

**Town of Foxborough Other  
Postemployment Benefits Plan**

**GASB 45 Actuarial Valuation**

*as of*

June 30, 2015

For the fiscal years ending

June 30, 2015

June 30, 2016

Delivered November 2015

TABLE OF CONTENTSLETTER

<u>SECTION</u>		<u>PAGE</u>
I	PRINCIPAL RESULTS OF THE VALUATION	1
II	SUMMARY OF PLAN PROVISIONS	10
III	ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS	11
<u>EXHIBITS</u>		
A	FINANCIAL STATEMENT DISCLOSURES	20
B	RECONCILIATION OF PLAN PARTICIPANTS	32
C	PROJECTED CASH FLOWS (OPEN GROUP)	33
D	GLOSSARY OF TERMS	35

November 2, 2015

*Personal and Confidential*

Mr. William R. Scollins, III  
Finance Director/Town Accountant  
Town of Foxborough  
40 South Street  
Foxborough, MA 02035

Dear Mr. Scollins:

We have performed an actuarial valuation of the Town of Foxborough Other Postemployment Benefits Plan for the fiscal year ending June 30, 2015. The figures presented in this report reflect the adoption, by the Town of Foxborough, of Statement No. 45 of the Governmental Accounting Standards Board ("GASB 45") effective July 1, 2008.

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, taking into account 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,



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

November 2, 2015

ACTUARIAL CERTIFICATION

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the Town of Foxborough other postemployment benefit programs as of June 30, 2015 for the fiscal year ending June 30, 2015 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 Number 43 and 45 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 Town and on participant claims or premium data provided by the Town and/or vendors employed by the Town.

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 43 and 45 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 Town are reasonably related to the experience and expectations of the postemployment benefits programs.



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

SECTION I  
PRINCIPAL RESULTS OF THE VALUATION

**Town of Foxborough**  
**Assuming Partial Funding - 7.00% discount rate**  
**Comparison of Plan Liabilities to Prior Valuation**

	<u>June 30, 2015</u>	<u>June 30, 2013</u>
I. Present Value of Future Benefits		
A. Actives	24,525,358	38,014,914
B. Retirees/Disabled	<u>11,217,363</u>	<u>12,158,046</u>
C. Total	35,742,721	50,172,960
II. Present Value of Future Normal Cost	8,490,335	16,441,109
III. Actuarial Accrued Liability (Entry Age Normal)		
A. Actives	16,035,023	21,573,805
B. Retirees/Disabled	<u>11,217,363</u>	<u>12,158,046</u>
C. Total	27,252,386	33,731,851
IV. Plan Assets	4,578,158	2,816,337
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	22,674,228	30,915,514
VI. Funded Ratio [IV. / III.]	16.80%	8.35%
VII. Annual Covered Payroll	36,586,631	34,778,502
VIII. UAAL as % of Covered Payroll	62.00%	88.9%
IX. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	14,510,965	12,948,753
X. Number of Eligible Participants		
A. Actives	606	596
B. Retirees/Disabled	<u>332</u>	<u>321</u>
C. Total	938	917
<b>For Fiscal Year Ending June 30, 2015</b>	<u>June 30, 2015</u>	<u>June 30, 2013</u>
XI. Normal Cost	994,399	1,540,301
XII. Amortization of UAAL - 30 year increase 4.00% per yr	2,871,586	2,348,847
XIII. Annual Required Contribution ('ARC') [ XI. + XII.]	3,865,985	3,889,148
XIV. Interest on Net OPEB Obligation (Asset)	1,015,766	744,553
XV. Adjustment to Annual Required Contribution	(1,092,883)	(865,899)
XVI. Amortization of Actuarial (Gains) / Losses	(2,107,907)	(1,273,631)
XVII. Annual OPEB Expense [XIII. + XIV. + XV. + XVI.]	1,680,961	2,494,171
XVIII. Employer Share of Costs	1,138,855	1,142,495
XIX. Employer Payments (Withdrawals) to/from OPEB Trust	664,069	577,913
XX. Total Employer Contribution [XVIII. + XIX.]	1,802,924	1,720,408
XXI. Percentage of Annual OPEB Expense Contributed	107.3%	69.0%
XXII. Net OPEB Obligation (Asset) at Beginning of Year [IX.]	14,510,965	12,948,753
XXIII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVII. - XX.]	(121,963)	773,763
XXIV. Net OPEB Obligation (Asset) at End of Year [XXII. + XXIII.]	14,389,002	13,722,516
XXV. Discount Rate	7.00%	5.75%

## SECTION I

### PRINCIPAL RESULTS OF THE VALUATION

(continued)

**Town of Foxborough  
Assuming Full Funding - 7.00% discount rate  
Plan Liabilities as of June 30, 2015**

	<u>Medical</u>	<u>Dental</u>	<u>Life</u>	<u>Excise Tax</u>	<u>Total</u>
I. Present Value of Future Benefits					
A. Actives	23,622,248	0	78,237	824,873	24,525,358
B. Retirees/Disabled	<u>11,050,513</u>	<u>0</u>	<u>115,454</u>	<u>51,396</u>	<u>11,217,363</u>
C. Total	34,672,761	0	193,691	876,269	35,742,721
II. Present Value of Future Normal Cost	7,976,292	0	18,881	495,162	8,490,335
III. Actuarial Accrued Liability (Entry Age Normal)					
A. Actives	15,645,956	0	59,356	329,711	16,035,023
B. Retirees/Disabled	<u>11,050,513</u>	<u>0</u>	<u>115,454</u>	<u>51,396</u>	<u>11,217,363</u>
C. Total	26,696,469	0	174,810	381,107	27,252,386
IV. Plan Assets	4,484,803	0	29,427	63,928	4,578,158
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	22,211,666	0	145,383	317,179	22,674,228
VI. Annual Covered Payroll	36,586,631	36,586,631	36,586,631	36,586,631	36,586,631
VII. UAAL as % of Covered Payroll	60.7%	0.0%	0.4%	0.9%	62.0%
VIII. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	14,214,959	0	93,080	202,926	14,510,965
IX. Number of Eligible Participants					
A. Actives	606	606	606	606	
B. Retirees/Disabled	<u>332</u>	<u>0</u>	<u>159</u>	<u>332</u>	
C. Total	938	606	765	938	
<b>For Fiscal Year Ending June 30, 2015</b>					
X. Normal Cost	949,126	0	2,741	42,532	994,399
XI. Amortization of UAAL - 30 year increase 4.00% per yr	2,813,009	0	18,420	40,157	2,871,586
XII. Annual Required Contribution ('ARC') [ X. + XI.]	3,762,135	0	21,161	82,689	3,865,985
XIII. Interest on Net OPEB Obligation (Asset)	995,046	0	6,516	14,204	1,015,766
XIV. Adjustment to Annual Required Contribution	<b>(1,070,590)</b>	0	<b>(7,010)</b>	<b>(15,283)</b>	<b>(1,092,883)</b>
XV. Amortization of Actuarial (Gains) / Losses	<b>(2,064,907)</b>	0	<b>(13,521)</b>	<b>(29,479)</b>	<b>(2,107,907)</b>
XVI. Annual OPEB Expense [XII. + XIII. + XIV. + XV.]	1,621,684	0	7,146	52,131	1,680,961
XVII. Employer Share of Costs	1,129,547	0	9,308	0	1,138,855
XVIII. Employer Payments (Withdrawals) to/from OPEB Trust	650,522	0	4,260	9,287	664,069
XIX. Total Employer Contribution [XVII. + XVIII.]	1,780,069	0	13,568	9,287	1,802,924
XX. Percentage of Annual OPEB Expense Contributed	109.8%	0.0%	189.9%	17.8%	107.3%
XXI. Net OPEB Obligation (Asset) at Beginning of Year [VIII.]	14,214,959	0	93,080	202,926	14,510,965
XXII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVI. - XIX.]	<b>(158,385)</b>	0	<b>(6,422)</b>	42,844	<b>(121,963)</b>
XXIII. Net OPEB Obligation (Asset) at End of Year [XXI. + XXII.]	14,056,574	0	86,658	245,770	14,389,002

SECTION I  
PRINCIPAL RESULTS OF THE VALUATION  
(continued)

**Town of Foxborough**  
**Plan Liabilities as of June 30, 2015**  
**Assuming maintain Full Funding funding method**

	Town Employees and Retirees	School Employees and Retirees	Public Safety Employees and Retirees	Water Enterprise Employees and Retirees	Sewer Enterprise Employees and Retirees	Government Activities	Business-Type Activities	Total
I. Present Value of Future Benefits								
A. Actives	2,425,326	17,386,671	4,114,878	506,635	91,848	23,926,875	598,483	24,525,358
B. Retirees/Disabled	<u>3,017,392</u>	<u>8,199,971</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>11,217,363</u>	<u>0</u>	<u>11,217,363</u>
C. Total	5,442,718	25,586,642	4,114,878	506,635	91,848	35,144,238	598,483	35,742,721
II. Present Value of Future Normal Cost	939,825	5,344,043	2,000,556	138,569	67,342	8,284,424	205,911	8,490,335
III. Actuarial Accrued Liability (Entry Age Normal)								
A. Actives	1,485,501	12,042,628	2,114,322	368,066	24,506	15,642,451	392,572	16,035,023
B. Retirees/Disabled	<u>3,017,392</u>	<u>8,199,971</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>11,217,363</u>	<u>0</u>	<u>11,217,363</u>
C. Total	4,502,893	20,242,599	2,114,322	368,066	24,506	26,859,814	392,572	27,252,386
IV. Plan Assets	761,394	3,399,005	351,558	62,062	4,138	4,511,957	66,201	4,578,158
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	3,741,499	16,843,594	1,762,764	306,004	20,368	22,347,857	326,371	22,674,228
VI. Annual Covered Payroll	3,385,935	26,720,033	4,264,227	1,145,590	1,070,846	34,370,195	2,216,436	36,586,631
VII. UAAL as % of Covered Payroll	110.5%	63.0%	41.3%	26.7%	1.9%	214.8%	28.6%	62.0%
VIII. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	2,377,944	10,694,797	1,117,061	225,913	95,250	14,189,802	321,163	14,510,965
IX. Number of Eligible Participants								
A. Actives	77	448	65	12	4	590	16	606
B. Retirees/Disabled	<u>86</u>	<u>246</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>332</u>	<u>0</u>	<u>332</u>
C. Total	163	694	65	12	4	922	16	938
<b>For Fiscal Year Ending June 30, 2015</b>								
X. Normal Cost	129,190	651,513	181,495	22,793	9,408	962,198	32,201	994,399
XI. Amortization of UAAL - 30 year increase 4.00% per yr	439,435	2,164,139	226,042	39,350	2,620	2,829,616	41,970	2,871,586
XII. Annual Required Contribution ("ARC") [ X. + XI.]	568,625	2,815,652	407,537	62,143	12,028	3,791,814	74,171	3,865,985
XIII. Interest on Net OPEB Obligation (Asset)	166,456	748,636	78,194	15,813	6,667	993,286	22,480	1,015,766
XIV. Adjustment to Annual Required Contribution	(179,094)	(805,472)	(84,130)	(17,014)	(7,173)	(1,068,696)	(24,187)	(1,092,883)
XV. Amortization of Actuarial (Gains) / Losses	(348,288)	(1,565,717)	(163,538)	(28,469)	(1,895)	(2,077,543)	(30,364)	(2,107,907)
XVI. Annual OPEB Expense [XII. + XIII. + XIV. + XV.]	207,699	1,193,099	238,063	32,473	9,627	1,638,861	42,100	1,680,961
XVII. Employer Share of Costs	286,433	836,429	10,969	5,024	0	1,133,831	5,024	1,138,855
XVIII. Employer Payments (Withdrawals) to/from OPEB Trust	48,617	499,238	52,145	51,256	12,813	600,000	64,069	664,069
XIX. Total Employer Contribution [XVII. + XVIII.]	335,050	1,335,667	63,114	56,280	12,813	1,733,831	69,093	1,802,924
XX. Percentage of Annual OPEB Expense Contributed	137.9%	70.1%	4.6%	15.5%	0.0%	212.6%	15.5%	67.8%
XXI. Net OPEB Obligation (Asset) at Beginning of Year [VIII.]	2,377,944	10,694,797	1,117,061	225,913	95,250	14,189,802	321,163	14,510,965
XXII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVI. - XIX.]	(127,351)	(142,568)	174,949	(23,807)	(3,186)	(94,970)	(26,993)	(121,963)
XXIII. Net OPEB Obligation (Asset) at End of Year [XXI. + XXII.]	2,250,593	10,552,229	1,292,010	202,106	92,064	14,094,832	294,170	14,389,002



SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

**Town of Foxborough**  
**Detail of Plan Liabilities by Group and Dependency Status**  
**Assuming Full Funding - 7.00% discount rate**  
**Plan Liabilities as of June 30, 2015**

	<u>Present Value of Future Benefits</u>	<u>Actuarial Accrued Liability (Entry Age Normal)</u>	<u>Normal Cost</u>
<b>Actives</b>			
Under Age 65			
A. Participants	4,851,494	3,023,039	196,616
B. Spouses	<u>3,860,463</u>	<u>2,456,411</u>	<u>157,986</u>
C. Total	8,711,957	5,479,450	354,602
Age 65 and Over			
A. Participants	9,141,001	6,011,124	373,856
B. Spouses	<u>6,672,400</u>	<u>4,544,449</u>	<u>265,941</u>
C. Total	15,813,401	10,555,573	639,797
Actives Total			
A. Participants	13,992,495	9,034,163	570,472
B. Spouses	<u>10,532,863</u>	<u>7,000,860</u>	<u>423,927</u>
C. Total	24,525,358	16,035,023	994,399
<b>Retirees/Disabled</b>			
Under Age 65			
A. Participants	950,219	950,219	0
B. Spouses	<u>272,510</u>	<u>272,510</u>	<u>0</u>
C. Total	1,222,729	1,222,729	0
Age 65 and Over			
A. Participants	9,233,882	9,233,882	<u>0</u>
B. Spouses	<u>760,752</u>	<u>760,752</u>	<u>0</u>
C. Total	9,994,634	9,994,634	0
Retirees/Disabled Total			
A. Participants	10,184,101	10,184,101	0
B. Spouses	<u>1,033,262</u>	<u>1,033,262</u>	<u>0</u>
C. Total	11,217,363	11,217,363	0
<b>Total Population</b>			
A. Participants	24,176,596	19,218,264	570,472
B. Spouses	<u>11,566,125</u>	<u>8,034,122</u>	<u>423,927</u>
C. Total	35,742,721	27,252,386	994,399

## Overview of GASB 43 and 45

GASB 43 requires retiree medical plans to disclose information about asset and liability levels and show historical contribution information. GASB 43 only applies in situations where a separate trust is established to prefund these benefits. GASB 45 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 43 and 45 apply to those benefits provided after retirement except for pension benefits such as medical insurance, 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 43 and 45 extend this practice to all other post-employment benefits.

## Overview of GASB 43 and 45

(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 Town, the present value is divided into three pieces: the part that is attributed to past years (the "Accrued Liability" or "Past Service Liability"), the part that is being earned this year (the "Normal Cost"), and the part that will be earned in future years (the "Future Service Liability").

Once the Accrued Liability and the Normal Cost have been calculated, the next step is to determine an annual contribution. This consists of two pieces:

- ✓ Normal Cost - because the benefits earned each year should be paid for each year
- ✓ Past Service Cost - a catch-up payment to fund the Accrued Liability over the next 10-30 years

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 Town's financial statements as the Net OPEB Obligation. If you decide to fully fund the OPEB obligation 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 45 – How we got here:

The Plan adopted and implemented GASB 45 (“Accounting and Financial Reporting by Employers for Postemployment Benefits other than Pensions”) effective for the fiscal year ending June 30, 2009. GASB 45 is designed to recognize the Other Postemployment Benefits (“OPEB”) earned by employees throughout their working career vs. when they are actually paid in retirement – accrual accounting vs. “pay-as-you-go” accounting. When GASB 45 was adopted, there was an Unfunded Actuarial Accrued Liability (“UAAL”) or “past service liability” which reflected all benefits earned until the date of such adoption. To smooth the impact of transitioning to GASB 45 on your financial statement, the UAAL was amortized over a 30 year period using a flat dollar amortization. Additionally, each eligible active employee earns benefits each year representing benefits to be paid in retirement or a “Normal 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.

### 2. Summary of Results:

During the fiscal year ending June 30, 2015, the Plan saw an experience gain of \$11,540,986 or 33.73%. Plan experience was more favorable than expected. This was mainly due to an increase in the discount rate to 7.00% (decreases disclosed Accrued Liabilities by \$4.5 million & annual OPEB expense by \$465K) & premiums for Medicare integrated plans increasing by 3% vs. an expected 11% increase. This was somewhat offset by the introduction of a new Actuarial Cost Method in preparation for GASB 75 (increasing disclosed Accrued Liabilities by \$2.7 million) and by premiums for non-Medicare Integrated plans increasing by 15% vs. an expected 11% increase. The actuarial experience gain is amortized into the annual OPEB costs over a 30-year period. The net impact of plan experience is a decrease in the annual OPEB cost. Please note there was a change in methodology to include spouses of retirees in the count.

Commentary on Plan Experience and Contribution Amounts  
(continued)

3. **Balance Sheet Items**

	June 30, 2015	June 30, 2013
Actuarial Accrued Liability	\$27,252,386	\$33,731,851
Plan Assets	\$4,578,158	\$2,816,337
Unfunded Actuarial Accrued Liability	\$22,674,228	\$30,915,514
Funded %	16.80%	8.35%
Net OPEB Obligation	\$14,510,965	\$12,948,753

4. **Income Statement Items**

	June 30, 2015	June 30, 2013
Normal Cost	\$994,399	\$1,540,301
Amortization of UAAL	\$2,871,586	\$2,348,847
Interest on Net OPEB Obligation	\$1,015,766	\$744,553
Adjustment to Annual Required Contribution	\$(1,092,883)	\$(865,899)
Amortization of Actuarial (Gains)/Losses	\$(2,107,907)	\$(1,273,631)
Annual OPEB Expense	\$1,680,961	\$2,494,171
Employer Share of Costs Employer Contributions/(Withdrawals) to/from OPEB Trust	\$1,138,855	\$1,142,495
Total Employer Contribution	\$664,069	\$577,913
Discount Rate	7.00%	5.75%

Commentary on Plan Experience and Contribution Amounts  
(continued)

5. **GASB 75 – Where we’re going:**

The Governmental Accounting Standards Board (“GASB”) issued GASB 75 “Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions” on June 2, 2015 which will become effective for your 2018 fiscal year. This standard will largely mirror the GASB 68 standard for pension plans. The new standards will require increased disclosure and will tie interest rates used in the valuation to the plan’s underlying investment and funding policy. This may increase the pressure on many entities to begin funding their OPEB liabilities. The final text of the GASB 75 was released on July 2, 2015 and we will be communicating more information about the new standard and the impact as more information becomes available.

SECTION IISUMMARY OF PLAN PROVISIONS

<u>Effective Date</u>	July 1, 2008; GASB 45 is adopted.
<u>Plan Year</u>	July 1 through June 30.
<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>	Retirees shall pay 50% of stated premiums for medical insurance and 50% of stated premiums for life insurance and 100% of premiums for dental insurance. Additionally, all retirees enrolled in a non-Medicare integrated plan as of 8/31/2013 will receive a Health Savings Debit Card with \$500.00 per family plan or \$250.00 per individual plan annually for 3 years.
<u>Benefits Offered</u>	Various Medical offerings via Blue Cross Blue Shield of Massachusetts as well as Group Term Life Insurance.
<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 Actuarial Cost Method. Under this method, the annual normal cost for each individual active members, 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, each individual's annual normal cost is a level dollar amount. 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 over a 30 year period.

All employees who are plan participants on a 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 valuation 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- and Post-Retirement Mortality

It is assumed that both pre-retirement and post-retirement mortality are represented by the RP-2000 Mortality Table projected to 2017 for males and females.

Discount Rate

7.00% per annum (previously 5.75%)

Employee Termination

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

<u>Service</u>	<u>Non Public</u>		<u>Public</u> <u>Safety</u>
	<u>Safety Male</u>	<u>Safety Female</u>	
0	15.00%	15.00%	1.50%
5	7.60%	7.60%	1.50%
10	5.40%	5.40%	1.50%
15	3.30%	3.30%	0.00%
20	2.00%	2.00%	0.00%
25	1.00%	1.00%	0.00%
30	0.00%	0.00%	0.00%

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD  
AND ACTUARIAL ASSUMPTIONS  
(continued)

C. ACTUARIAL ASSUMPTIONS (continued)

Retirement Rates for non-teachers

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)

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 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%

SECTION IIIACTUARIAL COST METHOD, ASSET VALUATION METHOD  
AND ACTUARIAL ASSUMPTIONS

(continued)

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.

The Town is adding the Managed Blue for Seniors medical plan to their retiree medical offerings during FY 16. To reflect this it was assumed that 20% of participants who are eligible for the Managed Blue for Seniors plan would elect it when it becomes available.

Surviving Spouses will pay 100% of premiums for Medical Insurance.

Based on the Town's funding & investment policy and a discussion with the Town's auditor the discount rate was increased from 5.75% to 7.00%. The funding & investment policies will be monitored to ensure that the discount rate continues to be appropriate for GASB 45 (and GASB 75 going forward).

### 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 43 and 45 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. 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 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
Network Blue HMO	167		292	459
Blue Care Elect PPO	9		4	13
Managed Blue for Seniors	45			45
Medex II	210			210
<b>Total</b>	431	0	296	727

	Per Contract Costs (monthly) - FY 2016		
	Single	Two-Person	Family
Network Blue HMO	691.88	0.00	1,788.92
Blue Care Elect PPO	844.33	0.00	2,182.85
Managed Blue for Seniors	274.70	549.40	
Medex II	363.22	726.44	

Gross Expected FY 2016 Incurred Premiums	8,914,095
Adjustment to reflect children's claims	(1,443,402)
<b>Total Expected FY 2016 Incurred Premiums (adults only)</b>	<b>7,470,693</b>

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

	<b>Employer Primary</b>	<b>Medicare Primary</b>
Age 65	11,924	4,170
Average Age	11,519	4,170

### 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

7,470,693 Active and Retired Claims (No Children)

##### ALL ACTIVE EMPLOYEES AND SPOUSES (non-GIC)

Age Bracket	Number of Females	Number of Males	Female Aging Factor	Male Aging Factor	Aged (F) Average Claims	Aged (M) Average Claims	Age Related Claims
24 & Under	2	3	1.312	0.549	7,316	3,061	23,815
25 to 29	12	33	1.312	0.591	7,316	3,295	196,527
30 to 34	26	42	1.312	0.712	7,316	3,970	356,956
35 to 39	39	37	1.312	0.850	7,316	4,740	460,704
40 to 44	26	38	1.312	1.000	7,316	5,576	402,104
45 to 49	42	45	1.456	1.193	8,119	6,652	640,338
50 to 54	57	57	1.599	1.441	8,916	8,035	966,207
55 to 59	66	65	1.740	1.753	9,702	9,775	1,275,707
60 to 64	47	31	1.968	2.102	10,974	11,721	879,129
65 to 69	14	5	2.168	2.316	12,089	12,914	233,816
70 & Over	2	2	2.396	2.557	13,360	14,258	55,236
Total	333	358					5,490,539

##### ALL RETIREES AND SPOUSES - NOT MEDICARE ELIGIBLE (non-GIC)

Age Bracket	Number of Females	Number of Males	Female Aging Factor	Male Aging Factor	Aged (F) Average Claims	Aged (M) Average Claims	Age Related Claims
44 & Under	2	1	1.312	1.000	7,316	5,576	20,208
45 to 49	0	0	1.456	1.193	8,119	6,652	0
50 to 54	1	0	1.599	1.441	8,916	8,035	8,916
55 to 59	4	13	1.740	1.753	9,702	9,775	165,883
60 to 64	28	11	1.968	2.102	10,974	11,721	436,203
65 to 69	3	1	2.168	2.316	12,089	12,914	49,181
70 to 74	3	2	2.396	2.557	13,360	14,258	68,596
75 to 79	3	1	2.593	2.769	14,459	15,440	58,817
80 to 84	5	1	2.724	2.910	15,189	16,226	92,171
85 to 89	1	1	2.864	3.059	15,970	17,057	33,027
90 & Over	0	0	3.010	3.215	16,784	17,927	0
Total	50	31					933,002

##### ALL RETIREES AND SPOUSES - MEDICARE ELIGIBLE (non-GIC)

Age Bracket	Number of Females	Number of Males	Female Aging Factor	Male Aging Factor	Aged (F) Average Claims	Aged (M) Average Claims	Age Related Claims
65 to 69	39	28	2.168	2.316	4,170	4,170	279,390
70 to 74	36	30	2.396	2.557	4,170	4,170	275,220
75 to 79	29	26	2.593	2.769	4,170	4,170	229,350
80 to 84	22	13	2.724	2.910	4,170	4,170	145,950
85 to 89	10	7	2.864	3.059	4,170	4,170	70,890
90 & Over	4	7	3.010	3.215	4,170	4,170	45,870
Total	140	111					1,046,670
Grand Totals	523	500					7,470,211



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 2016		
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>
<b>Dental Plan</b>	N/A		N/A
FY 2016 Expected Per Person Rate			N/A

## EXHIBIT A

### Financial Statement Disclosure

(As of June 30, 2015)

The GASB Standards for accounting and financial reporting for postemployment benefits other than pensions requires the following disclosures in the financial statements with regard to the retiree medical and life insurance benefits;

#### **1. A DESCRIPTION OF THE RETIREE MEDICAL INSURANCE PROGRAM:**

- a. Plan Type: Comprehensive Medical & Medicare Supplement coverages through Blue Cross Blue Shield of Massachusetts.
- b. Administrator: Town of Foxborough
- 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: 50% of premiums. Additionally, all retirees enrolled in a non-Medicare integrated plan as of 8/31/2013 will receive a Health Savings Debit Card with \$500.00 per family plan or \$250.00 per individual plan annually for 3 years.

#### **2. A DESCRIPTION OF THE DENTAL INSURANCE PROGRAM:**

- a. Plan Type: Comprehensive Dental Insurance
- b. Administrator: Town of Foxborough
- 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 - \$3,000
- b. Administrator: Town of Foxborough
- c. Eligibility: Same as above
- d. Cost sharing: Employees will pay 50% of premiums in retirement.

EXHIBIT A

Financial Statement Disclosure

(As of June 30, 2015)

(continued)

**4. RETIREE MEDICAL AND LIFE INSURANCE CONTRIBUTIONS:**

Group	Individual	Family
Medical	50%	50%
Dental	100%	100%
Life	50%	N/A

**5. FUNDING POLICY**

The contribution requirements of plan members and the Town are established and may be amended through Town ordinances. The Town expects to contribute \$0 beyond the pay-as-you-go. For the 2015 fiscal year, total Town premiums plus implicit costs for the retiree medical program are \$1,138,855. The Town is also projected to make a contribution to an OPEB Trust of \$664,069 for the 2015 fiscal year for a total contribution of \$1,802,924 .

EXHIBIT A

Financial Statement Disclosure

(As of June 30, 2015)

(continued)

**6. ANNUAL OPEB COST AND NET OPEB OBLIGATION**

The Town's annual other postemployment benefit ("OPEB") cost (expense) is calculated based on the annual required contribution of the employer ("ARC"), an amount actuarially determined in accordance with the parameters of GASB Statement No. 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed thirty (30) years. The following table shows the components of the Town's annual OPEB costs for the fiscal year, the amount actually contributed to the plan and changes in the Town's net OPEB obligation to the plan:

Annual Required Contribution	\$3,865,985
Interest on net OPEB Obligation (Asset)	\$1,015,766
Adjustment to annual required contribution	(\$1,092,883)
Amortization of Actuarial (Gains) / Losses	(\$2,107,907)
Annual OPEB expense	\$1,680,961
Contributions made to pay benefits	\$1,138,855
Contributions made to OPEB Trust	\$664,069
Increase (Decrease) in net OPEB Obligation (Asset)	(\$121,963)
Net OPEB Obligation (Asset) – beginning of year	\$14,510,965
Net OPEB Obligation (Asset) – end of year	\$14,389,002

EXHIBIT A

Financial Statement Disclosure

(As of June 30, 2015)

(continued)

The Town's annual OPEB cost, the percentage of the annual OPEB cost contributed to the plan, and the net OPEB obligation for the 2015 fiscal year and the three preceding years were as follows:

Fiscal Year Ended	Annual OPEB Cost	Expected Employer Payments	Percentage of OPEB Cost Contributed	Increase (Decrease) in Net OPEB Obligation (Asset)	Net OPEB Obligation (Asset)
06/30/2017 (est.)	\$2,010,116	\$2,262,221	112.5%	(\$252,105)	\$13,969,398
06/30/2016 (est.)	\$1,849,734	\$2,017,233	109.1%	(\$167,499)	\$14,221,503
06/30/2015	\$1,680,961	\$1,802,924	107.3%	(\$121,963)	\$14,389,002
06/30/2014	\$2,680,368	\$1,891,922	70.6%	\$788,446	\$14,510,965
06/30/2013	\$2,494,174	\$1,720,408	69.0%	\$773,766	\$13,722,519
06/30/2012	\$4,964,542	\$1,642,093	33.1%	\$3,322,449	\$12,948,753

**Schedule of Funding Progress:**

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio	Covered Payroll	UAAL as a % of Covered Payroll
06/30/2017 (est.)	\$6,766,894	\$30,825,803	\$24,058,909	22.0%	\$38,814,757	62.0%
06/30/2016 (est.)	\$5,585,547	\$29,005,480	\$23,419,933	19.3%	\$37,684,230	62.1%
06/30/2015	\$4,578,158	\$27,252,386	\$22,674,228	16.8%	\$36,586,631	62.0%
06/30/2014	\$3,797,658	\$36,092,116	\$32,294,458	10.5%	\$35,821,857	100.8%
06/30/2013	\$2,816,337	\$33,731,851	\$30,915,514	8.3%	\$34,778,502	97.0%
06/30/2012	\$2,051,867	\$57,875,873	\$55,824,006	3.5%	N/A	N/A

EXHIBIT A

Financial Statement Disclosure  
(As of June 30, 2015)  
(continued)

Fiscal Year Ending June 30, 2015								
	Town Employees and Retirees	School Employees and Retirees	Public Safety Employees and Retirees	Water Enterprise Employees and Retirees	Sewer Enterprise Employees and Retirees	Government Activities	Business-Type Activities	Total
OPEB Obligation (Asset) at beginning of year	2,377,944	10,694,797	1,117,061	225,913	95,250	14,189,802	321,163	14,510,965
Annual Required Contribution	568,625	2,815,652	407,537	62,143	12,028	3,791,814	74,171	3,865,985
Interest on Net OPEB Obligation	166,456	748,636	78,194	15,813	6,667	993,286	22,480	1,015,766
Adjustment to the ARC	(179,094)	(805,472)	(84,130)	(17,014)	(7,173)	(1,068,696)	(24,187)	(1,092,883)
Amortization of Actuarial (Gains)/Losses	(348,288)	(1,565,717)	(163,538)	(28,469)	(1,895)	(2,077,543)	(30,364)	(2,107,907)
Annual OPEB Cost	207,699	1,193,099	238,063	32,473	9,627	1,638,861	42,100	1,680,961
Expected Employer Contribution	286,433	836,429	10,969	5,024	-	1,133,831	5,024	1,138,855
Contribution (Withdrawal) to/from Trust Fund over 30 Years	48,617	499,238	52,145	51,256	12,813	600,000	64,069	664,069
Total Expected Employer Payments	335,050	1,335,667	63,114	56,280	12,813	1,733,831	69,093	1,802,924
Increase (Decrease) in OPEB Obligation (Asset)	(127,351)	(142,568)	174,949	(23,807)	(3,186)	(94,970)	(26,993)	(121,963)
OPEB Obligation (Asset) at end of year	2,250,593	10,552,229	1,292,010	202,106	92,064	14,094,832	294,170	14,389,002
AAL as of June 30, 2015	4,502,893	20,242,599	2,114,322	368,066	24,506	26,859,814	392,572	27,252,386
Plan Assets as of June 30, 2015	761,394	3,399,005	351,558	62,062	4,138	4,511,957	66,201	4,578,158
Unfunded Actuarial Liability as of June 30, 2015	3,741,499	16,843,594	1,762,764	306,004	20,368	22,347,857	326,371	22,674,228

Fiscal Year Ending June 30, 2016								
	Town Employees and Retirees	School Employees and Retirees	Public Safety Employees and Retirees	Water Enterprise Employees and Retirees	Sewer Enterprise Employees and Retirees	Government Activities	Business-Type Activities	Total
OPEB Obligation (Asset) at beginning of year	2,250,593	10,552,229	1,292,010	202,106	92,064	14,094,832	294,170	14,389,002
Annual Required Contribution	594,704	2,944,789	426,228	64,993	12,580	3,965,721	77,573	4,043,294
Interest on Net OPEB Obligation	165,057	742,345	77,537	15,680	6,611	984,939	22,291	1,007,230
Adjustment to the ARC	(177,589)	(798,703)	(83,423)	(16,871)	(7,113)	(1,059,715)	(23,984)	(1,083,699)
Amortization of Actuarial (Gains)/Losses	(353,619)	(1,575,542)	(158,377)	(28,069)	(1,484)	(2,087,538)	(29,553)	(2,117,091)
Annual OPEB Cost	228,553	1,312,889	261,965	35,733	10,594	1,803,407	46,327	1,849,734
Expected Employer Contribution	309,291	920,017	10,619	11,714	1,523	1,239,927	13,237	1,253,164
Contribution (Withdrawal) to/from Trust Fund over 30 Years	65,586	574,417	59,997	51,256	12,813	700,000	64,069	764,069
Total Expected Employer Payments	374,877	1,494,434	70,616	62,970	14,336	1,939,927	77,306	2,017,233
Increase (Decrease) in OPEB Obligation (Asset)	(146,324)	(181,545)	191,349	(27,237)	(3,742)	(136,520)	(30,979)	(167,499)
OPEB Obligation (Asset) at end of year	2,104,269	10,370,684	1,483,359	174,869	88,322	13,958,312	263,191	14,221,503
AAL as of June 30, 2016	4,792,556	21,544,767	2,250,332	391,743	26,082	28,587,655	417,825	29,005,480
Plan Assets as of June 30, 2016	864,982	4,153,351	430,106	119,426	17,682	5,448,439	137,108	5,585,547
Unfunded Actuarial Liability as of June 30, 2016	3,927,574	17,391,416	1,820,226	272,317	8,400	23,139,216	280,717	23,419,933

## EXHIBIT A

### Financial Statement Disclosure

(As of June 30, 2015)

(continued)

#### **7. FUNDED STATUS AND FUNDING PROGRESS**

As of June 30, 2015, the most recent valuation date, the plan was 16.80% funded. The actuarial liability for benefits was \$27,252,386, and the actuarial value of assets was \$4,578,158, resulting in an unfunded actuarial accrued liability (UAAL) of \$22,674,228. The covered payroll (annual payroll of active employees covered by the plan) was \$ 36,586,631 and the ratio of the UAAL to the covered payroll was 62.0%.

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 annual required 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 actuarial accrued liabilities for benefits.

#### **8. EFFECT OF 1% CHANGE IN HEALTHCARE TREND RATES**

In the event that healthcare trend rates were 1% higher than forecast and employee contributions were to increase at the forecast rates, the Actuarial Accrued Liability would increase to \$34,948,211 or by 28.2% and the corresponding Normal Cost would increase to \$1,465,392 or by 47.4%. If such healthcare trend rates were 1% less than forecast and employee contributions were to increase at the forecast rate, the Actuarial Accrued Liability would decrease to \$21,016,784 or by 22.9% and the corresponding Normal Cost would decrease to \$637,914 or by 35.8%.

EXHIBIT A

Financial Statement Disclosure

(As of June 30, 2015)

(continued)

**9. 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: Entry Age Normal  
Investment Rate of Return: 7.00% per annum (previously 5.75%)  
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: 2.50% per annum  
Annual Compensation Increases: 3.00% per annum  
Actuarial Value of Assets: Market Value  
Amortization of UAAL: Amortized increasing at 4.00% per year  
over 30 years at transition  
Remaining Amortization Period: 24 years at June 30, 2015



EXHIBIT A

Financial Statement Disclosure

(As of June 30, 2015)

(continued)

**10. Remaining Amortization Bases**

The initial Actuarial Accrued Liability as of the date GASB 45 was adopted is amortized as a component of the Annual Required Contribution ("ARC"). The Unfunded Actuarial Accrued Liability was amortized beginning in 2008 over a 30 year period with amortization payments increasing at 4.00% per year. For years subsequent to the initial adoption of GASB 45, cumulative gains/losses are amortized on a level dollar basis over a 30 year period. Gains and losses arise from experience and contribution deficiencies and excess contributions in relation to each year's ARC under GASB 45.

<b>Changes in Unfunded Actuarial Liability Since Prior Valuation</b>
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***Expected Unfunded Actuarial Liability***

1. Actuarial Accrued Liability at prior valuation date	33,731,851
2. Actuarial Value of Assets at prior valuation date	<u>2,816,337</u>
3. Unfunded Actuarial Accrued Liability at prior valuation date [1. - 2.]	30,915,514
4. Normal Cost for prior periods	3,080,602
5. Employer Contributions for prior periods	<b>(3,612,330)</b>
6. Interest to current valuation date	<u>3,831,428</u>
7. Expected Unfunded Actuarial Accrued Liability [3. + 4. + 5. + 6.]	34,215,214

***Actual Unfunded Actuarial Liability***

8. Actuarial Accrued Liability at current valuation date	27,252,386
9. Actuarial Value of Assets at current valuation date	<u>4,578,158</u>
10. Unfunded Actuarial Accrued Liability at current valuation date [8. - 9.]	22,674,228

***Net Actuarial (Gain) / Loss from Plan Experience [10. - 7.]*** **(11,540,986)**

11. Unfunded Actuarial Accrued Liability at current valuation date [10.]	22,674,228
12. Remaining Initial Unfunded to be amortized	<u>50,662,337</u>
13. Actuarial (Gain) / Loss to be amortized: [11. - 12.]	<b>(27,988,109)</b>

EXHIBIT A

Financial Statement Disclosure  
(As of June 30, 2015)  
(continued)

Amortization of Initial Unfunded and Plan Experience under GASB 45						
Date Established	Description	Initial Amount	Initial Amortization Period	Remaining Balance at Valuation Date	Remaining Amortization Period	Annual Amortization Payment
July 1, 2008	GASB 45 Liability	62,192,355	30	50,662,337	24	2,871,586
June 30, 2015	Cumulative (Gain) / Loss	(27,988,109)	30	(27,988,109)	30	(2,107,907)
June 30, 2015	Adjustment to ARC	(14,510,965)	30	(14,510,965)	30	(1,092,885)
Total				8,163,263		(329,206)

**11. Recognition of OPEB trust assets**

The State of Massachusetts has recently 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 45. To the best of our knowledge, Town of Foxborough has established an irrevocable trust for the purposes of prefunding liabilities under GASB 45.

EXHIBIT AFinancial Statement Disclosure

(As of June 30, 2015)

(continued)

**12. 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, 2017 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 basic dollar amount for 2018 is \$10,200 for single coverage and \$27,500 for family coverage and the "kicker" amount for 2018 is \$1,650 for single coverage and \$3,450 for family coverage.

The excise tax liability will vary significantly over time as it is highly leveraged with the basic amount increased with general CPI and medical costs increasing with medical trend (generally higher). For purposes of the fiscal year ending June 30, 2015, the AAL for the excise tax is \$381,107 and the increase in annual OPEB Cost is \$52,131. Given your premiums through the 2016 fiscal year and the excise tax threshold, your single premiums are within 73.03% of the excise tax and your family premiums are within 27.72% of the excise tax. As more regulatory guidance becomes available, the calculation of the excise tax liability will evolve.

EXHIBIT AFinancial Statement Disclosure

(As of June 30, 2015)

(continued)

**13. Impact of Section 9A 1/2 of M.G.L. Chapter 32B**

For employees who retire on or after January 1, 2011 whenever a retired employee or beneficiary receives a healthcare premium contribution from a governmental unit in a case where a portion of the retiree's creditable service is attributable to service in 1 or more other governmental units, the first governmental unit shall be reimbursed in full, in accordance with this paragraph, by the other governmental units for the portion of the premium contributions that corresponds to the percentage of the retiree's creditable service that is attributable to each governmental unit. The other governmental units shall be charged based on their own contribution rate or the contribution rate of the first employer, whichever is lower.

For purposes of the valuation we have not attempted to value the impact of prior governmental service at other entities in the State of Massachusetts for current employees of the Town of Foxborough nor have we attempted to value the impact of prior Town of Foxborough employees currently working at other governmental entities in the State of Massachusetts.

EXHIBIT B

Reconciliation of Plan Participation  
(As of June 30, 2015)

**ACTIVE EMPLOYEES**

	<u>June 30, 2015</u>	<u>June 30, 2013</u>
<b>A. Average Age at Hire</b>	37.78	36.68
<b>B. Average Service</b>	10.16	10.50
<b>C. Average Current Age</b>	47.94	47.18

**RETIRED EMPLOYEES & DEPENDENTS**

	<u>June 30, 2015</u>	<u>June 30, 2013</u>
<b>I. Retirees</b>		
<b>A. Under Age 65</b>	36	48
<b>B. Age 65 &amp; Over</b>	<u>277</u>	<u>252</u>
<b>C. Total Retirees</b>	313	300
<b>II. Dependents of Retirees</b>		
<b>A. Under Age 65</b>	9	15
<b>B. Age 65 &amp; Over</b>	<u>10</u>	<u>6</u>
<b>C. Total Retirees</b>	19	21
<b>III. Retirees &amp; Dependents</b>		
<b>A. Under Age 65</b>	45	63
<b>B. Age 65 &amp; Over</b>	<u>287</u>	<u>258</u>
<b>C. Total Retirees</b>	332	321

EXHIBIT C

Projected Cash Flows (Open Group) – Full Funding Approach

**Total Medical, Dental & Life Insurance - Full Funding - 7.00% discount rate**

Fiscal Year	I. Total Actuarial Accrued Liability ("AAL") as of		III. Unfunded Accrued Actuarial Liability ("UAAL")	V. Expected Amortization (increasing at	VI. Interest on Net OPEB Obligation	VII.	VIII.	IX. Expected Annual OPEB Expense [IV. + V. + VI. +	X. OPEB Obligation	XI. Employer Share of	XII. Excess Employer Payments	
	June 30	II. Plan Assets as of June 30	Liability ["I. - II."]	4.00%]	(Asset)	Adjustment to ARC	Amortization of Actuarial (Gain) / Loss	VII. + VIII.]	(Asset) as of June 30	Premiums / Claims	(beyond claims)	
									14,510,965			
2015	27,252,386	4,578,158	22,674,228	994,399	2,871,586	1,015,766	(1,092,883)	(2,107,907)	1,680,961	14,389,002	1,138,855	664,069
2016	29,005,480	5,585,547	23,419,933	1,056,845	2,986,449	1,007,230	(1,083,699)	(2,117,091)	1,849,734	14,221,503	1,253,164	764,069
2017	30,825,803	6,766,894	24,058,909	1,109,494	3,105,907	995,505	(1,071,084)	(2,129,706)	2,010,116	13,969,398	1,398,152	864,069
2018	32,674,746	8,134,377	24,540,369	1,164,184	3,230,143	977,858	(1,052,097)	(2,148,693)	2,171,395	13,666,365	1,510,359	964,069
2019	34,591,471	9,701,024	24,890,447	1,218,546	3,359,349	956,645	(1,029,274)	(2,171,516)	2,333,750	13,275,897	1,660,149	1,064,069
2020	36,540,359	11,480,777	25,059,582	1,271,933	3,493,723	929,314	(999,866)	(2,200,924)	2,494,180	12,835,334	1,770,674	1,164,069
2021	38,564,532	13,488,554	25,075,978	1,328,245	3,633,471	898,474	(966,685)	(2,234,105)	2,659,400	12,363,916	1,866,749	1,264,069
2022	40,687,850	15,740,316	24,947,534	1,383,520	3,778,809	865,475	(931,181)	(2,269,609)	2,827,014	11,865,897	1,960,964	1,364,069
2023	42,917,799	18,253,142	24,664,657	1,442,546	3,929,962	830,613	(893,673)	(2,307,117)	3,002,331	11,324,018	2,080,141	1,464,069
2024	45,233,064	21,045,307	24,187,757	1,506,871	4,087,160	792,681	(852,861)	(2,347,929)	3,185,922	10,750,066	2,195,806	1,564,069
2025	47,662,217	24,136,364	23,525,853	1,566,165	4,250,647	752,505	(809,634)	(2,391,156)	3,368,527	10,139,709	2,314,815	1,664,069
2026	50,192,845	27,547,236	22,645,609	1,624,974	4,420,674	709,779	(763,666)	(2,436,653)	3,555,108	9,456,828	2,473,921	1,764,069
2027	52,795,917	31,300,310	21,495,607	1,692,741	4,597,501	661,978	(712,236)	(2,487,220)	3,752,764	8,706,143	2,639,381	1,864,069
2028	55,488,034	35,419,540	20,068,494	1,764,629	4,781,402	609,430	(655,697)	(2,542,937)	3,956,827	7,928,560	2,770,341	1,964,069
2029	58,287,807	39,930,557	18,357,250	1,838,244	4,972,659	554,999	(597,134)	(2,600,726)	4,168,042	7,100,999	2,931,534	2,064,069
2030	61,198,136	44,860,786	16,337,350	1,914,617	5,171,566	497,070	(534,808)	(2,662,334)	4,386,111	6,220,799	3,102,242	2,164,069
2031	64,200,837	50,239,571	13,961,266	1,996,575	5,378,429	435,455	(468,516)	(2,727,970)	4,613,973	5,390,207	3,180,497	2,264,069
2032	67,404,240	56,098,312	11,305,928	2,083,086	5,593,567	377,314	(405,960)	(2,789,938)	4,858,069	4,570,447	3,313,760	2,364,069
2033	70,830,747	62,470,606	8,360,141	2,171,213	5,817,310	319,932	(344,220)	(2,851,165)	5,113,070	3,719,867	3,499,581	2,464,069
2034	74,345,771	69,392,401	4,953,370	2,269,094	6,050,003	260,391	(280,159)	(2,914,795)	5,384,534	2,923,289	3,617,042	2,564,069
2035	78,113,829	76,902,163	1,211,666	2,372,744	6,292,003	204,630	(220,166)	(2,974,445)	5,674,766	2,159,354	3,774,631	2,664,069
2036	82,084,884	85,041,049	(2,956,165)	2,476,313	6,543,683	151,155	(162,630)	(3,031,733)	5,976,788	7,090,092	4,002,215	(2,956,165)
2037	86,204,355	87,936,042	(1,731,687)	2,588,135	6,805,430	496,307	(533,986)	(2,661,583)	6,694,303	11,307,609	4,208,473	(1,731,687)
2038	90,580,057	92,300,294	(1,720,237)	2,708,499	7,077,647	791,532	(851,626)	(2,344,937)	7,381,115	15,963,555	4,445,407	(1,720,237)
2039	95,075,154	96,981,888	(1,906,734)	2,835,785	0	1,117,449	(1,202,285)	(1,995,354)	755,595	13,789,613	4,836,272	(1,906,734)
2040	99,626,884	101,798,279	(2,171,395)	2,972,122	0	965,273	(1,038,556)	(2,156,734)	742,105	11,527,265	5,175,848	(2,171,395)
2041	104,261,023	106,678,050	(2,417,027)	3,117,458	0	806,909	(868,169)	(2,324,796)	731,402	9,190,814	5,484,880	(2,417,027)
2042	109,063,647	111,645,321	(2,581,674)	3,268,637	0	643,357	(692,200)	(2,498,461)	721,333	6,641,604	5,852,216	(2,581,674)
2043	113,933,673	116,789,989	(2,856,316)	3,430,065	0	464,913	(500,208)	(2,688,153)	706,617	4,061,559	6,142,978	(2,856,316)
2044	119,006,213	122,010,692	(3,004,479)	3,600,523	0	284,309	(305,894)	(2,880,190)	698,748	1,316,873	6,447,912	(3,004,479)
2045	124,395,215	127,443,583	(3,048,368)	3,776,448	0	92,182	(99,180)	116,161	3,885,611	1,478,007	6,772,845	(3,048,368)
2046	129,934,593	133,211,377	(3,276,784)	3,959,355	0	103,461	(111,316)	129,040	4,080,540	1,772,383	7,062,948	(3,276,784)

EXHIBIT C

Projected Cash Flows (Open Group) - Full Funding Approach

**Total Medical, Dental & Life Insurance - Full Funding**

Fiscal Year	Number of Retirees, Spouses & Surviving Spouses	Total Actuarial Accrued Liability ("AAL")	Present Value at 4.00% of Total Actuarial Accrued Liability ("AAL")	Employer Share of Premiums / Claims including "implicit cost"	Present Value at 4.00% of Employer Share of Premiums / Claims including "implicit cost"
2015	332	27,252,386	27,252,386	1,138,855	1,138,855
2016	354	29,005,480	27,889,885	1,253,164	1,204,965
2017	368	30,825,803	28,500,188	1,398,152	1,292,670
2018	385	32,674,746	29,047,730	1,510,359	1,342,704
2019	400	34,591,471	29,568,934	1,660,149	1,419,102
2020	416	36,540,359	30,033,512	1,770,674	1,455,365
2021	431	38,564,532	30,478,110	1,866,749	1,475,319
2022	444	40,687,850	30,919,422	1,960,964	1,490,171
2023	459	42,917,799	31,359,615	2,080,141	1,519,939
2024	471	45,233,064	31,780,151	2,195,806	1,542,744
2025	480	47,662,217	32,198,886	2,314,815	1,563,806
2026	490	50,192,845	32,604,315	2,473,921	1,607,012
2027	499	52,795,917	32,976,174	2,639,381	1,648,550
2028	507	55,488,034	33,324,675	2,770,341	1,663,795
2029	513	58,287,807	33,659,756	2,931,534	1,692,888
2030	517	61,198,136	33,981,153	3,102,242	1,722,565
2031	520	64,200,837	34,277,352	3,180,497	1,698,093
2032	522	67,404,240	34,603,533	3,313,760	1,701,196
2033	523	70,830,747	34,964,049	3,499,581	1,727,492
2034	524	74,345,771	35,287,657	3,617,042	1,716,802
2035	525	78,113,829	35,650,132	3,774,631	1,722,692
2036	526	82,084,884	36,021,605	4,002,215	1,756,306
2037	527	86,204,355	36,374,392	4,208,473	1,775,788
2038	529	90,580,057	36,750,714	4,445,407	1,803,619
2039	531	95,075,154	37,090,859	4,836,272	1,886,734
2040	534	99,626,884	37,371,718	5,175,848	1,941,548
2041	538	104,261,023	37,605,828	5,484,880	1,978,337
2042	541	109,063,647	37,825,080	5,852,216	2,029,645
2043	544	113,933,673	37,994,313	6,142,978	2,048,545
2044	547	119,006,213	38,159,511	6,447,912	2,067,532
2045	550	124,395,215	38,353,367	6,772,845	2,088,195
2046	551	129,934,593	38,520,443	7,062,948	2,093,883
2047	554	135,769,044	38,702,044	7,307,057	2,082,935
2048	555	142,012,935	38,924,918	7,650,508	2,096,960
2049	557	148,839,345	39,226,920	8,016,317	2,112,717
2050	558	155,814,628	39,485,837	8,279,462	2,098,144
2051	558	163,434,293	39,823,825	8,580,309	2,090,753
2052	558	171,769,411	40,245,032	8,894,774	2,084,018
2053	558	180,211,825	40,599,099	9,221,105	2,077,381
2054	557	188,890,947	40,917,671	9,578,853	2,074,977

## EXHIBIT D

### GLOSSARY

**AAI** – Actuarial Accrued Liability. That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of pension plan benefits and expenses which is not provided for by future Normal Costs.

**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.

**Actuarial Value of Assets** – The value of cash, investments, other assets and property belonging to an OPEB trust, pension fund or similar entity, as used by the actuary for the purpose of actuarial valuation. Some funds may be restricted for other purposes, and “smoothing” of investment gains and losses often make the actuarial value of assets different from the market value of assets.

**Annual Required Contribution** – Normal Cost plus an amortization of the funding shortfall over a period of no more than 30 years.

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

**Discount Rate** – The interest rate used to calculate present value of a series of future cash flows. Under GASB 45, the rate should be “long term expected yield on the investments that are expected to be used to pay benefits as they come due. These would be plan investments for a funded plan, the employer’s investments for a pay as you go plan [e.g. short term county investment pool], or a weighted average of expected plan and employer investments for a plan that is partially funded”.

**FASB – Financial Accounting Standards Board.** “Since 1973, the Financial Accounting Standards Board (FASB) has been the designated organization in the private sector for establishing standards of financial accounting and reporting”.

**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.”



EXHIBIT D**GLOSSARY***(continued)*

**GFOA – Government Finance Officers Association.** “GFOA is the professional association of state/provincial and local finance officers in the United States and Canada, and has served the public finance profession since 1906. Approximately 16,000 GFOA members are dedicated to the sound management of government financial resources.”

**Implicit Subsidy** – “The difference between a premium rate charged to retirees for a particular benefit and the estimated rate that would have been applicable to those retirees if that benefit was acquired for them as a separate group.”

**Irrevocable Contribution** – “Irrevocably transferred assets to a qualifying trust, or equivalent arrangement, in which plan assets are dedicated to providing benefits to retirees and their beneficiaries in accordance with the terms of the plan and are legally protected from creditors of the employer(s) or plan administrator. The preceding criteria preclude counting as [irrevocable] contributions (a) designations of net assets of a governmental or proprietary fund to be used for OPEB or (b) internal transfers of assets to a separate governmental or proprietary fund for the same purpose. Rather, such actions should be regarded as earmarking of employer assets.”

**Level Dollar Amortization** – Funding a shortfall in OPEB assets with equal dollar payments over a designated number of years (no more than 30 years). The present value of the level payments equals the present value of unfunded liabilities, the UAAL.

**Level Percent of Payroll Amortization** – Funding a shortfall in OPEB assets as a level percent of payroll over a designated number of years (no more than 30 years). The present value of the payments equals the present value of unfunded liabilities, the UAAL. Level percent of payroll typically has lower payments in the early years than level dollar amortization. When using level payroll amortization, employee count is assumed to be constant, and the payroll differences arise from overall wage trends.

## EXHIBIT D

### **GLOSSARY**

*(continued)*

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

**NOA** - Net OPEB Asset. The amount recognized by an employer for contributions to an OPEB plan greater than OPEB expenses.

**NOO** - Net OPEB Obligation. The cumulative difference since the effective date of GASB Statement number 45 between annual OPEB cost and the employer's contributions to the plan, including the OPEB liability (asset) at transition, if any, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to OPEB-related debt.

**OPEB** - Other Post Employment Benefits

**OPEB Trust** - An entity other than a pension or retirement system which manages OPEB assets. In many respects it is similar to a pension fund for OPEB. For reasons detailed in GASB 45, contributions to an OPEB trust should be irrevocable in order to obtain the most favorable accounting treatment.

**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.

**POB** - Pension Obligation Bond. Generally yielding taxable interest, POBs are issued to help fund a previously unfunded or underfunded pension liability.

**UAAL** - Unfunded Accrued Actuarial Liability. Actuarial Accrued Liability minus the Actuarial Value of Assets.