5,373	1,163,194	1,168,567	0	46,316	29,251	75,567
2055	0	1,203,624	1,203,624	0	46,441	32,010	78,451
2056	0	1,239,733	1,239,733	0	46,170	35,177	81,347
2057	0	1,276,925	1,276,925	0	45,929	38,660	84,589

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Financial Statement Disclosure
(As of the December 31, 2017 Measurement Date)
(continued)

Projection of Contributions using a December 31, 2017 Valuation Date (Continued)

Fiscal Year	I. Payroll for current employees	II. Payroll for future employees	III. Total employee payroll [I.+II.]	IV. Contributions from current employees	V. Employer Payments for current plan members	VI. Employer Payments for future employees	VII. Total Payments [IV.+V.+VI.]
2058	0	1,315,233	1,315,233	0	45,719	42,319	88,038
2059	0	1,354,690	1,354,690	0	45,482	46,277	91,759
2060	0	1,395,331	1,395,331	0	45,229	50,575	95,804
2061	0	1,437,191	1,437,191	0	44,907	55,115	100,022
2062	0	1,480,307	1,480,307	0	44,523	59,842	104,365
2063	0	1,524,716	1,524,716	0	44,044	64,954	108,998
2064	0	1,570,457	1,570,457	0	43,468	70,239	113,707
2065	0	1,617,571	1,617,571	0	42,724	75,679	118,403
2066	0	1,666,098	1,666,098	0	41,819	81,412	123,231
2067	0	1,716,081	1,716,081	0	40,742	87,496	128,238
2068	0	1,767,563	1,767,563	0	39,487	93,871	133,358
2069	0	1,820,590	1,820,590	0	38,152	100,658	138,810
2070	0	1,875,208	1,875,208	0	36,898	107,889	144,787
2071	0	1,931,464	1,931,464	0	35,447	115,434	150,881
2072	0	1,989,408	1,989,408	0	33,828	123,275	157,103
2073	0	2,049,090	2,049,090	0	32,018	131,517	163,535
2074	0	2,110,563	2,110,563	0	30,062	140,141	170,203
2075	0	2,173,880	2,173,880	0	27,960	149,051	177,011
2076	0	2,239,096	2,239,096	0	25,845	158,347	184,192
2077	0	2,306,269	2,306,269	0	23,639	168,152	191,791
2078	0	2,375,457	2,375,457	0	21,472	178,419	199,891
2079	0	2,446,721	2,446,721	0	19,336	189,150	208,486
2080	0	2,520,123	2,520,123	0	17,238	200,430	217,668
2081	0	2,595,727	2,595,727	0	15,229	212,236	227,465
2082	0	2,673,599	2,673,599	0	13,275	224,598	237,873
2083	0	2,753,807	2,753,807	0	11,420	237,525	248,945
2084	0	2,836,421	2,836,421	0	9,702	251,056	260,758
2085	0	2,921,514	2,921,514	0	8,112	265,234	273,346
2086	0	3,009,159	3,009,159	0	6,668	280,058	286,726
2087	0	3,099,434	3,099,434	0	5,424	295,623	301,047
2088	0	3,192,417	3,192,417	0	4,360	311,958	316,318
2089	0	3,288,190	3,288,190	0	3,477	329,099	332,576
2090	0	3,386,836	3,386,836	0	2,734	347,115	349,849
2091	0	3,488,441	3,488,441	0	2,133	366,017	368,150
2092	0	3,593,094	3,593,094	0	1,624	385,864	387,488
2093	0	3,700,887	3,700,887	0	1,228	406,682	407,910
2094	0	3,811,914	3,811,914	0	890	428,551	429,441
2095	0	3,926,271	3,926,271	0	636	451,501	452,137
2096	0	4,044,059	4,044,059	0	447	475,583	476,030

EXHIBIT A

Financial Statement Disclosure
(As of the December 31, 2017 Measurement Date)
(continued)

20. PLAN PROJECTION DISCLOSURES (CONTINUED)

Projection of OPEB Plan's Fiduciary Net Position using a December 31, 2017 Valuation Date

Fiscal Year	I. Projected Beginning Fiduciary Net Position	II. Portion of Employer Contributions for Current Plan Members	III. Total Projected Benefit Payments	IV. Projected Administrative Expense	V. Total Contributions to Trust	VI. Contributions to Trust for Current Plan Members	VII. Projected Investment Earnings	VIII. Projected Ending Fiduciary Net Position for Current Plan Members
2018	15,510	53,183	53,183	0	7,000	7,000	945	23,455
2019	23,455	53,909	53,909	0	7,000	6,438	1,340	31,233
2020	31,233	53,631	53,631	0	7,000	6,004	1,728	38,965
2021	38,965	53,413	53,413	0	7,000	5,623	2,113	46,701
2022	46,701	53,230	53,230	0	7,000	5,323	2,498	54,522
2023	54,522	53,062	53,062	0	7,000	5,079	2,887	62,488
2024	62,488	47,920	47,920	0	7,000	4,854	3,284	70,626
2025	70,626	49,022	49,022	0	7,000	4,706	3,689	79,021
2026	79,021	52,622	52,622	0	7,000	3,284	4,107	86,412
2027	86,412	52,357	52,357	0	7,000	3,161	4,475	94,048
2028	94,048	51,987	51,987	0	7,000	3,067	4,856	101,971
2029	101,971	51,479	51,568	0	7,000	2,976	5,250	110,108
2030	110,108	52,015	52,234	0	7,000	2,895	5,656	118,440
2031	118,440	53,071	53,477	0	7,000	2,733	6,070	126,837
2032	126,837	54,609	55,255	0	7,000	2,510	6,489	135,190
2033	135,190	55,617	56,549	0	7,000	2,258	6,905	143,421
2034	143,421	55,664	56,870	0	7,000	2,085	7,315	151,615
2035	151,615	53,660	55,161	0	7,000	1,955	7,723	159,792
2036	159,792	53,359	55,252	0	7,000	1,769	8,130	167,798
2037	167,798	54,300	56,761	0	7,000	1,639	8,529	175,505
2038	175,505	52,530	55,509	0	7,000	1,474	8,912	182,912
2039	182,912	54,410	58,040	0	7,000	1,263	9,281	189,826
2040	189,826	56,548	60,965	0	7,000	990	9,626	196,025
2041	196,025	57,031	62,332	0	7,000	858	9,934	201,516
2042	201,516	51,868	58,116	0	7,000	765	10,208	206,241
2043	206,241	51,423	58,882	0	7,000	644	10,443	209,869
2044	209,869	50,981	59,600	0	7,000	588	10,624	212,462
2045	212,462	45,014	54,805	0	7,000	543	10,753	213,967
2046	213,967	46,524	57,749	0	7,000	501	10,828	214,071
2047	214,071	49,096	61,945	0	7,000	352	10,833	212,407
2048	212,407	50,789	65,454	0	7,000	245	10,750	208,737
2049	208,737	51,767	68,493	0	7,000	182	10,567	202,760
2050	202,760	49,208	68,218	0	7,000	141	10,270	194,161
2051	194,161	49,375	70,728	0	7,000	84	9,841	182,733
2052	182,733	49,479	73,166	0	7,000	62	9,272	168,380
2053	168,380	46,479	72,946	0	7,000	46	8,558	150,517
2054	150,517	46,316	75,567	0	7,000	32	7,668	128,966
2055	128,966	46,441	78,451	0	7,000	0	6,595	103,551
2056	103,551	46,170	81,347	0	7,000	0	5,329	73,703
2057	73,703	45,929	84,589	0	7,000	0	3,843	38,886

EXHIBIT A

Financial Statement Disclosure
(As of the December 31, 2017 Measurement Date)
(continued)

Projection of OPEB Plan's Fiduciary Net Position using a December 31, 2017 Valuation Date (Continued)

Fiscal Year	I. Projected	II. Portion of	III. Total	IV. Projected	V. Total	VI. Contributions	VII. Projected	VIII. Projected
	Beginning Fiduciary Net Position	Employer Contributions for Current Plan Members	Projected Benefit Payments	Administrative Expense	Contributions to Trust	to Trust for Current Plan Members	Investment Earnings	Ending Fiduciary Net Position for Current Plan Members
2058	38,886	45,719	88,038	0	7,000	0	2,109	2,109
2059	2,109	45,482	91,759	0	7,000	0	277	277
2060	277	45,229	95,804	0	7,000	0	186	186
2061	186	44,907	100,022	0	7,000	0	181	181
2062	181	44,523	104,365	0	7,000	0	181	181
2063	181	44,044	108,998	0	7,000	0	181	181
2064	181	43,468	113,707	0	7,000	0	181	181
2065	181	42,724	118,403	0	7,000	0	181	181
2066	181	41,819	123,231	0	7,000	0	181	181
2067	181	40,742	128,238	0	7,000	0	181	181
2068	181	39,487	133,358	0	7,000	0	181	181
2069	181	38,152	138,810	0	7,000	0	181	181
2070	181	36,898	144,787	0	7,000	0	181	181
2071	181	35,447	150,881	0	7,000	0	181	181
2072	181	33,828	157,103	0	7,000	0	181	181
2073	181	32,018	163,535	0	7,000	0	181	181
2074	181	30,062	170,203	0	7,000	0	181	181
2075	181	27,960	177,011	0	7,000	0	181	181
2076	181	25,845	184,192	0	7,000	0	181	181
2077	181	23,639	191,791	0	7,000	0	181	181
2078	181	21,472	199,891	0	7,000	0	181	181
2079	181	19,336	208,486	0	7,000	0	181	181
2080	181	17,238	217,668	0	7,000	0	181	181
2081	181	15,229	227,465	0	7,000	0	181	181
2082	181	13,275	237,873	0	7,000	0	181	181
2083	181	11,420	248,945	0	7,000	0	181	181
2084	181	9,702	260,758	0	7,000	0	181	181
2085	181	8,112	273,346	0	7,000	0	181	181
2086	181	6,668	286,726	0	7,000	0	181	181
2087	181	5,424	301,047	0	7,000	0	181	181
2088	181	4,360	316,318	0	7,000	0	181	181
2089	181	3,477	332,576	0	7,000	0	181	181
2090	181	2,734	349,849	0	7,000	0	181	181
2091	181	2,133	368,150	0	7,000	0	181	181
2092	181	1,624	387,488	0	7,000	0	181	181
2093	181	1,228	407,910	0	7,000	0	181	181
2094	181	890	429,441	0	7,000	0	181	181
2095	181	636	452,137	0	7,000	0	181	181
2096	181	447	476,030	0	7,000	0	181	181

EXHIBIT A

Financial Statement Disclosure

(As of the December 31, 2017 Measurement Date)

(continued)

20. PLAN PROJECTION DISCLOSURES (CONTINUED)

Actuarial Present Values of Projected Benefit Payments using a December 31, 2017 Valuation Date

Fiscal Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments	Present Value of Unfunded Benefit Payments	Present Value of Benefit Payments using Single Discount Rate
2018	15,510	53,183	15,510	37,673	15,510	37,673	53,183
2019	23,455	53,909	23,455	30,454	22,342	29,522	51,657
2020	31,233	53,631	31,233	22,398	28,340	21,049	49,244
2021	38,965	53,413	38,965	14,448	33,679	13,162	46,994
2022	46,701	53,230	46,701	6,529	38,450	5,766	44,877
2023	54,522	53,062	53,062	0	41,615	0	42,866
2024	62,488	47,920	47,920	0	35,800	0	37,095
2025	70,626	49,022	49,022	0	34,886	0	36,363
2026	79,021	52,622	52,622	0	35,671	0	37,403
2027	86,412	52,357	52,357	0	33,808	0	35,659
2028	94,048	51,987	51,987	0	31,976	0	33,928
2029	101,971	51,479	51,479	0	30,162	0	32,193
2030	110,108	52,015	52,015	0	29,030	0	31,169
2031	118,440	53,071	53,071	0	28,214	0	30,474
2032	126,837	54,609	54,609	0	27,655	0	30,047
2033	135,190	55,617	55,617	0	26,829	0	29,323
2034	143,421	55,664	55,664	0	25,578	0	28,122
2035	151,615	53,660	53,660	0	23,488	0	25,977
2036	159,792	53,359	53,359	0	22,248	0	24,752
2037	167,798	54,300	54,300	0	21,566	0	24,136
2038	175,505	52,530	52,530	0	19,874	0	22,374
2039	182,912	54,410	54,410	0	19,608	0	22,206
2040	189,826	56,548	56,548	0	19,412	0	22,115
2041	196,025	57,031	57,031	0	18,649	0	21,372
2042	201,516	51,868	51,868	0	16,156	0	18,625
2043	206,241	51,423	51,423	0	15,258	0	17,694
2044	209,869	50,981	50,981	0	14,409	0	16,809
2045	212,462	45,014	45,014	0	12,119	0	14,222
2046	213,967	46,524	46,524	0	11,931	0	14,085
2047	214,071	49,096	49,096	0	11,994	0	14,242
2048	212,407	50,789	50,789	0	11,819	0	14,118
2049	208,737	51,767	51,767	0	11,475	0	13,789
2050	202,760	49,208	49,208	0	10,390	0	12,559
2051	194,161	49,375	49,375	0	9,931	0	12,076
2052	182,733	49,479	49,479	0	9,480	0	11,595
2053	168,380	46,479	46,479	0	8,483	0	10,437
2054	150,517	46,316	46,316	0	8,052	0	9,966
2055	128,966	46,441	46,441	0	7,691	0	9,576
2056	103,551	46,170	46,170	0	7,283	0	9,122
2057	73,703	45,929	45,929	0	6,901	0	8,695

EXHIBIT A

Financial Statement Disclosure
(As of the December 31, 2017 Measurement Date)
(continued)

20. PLAN PROJECTION DISCLOSURES (CONTINUED)

Actuarial Present Values of Projected Benefit Payments using a December 31, 2017 Valuation Date (Continued)

Fiscal Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments	Present Value of Unfunded Benefit Payments	Present Value of Benefit Payments using Single Discount Rate
2058	38,886	45,719	38,886	6,833	5,566	1,972	8,294
2059	2,109	45,482	2,109	43,373	288	12,133	7,906
2060	277	45,229	277	44,952	36	12,190	7,534
2061	186	44,907	186	44,721	23	11,757	7,168
2062	181	44,523	181	44,342	21	11,301	6,810
2063	181	44,044	181	43,863	20	10,836	6,455
2064	181	43,468	181	43,287	19	10,367	6,104
2065	181	42,724	181	42,543	18	9,877	5,749
2066	181	41,819	181	41,638	18	9,371	5,392
2067	181	40,742	181	40,561	17	8,850	5,034
2068	181	39,487	181	39,306	16	8,313	4,675
2069	181	38,152	181	37,971	15	7,785	4,328
2070	181	36,898	181	36,717	14	7,298	4,011
2071	181	35,447	181	35,266	14	6,795	3,692
2072	181	33,828	181	33,647	13	6,285	3,377
2073	181	32,018	181	31,837	12	5,765	3,062
2074	181	30,062	181	29,881	12	5,245	2,755
2075	181	27,960	181	27,779	11	4,727	2,455
2076	181	25,845	181	25,664	11	4,233	2,175
2077	181	23,639	181	23,458	10	3,751	1,906
2078	181	21,472	181	21,291	10	3,301	1,659
2079	181	19,336	181	19,155	9	2,879	1,432
2080	181	17,238	181	17,057	9	2,485	1,223
2081	181	15,229	181	15,048	8	2,125	1,035
2082	181	13,275	181	13,094	8	1,793	865
2083	181	11,420	181	11,239	8	1,492	713
2084	181	9,702	181	9,521	7	1,225	580
2085	181	8,112	181	7,931	7	989	465
2086	181	6,668	181	6,487	7	784	366
2087	181	5,424	181	5,243	6	615	285
2088	181	4,360	181	4,179	6	475	220
2089	181	3,477	181	3,296	6	363	168
2090	181	2,734	181	2,553	5	273	127
2091	181	2,133	181	1,952	5	202	95
2092	181	1,624	181	1,443	5	145	69
2093	181	1,228	181	1,047	5	102	50
2094	181	890	181	709	5	67	35
2095	181	636	181	455	4	42	24
2096	181	447	181	266	4	24	16

EXHIBIT A

Financial Statement Disclosure
(As of the December 31, 2017 Measurement Date)
(continued)

21. CHANGES TO NET OPEB EXPENSE

Deferred (Inflows)/Outflows in OPEB Expense arising from the recognition of the effects of differences between expected & actual experience								
Fiscal Year	Differences between actual & expected		<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
	experience	Recognition Period (years)						
2009								
2010								
2011								
2012								
2013								
2014								
2015								
2016								
2017								
2018	20,678	3.72	<u>5,559</u>	<u>5,559</u>	<u>5,559</u>	<u>4,001</u>	<u>0</u>	<u>0</u>
Net increase (decrease) in OPEB expense			5,559	5,559	5,559	4,001	0	0

EXHIBIT A

Financial Statement Disclosure
(As of the December 31, 2017 Measurement Date)
(continued)

21. CHANGES TO NET OPEB EXPENSE (CONTINUED)

Deferred (Inflows)/Outflows in OPEB Expense arising from the recognition of the effects of Changes in Assumptions								
Fiscal Year	Differences from changes in		<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
	Actuarial Assumptions	Recognition Period (years)						
2009								
2010								
2011								
2012								
2013								
2014								
2015								
2016								
2017								
2018	0	3.72	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Net increase (decrease) in OPEB expense			0	0	0	0	0	0

EXHIBIT A

Financial Statement Disclosure
(As of the December 31, 2017 Measurement Date)
(continued)

21. CHANGES TO NET OPEB EXPENSE (CONTINUED)

Deferred (Inflows)/Outflows in OPEB Expense arising from the recognition of differences between Projected & Actual Earnings on OPEB Plan Investments									
Fiscal Year	Differences between actual & expected		Recognition Period (years)	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
	experience								
2009									
2010									
2011									
2012									
2013									
2014									
2015									
2016									
2017									
2018	(872)		5.00	(174)	(174)	(174)	(174)	(176)	0
Net increase (decrease) in OPEB expense				(174)	(174)	(174)	(174)	(176)	0

EXHIBIT AFinancial Statement Disclosure

(As of the December 31, 2017 Measurement Date)

(continued)

22. Impact of Patient Protection and Affordable Care Act ("PPACA") Excise Tax

Under the Patient Protection and Affordable Care Act ("PPACA"), an excise tax will be imposed for tax years beginning after December 31, 2019 (formerly December 31, 2017, but amended by Consolidated Appropriations Act) for high cost employer sponsored health coverage. The law specifies a 40% excise tax, to be paid by the provider of such coverage, of the excess value beyond a basic dollar amount plus an additional "kicker" for qualified retirees or those engaged in a high risk profession. The projected 2020 threshold amounts are \$11,850 for single coverage and \$30,950 for family coverage and a "kicker" amount of \$1,650 for single coverage and \$3,450 for family coverage.

For the fiscal year ending December 31, 2018, the TOL for the excise tax is \$994 and the increase in OPEB Expense is \$155. Given your premiums through the 2018 fiscal year and the excise tax threshold, your average single premiums are \$6,607 below the excise tax threshold and your average family premiums are \$9,808 below the excise tax threshold. As more regulatory guidance becomes available, the calculation of the excise tax liability will evolve.

EXHIBIT BRequired Supplementary Information
(As of the December 31, 2017 Measurement Date)Notes to Required Supplementary Information:

Valuation Date:	Actuarially Determined Contribution was calculated as of December 31, 2017.
Actuarial Cost Method:	Individual Entry Age Normal
Asset-Valuation Method:	Market Value of Assets as of the Measurement Date, December 31, 2017.
<u>Actuarial Assumptions:</u>	
Investment Rate of Return:	4.98%, net of OPEB plan investment expense, including inflation.
Single Equivalent Discount Rate:	4.50%, net of OPEB plan investment expense, including inflation.
Inflation:	2.75% as of December 31, 2017 and for future periods
Salary Increases:	3.00% annually as of December 31, 2017 and for future periods
Cost of Living Adjustment:	Not Applicable
Pre-Retirement Mortality:	RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 for males and females
Post-Retirement Mortality:	RP-2000 Healthy Annuitant Mortality Table projected generationally with scale BB and a base year 2009 for males and females
Disabled Mortality:	RP-2000 Healthy Annuitant Table projected generationally with Scale BB and a base year 2012 for males and females

EXHIBIT B

Required Supplementary Information
(As of the December 31, 2017 Measurement Date)
(continued)

Notes to Required Supplementary Information (Continued):

Plan Membership

Plan Membership: At December 31, 2017, OPEB plan membership consisted of the following

Inactive employees or beneficiaries currently receiving benefits:	12
Active Employees:	<u>5</u>
Total:	17

Changes in Assumptions: Effective December 31, 2017

- Discount rate is 4.50% previously 4.00%
- The assumed pre-retirement mortality table is the RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 for males and females- previously RP-2000 Mortality Table projected to 2017
- The assumed post-retirement mortality table is the RP-2000 Healthy Annuitant Mortality Table projected generationally with scale BB and a base year 2009 for males and females- previously RP-2000 Mortality Table projected to 2017
- The actuarial cost method is Individual Entry Age Normal

EXHIBIT B

Required Supplementary Information
(As of the December 31, 2017 Measurement Date)
(continued)

Notes to Required Supplementary Information (Continued):

Deferred Outflows of Resources and Deferred Inflows of Resources Arising between Expected & Actual Experience					
Fiscal Year	Experience Losses	Experience Gains	Amounts recognized in OPEB Expense through December 31, 2018	Balances at December 31, 2018	
				Deferred Outflows of Resources	Deferred Inflows of Resources
2009				0	0
2010				0	0
2011				0	0
2012				0	0
2013				0	0
2014				0	0
2015				0	0
2016				0	0
2017				0	0
2018	20,678	0	5,559	15,119	0
Total				15,119	0

EXHIBIT B

Required Supplementary Information
(As of the December 31, 2017 Measurement Date)
(continued)

Notes to Required Supplementary Information (Continued):

Deferred Outflows of Resources and Deferred Inflows of Resources Arising from Changes of Assumptions					
Fiscal Year	Increase in the Total OPEB Liability	Decrease in the Total OPEB Liability	Amounts recognized in OPEB Expense through December 31, 2018	Balances at December 31, 2018	
				Deferred Outflows of Resources	Deferred Inflows of Resources
2009				0	0
2010				0	0
2011				0	0
2012				0	0
2013				0	0
2014				0	0
2015				0	0
2016				0	0
2017				0	0
2018	0	0	0	0	0
Total				<u>0</u>	<u>0</u>

EXHIBIT B

Required Supplementary Information
(As of the December 31, 2017 Measurement Date)
(continued)

Notes to Required Supplementary Information (Continued):

Deferred Outflows of Resources and Deferred Inflows of Resources between Projected & Actual Earnings on OPEB Plan Investments					
Fiscal Year	Increase in the Total OPEB Liability	Decrease in the Total OPEB Liability	Amounts recognized in OPEB Expense through December 31, 2018	Balances at December 31, 2018	
				Deferred Outflows of Resources	Deferred Inflows of Resources
2009				0	0
2010				0	0
2011				0	0
2012				0	0
2013				0	0
2014				0	0
2015				0	0
2016				0	0
2017				0	0
2018	0	(872)	(174)	0	(698)
Total				0	(698)

EXHIBIT B

Required Supplementary Information
(As of the December 31, 2017 Measurement Date)
(continued)

Notes to Required Supplementary Information (Continued):

OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources related to OPEB as of December 31, 2018		
	Deferred Outflows of Resources	Deferred Inflows of Resources
I. Differences between actual & expected experience	15,119	0
II. Changes of assumptions	0	0
III. Net difference between projected & actual earnings on OPEB plan investments	<u>0</u>	<u>(698)</u>
IV. Total [I.+II.+III.]	15,119	(698)
Year ended June 30:		
	2019	5,385
	2020	5,385
	2021	3,827
	2022	(176)
	2023	0
	Thereafter	0

EXHIBIT BRequired Supplementary Information
(As of the December 31, 2017 Measurement Date)
(continued)Notes to Required Supplementary Information (Continued):Contributions:

The contribution requirements of plan members and the Authority are established and may be amended through Authority ordinances. The Authority expects to contribute \$7,000 beyond the pay-as-you-go cost for the 2018 fiscal year. Total Authority premiums plus implicit costs for the retiree medical program are \$53,183 for the 2018 fiscal year.

EXHIBIT C

Reconciliation of Plan Participation
(As of the December 31, 2017 Valuation Date)

ACTIVE EMPLOYEES

	<u>December 31, 2017</u>	<u>December 31, 2014</u>
A. Average Age at Hire	39.84	43.98
B. Average Service	<u>6.11</u>	<u>0.50</u>
C. Average Current Age	45.95	44.48

RETIRED EMPLOYEES & DEPENDENTS

	<u>December 31, 2017</u>	<u>December 31, 2014</u>
I. Retirees		
A. Under Age 65	1	1
B. Age 65 & Over	<u>6</u>	<u>9</u>
C. Total Retirees	7	10
II. Dependents of Retirees		
A. Under Age 65	0	0
B. Age 65 & Over	<u>5</u>	<u>7</u>
C. Total Retirees	5	7
III. Retirees & Dependents		
A. Under Age 65	1	1
B. Age 65 & Over	<u>11</u>	<u>16</u>
C. Total Retirees	12	17

EXHIBIT D

Projected Cash Flows (Open Group) – Partial Funding Approach

Total Medical, Dental & Life Insurance - Partial Funding - 4.50% discount rate

Measurement Date	I. Total OPEB Liability ("TOL") as of Measurement Date	II. Fiduciary Net Position as of Measurement Date with expected 4.98% return		III. Net OPEB Liability (Asset) [I. - II.]	IV. Funded Ratio [II. / I]	V. Service Cost	VI. Employer Share of Premiums / Claims	VII. Annual Funding / (Payments)	VIII. Total Employer Payments [VI. + VII.]
December 31, 2017	900,917	15,510	885,407	1.72%	21,279	53,183	7,000	60,183	
December 31, 2018	909,330	23,455	885,875	2.58%	21,301	53,909	7,000	60,909	
December 31, 2019	913,410	31,795	881,615	3.48%	21,501	53,631	7,000	60,631	
December 31, 2020	920,199	40,551	879,648	4.41%	21,777	53,413	7,000	60,413	
December 31, 2021	927,844	49,743	878,101	5.36%	22,172	53,230	7,000	60,230	
December 31, 2022	936,460	59,392	877,068	6.34%	22,639	53,062	7,000	60,062	
December 31, 2023	946,152	69,522	876,630	7.35%	23,154	47,920	7,000	54,920	
December 31, 2024	962,581	80,156	882,425	8.33%	23,838	49,022	7,000	56,022	
December 31, 2025	979,279	91,320	887,959	9.33%	18,480	52,622	7,000	59,622	
December 31, 2026	987,532	103,040	884,492	10.43%	21,937	52,357	7,000	59,357	
December 31, 2027	999,880	115,344	884,536	11.54%	22,727	51,987	7,000	58,987	
December 31, 2028	1,014,034	128,260	885,774	12.65%	23,502	51,568	7,000	58,568	
December 31, 2029	1,030,120	141,820	888,300	13.77%	24,349	52,234	7,000	59,234	
December 31, 2030	1,047,100	156,055	891,045	14.90%	25,000	53,477	7,000	60,477	
December 31, 2031	1,064,174	170,999	893,175	16.07%	25,576	55,255	7,000	62,255	
December 31, 2032	1,080,680	186,687	893,993	17.27%	26,122	56,549	7,000	63,549	
December 31, 2033	1,097,099	203,156	893,943	18.52%	26,917	56,870	7,000	63,870	
December 31, 2034	1,114,761	220,445	894,316	19.78%	27,870	55,161	7,000	62,161	
December 31, 2035	1,136,148	238,595	897,553	21.00%	28,781	55,252	7,000	62,252	
December 31, 2036	1,159,395	257,649	901,746	22.22%	29,835	56,761	7,000	63,761	
December 31, 2037	1,183,153	277,652	905,501	23.47%	31,323	55,509	7,000	62,509	
December 31, 2038	1,210,956	298,651	912,305	24.66%	32,854	58,040	7,000	65,040	
December 31, 2039	1,238,882	320,696	918,186	25.89%	34,292	60,965	7,000	67,965	
December 31, 2040	1,266,282	343,839	922,443	27.15%	36,294	62,332	7,000	69,332	
December 31, 2041	1,295,487	368,134	927,353	28.42%	38,095	58,116	7,000	65,116	
December 31, 2042	1,332,628	393,639	938,989	29.54%	40,099	58,882	7,000	65,882	
December 31, 2043	1,372,732	420,414	952,318	30.63%	42,076	59,600	7,000	66,600	
December 31, 2044	1,415,973	448,523	967,450	31.68%	44,145	54,805	7,000	61,805	
December 31, 2045	1,468,765	478,032	990,733	32.55%	46,270	57,749	7,000	64,749	
December 31, 2046	1,523,053	509,010	1,014,043	33.42%	48,610	61,945	7,000	68,945	
December 31, 2047	1,577,593	541,531	1,036,062	34.33%	51,763	65,454	7,000	72,454	
December 31, 2048	1,634,029	575,671	1,058,358	35.23%	54,501	68,493	7,000	75,493	

EXHIBIT E

Projected Cash Flows (Open Group) – Funded Approach

Total Medical, Dental & Life Insurance - 5.00% discount rate increasing at 0.00% per year

Measurement Date	I. Total OPEB Liability ("TOL") as of Measurement Date	II. Fiduciary Net Position as of Measurement Date with expected 4.98% return	III. Net OPEB Liability (Asset) ("NOL") [I. - II.]	IV. Funded Ratio [II. / I.]	V. Service Cost	VI. Employer Share of Premiums / Claims	VII. Annual Funding / (Payments)	VIII. Total Employer Payments [VI. + VII.]
December 31, 2017	846,898	15,510	831,388	1.83%	18,632	53,183	20,600	73,783
December 31, 2018	851,461	37,389	814,072	4.39%	18,641	53,909	20,600	74,509
December 31, 2019	855,392	60,358	795,034	7.06%	18,823	53,631	20,600	74,231
December 31, 2020	860,115	84,471	775,644	9.82%	19,073	53,413	20,600	74,013
December 31, 2021	865,664	109,784	755,880	12.68%	19,423	53,230	20,600	73,830
December 31, 2022	872,140	136,358	735,782	15.63%	19,830	53,062	20,600	73,662
December 31, 2023	879,632	164,255	715,377	18.67%	20,281	47,920	20,600	68,520
December 31, 2024	894,821	193,542	701,279	21.63%	20,908	49,022	20,600	69,622
December 31, 2025	910,150	224,287	685,863	24.64%	15,242	52,622	20,600	73,222
December 31, 2026	917,046	256,563	660,483	27.98%	18,220	52,357	20,600	72,957
December 31, 2027	927,265	290,447	636,818	31.32%	18,908	51,987	20,600	72,587
December 31, 2028	939,265	326,018	613,247	34.71%	19,579	51,568	20,600	72,168
December 31, 2029	953,219	363,360	589,859	38.12%	20,305	52,234	20,600	72,834
December 31, 2030	967,878	402,562	565,316	41.59%	20,834	53,477	20,600	74,077
December 31, 2031	982,362	443,716	538,646	45.17%	21,289	55,255	20,600	75,855
December 31, 2032	995,891	486,920	508,971	48.89%	21,705	56,549	20,600	77,149
December 31, 2033	1,009,003	532,275	476,728	52.75%	22,357	56,870	20,600	77,470
December 31, 2034	1,023,153	579,889	443,264	56.68%	23,148	55,161	20,600	75,761
December 31, 2035	1,041,215	629,874	411,341	60.49%	23,897	55,252	20,600	75,852
December 31, 2036	1,061,050	682,348	378,702	64.31%	24,768	56,761	20,600	77,361
December 31, 2037	1,081,006	737,436	343,570	68.22%	26,054	55,509	20,600	76,109
December 31, 2038	1,105,090	795,267	309,823	71.96%	27,402	58,040	20,600	78,640
December 31, 2039	1,128,692	855,978	272,714	75.84%	28,677	60,965	20,600	81,565
December 31, 2040	1,151,098	919,712	231,386	79.90%	30,413	62,332	20,600	82,932
December 31, 2041	1,174,718	986,620	188,098	83.99%	31,959	58,116	20,600	78,716
December 31, 2042	1,206,855	1,056,860	149,995	87.57%	33,689	58,882	20,600	79,482
December 31, 2043	1,241,677	1,130,598	111,079	91.05%	35,363	59,600	20,600	80,200
December 31, 2044	1,279,385	1,208,008	71,377	94.42%	37,107	54,805	20,600	75,405
December 31, 2045	1,327,530	1,289,274	38,256	97.12%	38,891	57,749	20,600	78,349
December 31, 2046	1,376,688	1,374,587	2,101	99.85%	40,920	61,945	20,600	82,545
December 31, 2047	1,425,400	1,464,148	(38,748)	102.72%	43,614	65,454	2,101	67,555
December 31, 2048	1,475,133	1,539,215	(64,082)	104.34%	45,931	68,493	0	68,493

EXHIBIT E

Projected Cash Flows (Open Group) – Funded Approach

Total Medical, Dental & Life Insurance - 5.00% discount rate and increasing at 3.00% per year

Measurement Date	I. Total OPEB Liability ("TOL") as of Measurement Date	II. Fiduciary Net Position as of Measurement Date with expected 4.98% return	III. Net OPEB Liability (Asset) ("NOL") [I. - II.]	IV. Funded Ratio [II. / I.]	V. Service Cost	VI. Employer Share of Premiums / Claims	VII. Annual Funding / (Payments)	VIII. Total Employer Payments [VI. + VII.]
December 31, 2017	846,898	15,510	831,388	1.83%	18,632	53,183	14,900	68,083
December 31, 2018	851,461	31,549	819,912	3.71%	18,641	53,909	15,347	69,256
December 31, 2019	855,392	48,845	806,547	5.71%	18,823	53,631	15,807	69,438
December 31, 2020	860,115	67,473	792,642	7.84%	19,073	53,413	16,281	69,694
December 31, 2021	865,664	87,515	778,149	10.11%	19,423	53,230	16,769	69,999
December 31, 2022	872,140	109,055	763,085	12.50%	19,830	53,062	17,272	70,334
December 31, 2023	879,632	132,183	747,449	15.03%	20,281	47,920	17,790	65,710
December 31, 2024	894,821	156,993	737,828	17.54%	20,908	49,022	18,324	67,346
December 31, 2025	910,150	183,586	726,564	20.17%	15,242	52,622	18,874	71,496
December 31, 2026	917,046	212,067	704,979	23.13%	18,220	52,357	19,440	71,797
December 31, 2027	927,265	242,546	684,719	26.16%	18,908	51,987	20,023	72,010
December 31, 2028	939,265	275,140	664,125	29.29%	19,579	51,568	20,624	72,192
December 31, 2029	953,219	309,973	643,246	32.52%	20,305	52,234	21,243	73,477
December 31, 2030	967,878	347,175	620,703	35.87%	20,834	53,477	21,880	75,357
December 31, 2031	982,362	386,883	595,479	39.38%	21,289	55,255	22,536	77,791
December 31, 2032	995,891	429,240	566,651	43.10%	21,705	56,549	23,212	79,761
December 31, 2033	1,009,003	474,399	534,604	47.02%	22,357	56,870	23,908	80,778
December 31, 2034	1,023,153	522,520	500,633	51.07%	23,148	55,161	24,625	79,786
December 31, 2035	1,041,215	573,772	467,443	55.11%	23,897	55,252	25,364	80,616
December 31, 2036	1,061,050	628,334	432,716	59.22%	24,768	56,761	26,125	82,886
December 31, 2037	1,081,006	686,393	394,613	63.50%	26,054	55,509	26,909	82,418
December 31, 2038	1,105,090	748,146	356,944	67.70%	27,402	58,040	27,716	85,756
December 31, 2039	1,128,692	813,801	314,891	72.10%	28,677	60,965	28,547	89,512
December 31, 2040	1,151,098	883,577	267,521	76.76%	30,413	62,332	29,403	91,735
December 31, 2041	1,174,718	957,705	217,013	81.53%	31,959	58,116	30,285	88,401
December 31, 2042	1,206,855	1,036,429	170,426	85.88%	33,689	58,882	31,194	90,076
December 31, 2043	1,241,677	1,120,004	121,673	90.20%	35,363	59,600	32,130	91,730
December 31, 2044	1,279,385	1,208,701	70,684	94.48%	37,107	54,805	33,094	87,899
December 31, 2045	1,327,530	1,302,802	24,728	98.14%	38,891	57,749	34,087	91,836
December 31, 2046	1,376,688	1,402,607	(25,919)	101.88%	40,920	61,945	24,728	86,673
December 31, 2047	1,425,400	1,497,793	(72,393)	105.08%	43,614	65,454	0	65,454
December 31, 2048	1,475,133	1,572,383	(97,250)	106.59%	45,931	68,493	0	68,493

EXHIBIT E

Projected Cash Flows (Open Group) – Funded Approach

Cambridge Redevelopment Authority

GASB 45 Projection of Funding Annual Service Cost and Impact on Unfunded Obligation

Total Medical, Dental & Life Insurance - Funding Annual Service Cost - 4.50% discount rate

Measurement Date	I. Total OPEB Liability	II. Service Cost	III. Employer Share of Premiums / Claims including "implicit cost"	IV. Funding Service Cost beyond claims	V. Total Funding Costs [III. + IV.]	VI. Present Value at 3.00% of Employer Share of Premiums / Claims including "implicit cost"	VII. Present Value at 3.00% of Funding Service Cost beyond claims	VIII. Present Value at 3.00% of Total Funding Costs [VI. + VII.]	IX. Fiduciary Net Position at Beginning of year	X. Net OPEB Liability (Asset) [I. - IX.]	XI. Present Value at 3.00% of Net OPEB Liability (Asset)
#####	900,917	21,279	53,183	(31,904)	21,279	53,183	(31,904)	21,279	15,510	885,407	885,407
#####	909,330	21,301	53,909	(32,608)	21,301	52,339	(31,658)	20,681	0	909,330	882,845
#####	913,410	21,501	53,631	(32,130)	21,501	50,552	(30,286)	20,266	0	913,410	860,977
#####	920,199	21,777	53,413	(31,636)	21,777	48,880	(28,951)	19,929	0	920,199	842,112
#####	927,844	22,172	53,230	(31,058)	22,172	47,294	(27,595)	19,699	0	927,844	824,377
#####	936,460	22,639	53,062	(30,423)	22,639	45,772	(26,243)	19,529	0	936,460	807,799
#####	946,152	23,154	47,920	(24,766)	23,154	40,132	(20,741)	19,391	0	946,152	792,387
#####	962,581	23,838	49,022	(25,184)	23,838	39,859	(20,477)	19,382	0	962,581	782,666
#####	979,279	18,480	52,622	(34,142)	18,480	41,540	(26,952)	14,588	0	979,279	773,052
#####	987,532	21,937	52,357	(30,420)	21,937	40,127	(23,314)	16,813	0	987,532	756,861
#####	999,880	22,727	51,987	(29,260)	22,727	38,683	(21,772)	16,911	0	999,880	744,005
#####	1,014,034	23,502	51,568	(28,066)	23,502	37,254	(20,275)	16,979	0	1,014,034	732,560
#####	1,030,120	24,349	52,234	(27,885)	24,349	36,636	(19,558)	17,078	0	1,030,120	722,505
#####	1,047,100	25,000	53,477	(28,477)	25,000	36,415	(19,391)	17,024	0	1,047,100	713,024
#####	1,064,174	25,576	55,255	(29,679)	25,576	36,530	(19,621)	16,909	0	1,064,174	703,544
#####	1,080,680	26,122	56,549	(30,427)	26,122	36,297	(19,530)	16,767	0	1,080,680	693,647
#####	1,097,099	26,917	56,870	(29,953)	26,917	35,440	(18,666)	16,774	0	1,097,099	683,676
#####	1,114,761	27,870	55,161	(27,291)	27,870	33,373	(16,512)	16,861	0	1,114,761	674,449
#####	1,136,148	28,781	55,252	(26,471)	28,781	32,455	(15,549)	16,906	0	1,136,148	667,367
#####	1,159,395	29,835	56,761	(26,926)	29,835	32,370	(15,356)	17,014	0	1,159,395	661,187
#####	1,183,153	31,323	55,509	(24,186)	31,323	30,734	(13,391)	17,343	0	1,183,153	655,083
#####	1,210,956	32,854	58,040	(25,186)	32,854	31,199	(13,539)	17,660	0	1,210,956	650,949
#####	1,238,882	34,292	60,965	(26,673)	34,292	31,817	(13,920)	17,897	0	1,238,882	646,563
#####	1,266,282	36,294	62,332	(26,038)	36,294	31,583	(13,193)	18,390	0	1,266,282	641,615
#####	1,295,487	38,095	58,116	(20,021)	38,095	28,589	(9,849)	18,740	0	1,295,487	637,294
#####	1,332,628	40,099	58,882	(18,783)	40,099	28,122	(8,971)	19,151	0	1,332,628	636,471
#####	1,372,732	42,076	59,600	(17,524)	42,076	27,636	(8,126)	19,510	0	1,372,732	636,529
#####	1,415,973	44,145	54,805	(10,660)	44,145	24,673	(4,799)	19,874	0	1,415,973	637,456
#####	1,468,765	46,270	57,749	(11,479)	46,270	25,241	(5,017)	20,224	0	1,468,765	641,963
#####	1,523,053	48,610	61,945	(13,335)	48,610	26,286	(5,659)	20,627	0	1,523,053	646,302
#####	1,577,593	51,763	65,454	(13,691)	51,763	26,966	(5,641)	21,325	0	1,577,593	649,947

EXHIBIT E

Projected Cash Flows (Open Group) – Funded Approach

Total Medical & Life Insurance - Partial Funding

Measurement Date	Number of Retirees, Spouses & Surviving Spouses	Total OPEB Liability	Present Value at 3.00% of Total OPEB Liability	Employer Share of Premiums / Claims including "implicit cost"	Present Value at 3.00% of Employer Share of Premiums / Claims including "implicit cost"
December 31, 2017	12	900,917	900,917	53,183	53,183
December 31, 2018	11	909,330	882,845	53,909	52,339
December 31, 2019	11	913,410	860,977	53,631	50,552
December 31, 2020	10	920,199	842,112	53,413	48,880
December 31, 2021	10	927,844	824,377	53,230	47,294
December 31, 2022	9	936,460	807,799	53,062	45,772
December 31, 2023	9	946,152	792,387	47,920	40,132
December 31, 2024	8	962,581	782,666	49,022	39,859
December 31, 2025	8	979,279	773,052	52,622	41,540
December 31, 2026	8	987,532	756,861	52,357	40,127
December 31, 2027	8	999,880	744,005	51,987	38,683
December 31, 2028	7	1,014,034	732,560	51,568	37,254
December 31, 2029	7	1,030,120	722,505	52,234	36,636
December 31, 2030	7	1,047,100	713,024	53,477	36,415
December 31, 2031	6	1,064,174	703,544	55,255	36,530
December 31, 2032	6	1,080,680	693,647	56,549	36,297
December 31, 2033	6	1,097,099	683,676	56,870	35,440
December 31, 2034	6	1,114,761	674,449	55,161	33,373
December 31, 2035	5	1,136,148	667,367	55,252	32,455
December 31, 2036	5	1,159,395	661,187	56,761	32,370
December 31, 2037	5	1,183,153	655,083	55,509	30,734
December 31, 2038	5	1,210,956	650,949	58,040	31,199
December 31, 2039	5	1,238,882	646,563	60,965	31,817
December 31, 2040	4	1,266,282	641,615	62,332	31,583
December 31, 2041	4	1,295,487	637,294	58,116	28,589
December 31, 2042	4	1,332,628	636,471	58,882	28,122
December 31, 2043	4	1,372,732	636,529	59,600	27,636
December 31, 2044	4	1,415,973	637,456	54,805	24,673
December 31, 2045	4	1,468,765	641,963	57,749	25,241
December 31, 2046	4	1,523,053	646,302	61,945	26,286
December 31, 2047	4	1,577,593	649,947	65,454	26,966
December 31, 2048	4	1,634,029	653,591	68,493	27,396
December 31, 2049	4	1,692,572	657,288	68,218	26,492
December 31, 2050	4	1,757,152	662,492	70,728	26,666
December 31, 2051	4	1,825,199	668,105	73,166	26,782
December 31, 2052	4	1,896,970	674,152	72,946	25,924
December 31, 2053	4	1,975,736	681,693	75,567	26,073
December 31, 2054	4	2,058,886	689,692	78,451	26,280
December 31, 2055	4	2,146,366	698,054	81,347	26,456
December 31, 2056	4	2,238,878	706,934	84,589	26,709

EXHIBIT F**GLOSSARY**

Accrual Accounting - A system of accounting in which revenues are recorded when earned and outlays are recorded when goods are received or services performed, even though the actual receipt of revenues and payment for goods or services may occur, in whole or in part, at a different time.

Actuarially Determined Contribution - Amount of funding required annually to fully fund plan benefits. Determined by the actuary using a consistent methodology.

Amortization - Allows the recognition of liability over a fixed period of time.

Cash Basis Accounting - A system of accounting in which revenues are recorded when received and outlays are recorded when payment is made.

Deferred Inflows/Outflows of Resources - Amounts arising from experience gains and losses that have not been recognized into the OPEB Expense, but will be recognized in the future.

Discount Rate - The interest rate used to calculate the present value of future cash flows. Under GASB 75, the rate should be the expected long term rate of return on investments for a plan that is being fully funded, the 20 year municipal bond index for a pay-as-you-go plan, and a blend of the two rates for a plan that is being partially funded.

Fiduciary Net Position - The value of cash, investments, other assets and property belonging to an OPEB trust.

GASB - Government Accounting Standards Board. "The Governmental Accounting Standards Board (GASB) was organized in 1984 by the Financial Accounting Foundation (FAF) to establish standards of financial accounting and reporting for state and local governmental entities. Its standards guide the preparation of external financial reports of those entities."

Implicit Subsidy - The liability that arises because retirees who are not eligible for Medicare are charged the same premium as active employees even though their actual medical costs are higher on average.

Irrevocable Contribution - The transfer of assets to a qualified trust in which assets may only be withdrawn for the purpose of providing retiree other post employment benefits.

EXHIBIT F**GLOSSARY***(continued)*

Net OPEB Liability (NOL) - Total OPEB Liability less the Fiduciary Net Position.

Other Post Employment Benefits (OPEB) - Benefits that an employee will begin to receive at the start of retirement. This does not include pension benefits paid to the retired employee.

OPEB Trust - An entity which holds assets for the sole purpose of funding OPEB. All contributions and earnings within this entity must be irrevocable and protected from creditors.

Pay-as-you-go funding - Paying benefits (such as pensions or OPEB) on a cash basis, with no money set aside for future liabilities which are already incurred.

Service Cost - The actuarially determined present value contribution needed to fund benefits which are earned for employee service rendered during the current year. Service cost depends on many factors, including the interest rate used to discount future cashflows, and expected inflation.

Total OPEB Liability (TOL) - That portion, as determined by the Individual Entry Age Normal Actuarial Cost Method, of the Actuarial Present Value of benefits and expenses which are not provided for by future Service Costs.