Gabriel Roeder Smith & Company
Consultants & Actuaries

CITY OF TRAVERSE CITY POLICE AND FIRE
HEALTH CARE COVERAGES DURING RETIREMENT
REPORT OF THE ACTUARIAL VALUATION REPORT
AS OF JUNE 30, 2016

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April 6, 2017

Mr. Brian Postma
City of Traverse City
400 Boardman Avenue
Traverse City, Michigan 49684

Dear Mr. Postma:

Submitted in this report are the results of an Actuarial Valuation of the assets and liabilities associated with the employer financed retiree health benefits provided by the City of Traverse City. The date of the valuation was June 30, 2016. The annual required contribution has been calculated for the fiscal years beginning July 1, 2017 and July 1, 2018.

This report was prepared at the request of the City of Traverse City and is intended for use by the City of Traverse City and those designated or approved by the City. This report may be provided to parties other than the City of Traverse City only in its entirety and only with the permission of the City. GRS is not responsible for unauthorized use of this report.

The actuarial calculations were prepared for purposes of complying with the requirements of Statement No. 45 of the Governmental Accounting Standards Board (GASB). In addition, we have included information which may be helpful if there is a trust requiring a GASB Statement No. 43 disclosure. The calculations reported herein have been made on a basis consistent with our understanding of these accounting standards. This report should not be relied on for any other purpose. Determinations of the liability associated with the benefits described in this report for purposes other than satisfying the City of Traverse City's financial reporting requirements may be significantly different than the values shown in this report. This report is not compliant with GASB Statements No. 74 and No. 75. A separate report that incorporates GASB Statements No. 74 and No. 75 will be issued at a later date once implementation guides are issued for these new standards.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

The funded ratio reported in this valuation is not appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligations.

The valuation was based upon information furnished by the City of Traverse City, concerning retiree health benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency with the last valuation, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the City of Traverse City.

To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the City of Traverse City as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Mark Buis and James D. Anderson are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor.

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY

Mark Buis

Mark Buis, FSA, EA, FCA, MAAA

James D. Anderson

James D. Anderson, FSA, EA, MAAA

MB/JDA:sc

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Annual Required Contribution and OPEB Cost

This report presents the Annual Required Contribution (ARC), one component of the annual Other Postemployment Benefits (OPEB) cost required to be recognized by the plan sponsor for purposes of complying with the accounting requirements of the Governmental Accounting Standards Board (GASB) Statement No. 45. In addition, the plan may need to comply with GASB Statement No. 43. Please consult with legal counsel and your auditors to determine whether you have a plan for GASB Statement No. 43 purposes.

We have calculated the Annual Required Contribution (ARC) for the fiscal years beginning July 1, 2017 and July 1, 2018 under an interest rate assumption of 7.5%. Below is a summary of the results. In the first year GASB Statement No. 45 is adopted, the annual OPEB cost is equal to the ARC. In subsequent years, if there is a net OPEB obligation (NOO, see below), the annual OPEB cost is equal to the ARC for the fiscal year plus one year's interest on the net OPEB Obligation plus an adjustment to the ARC.

Employer contributions to an OPEB trust act to reduce the NOO. In addition, actual premiums paid on behalf of retirees directly from the employer* might be employer contributions in relation to the ARC and act to reduce the NOO. The ARCs and estimated retiree premiums shown below include an adjustment for any implicit rate subsidy present in your pre-65 rates.

* *Premiums passed through the trust in the same fiscal year might also be treated as contributions for that year. We recommend all such transactions be discussed with your accounting professional prior to their occurrence.*

Annual Required Contribution	7.50% Interest	Estimated Premiums Paid for Retirees
Fiscal Year Beginning July 1, 2017	$480,230	$428,892
Fiscal Year Beginning July 1, 2018	480,429	453,752

Additional OPEB Reporting Requirements – Net OPEB Obligation

In addition to the annual cost described above, employers are required to disclose a Net OPEB Obligation (or asset). The NOO is the adjusted cumulative difference between annual OPEB cost and annual employer contributions in relation to the ARC accumulated from the implementation of GASB Statement No. 45. The requirements for determining the employer's contributions in relation to the ARC are described in paragraph 13g. of GASB Statement No. 45. Additional information required to be disclosed in the employer's financial statements is detailed in paragraphs 24 through 27 of GASB Statement No. 45.

Liabilities and Assets

	7.50% Interest
1. Present Value of Future Benefit Payments	$8,890,433
2. Actuarial Accrued Liability	8,094,695
3. Plan Assets	3,761,310
4. Unfunded Actuarial Accrued Liability (2) – (3)	4,333,385
5. Funded Ratio (3)/(2)	46.5%

The Present Value of Future Benefit Payments (PVFB) is the present value of all benefits projected to be paid from the plan for past and future service to current members. The Actuarial Accrued Liability is the portion of the PVFB allocated to past service by the Plan's funding method (see the Section titled "Actuarial Cost Method and Actuarial Assumptions").

SECTION A

VALUATION RESULTS

DEVELOPMENT OF THE FUNDING CONTRIBUTION FOR THE OTHER POST EMPLOYMENT BENEFITS

Contributions for	Development of the Funding Contribution for Fiscal Year Beginning	
	July 1, 2017	**July 1, 2018**
Total Normal Cost	$ 93,564	$ 93,763
Annual Active Member Contribution	0	0
Employer Normal Cost	93,564	93,763
Amortization of Unfunded Actuarial Accrued Liabilities	386,666	386,666
Funding Contribution	480,230	480,429

The unfunded actuarial accrued liabilities were amortized over a period of 23 years. The amortization is performed as a level dollar amount.

DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY

	June 30, 2014	June 30, 2016
A. Present Value of Future Benefits		
1. Retirees and Beneficiaries	$5,149,326	$5,464,541
2. Vested Terminated Members	0	270,466
3. Active Members	2,782,751	3,155,426
Total Present Value of Future Benefits	$7,932,077	$8,890,433
B. Present Value of Future Employer Normal Costs	778,428	795,738
C. Present Value of Future Contributions from Current Active Members	0	0
D. Actuarial Accrued Liability: (A.-B.-C.)	7,153,649	8,094,695
E. Actuarial Value of Assets	3,698,682	3,761,310
F. Unfunded Actuarial Accrued Liability: (D.-E.)	3,454,967	4,333,385
G. Funded Percent (E./D.)	51.7%	46.5%

The Unfunded Actuarial Accrued Liability (UAAL) is not booked as an expense all in one year and does not appear in the Employer's Statement of Net Assets. Nevertheless, it is reported in the Notes to the Financial Statements and in the Required Supplementary Information. These are information sections within the employer's financial statements.

FUNDING CONTRIBUTIONS
COMPARISON BY OPEB DIVISION

Division	Funding Contribution for
	July 1, 2017 - June 30, 2018
Police	$ 440,652
Fire	39,578
Total	$ 480,230
	July 1, 2018 - June 30, 2019
Police	$ 440,919
Fire	39,510
Total	$ 480,429

Development of the Funding Contribution for the Fiscal Year

Contributions for	July 1, 2017 - June 30, 2018
Employer Normal Cost	$ 80,870
Amortization of Unfunded Actuarial Accrued Liabilities (Amortized over 26 years)	359,782
Funding Contribution	$ 440,652
	July 1, 2018 - June 30, 2019
Funding Contribution	$ 440,919

Determination of Unfunded Actuarial Accrued Liability as of June 30, 2016

A. Present Value of Future Benefits	
1. Retirees and Beneficiaries	$4,054,611
2. Vested Terminated Members	270,466
3. Active Members	2,714,153
Total Present Value of Future Benefits	$7,039,230
B. Present Value of Future Employer Normal Costs	684,744
C. Present Value of Future Contributions from Current Active Members	0
D. Actuarial Accrued Liability (AAL)	6,354,486
E. Actuarial Value of Assets (AVA)	2,322,388
F. Unfunded Actuarial Accrued Liability (UAAL)	4,032,098

VALUATION RESULTS BY DIVISION
FIRE

Development of the Funding Contribution for the Fiscal Year

Contributions for	July 1, 2017 - June 30, 2018
Employer Normal Cost	$ 12,694
Amortization of Unfunded Actuarial Accrued Liabilities (Amortized over 26 years)	26,884
Funding Contribution	$ 39,578
	July 1, 2018 - June 30, 2019
Funding Contribution	$ 39,510

Determination of Unfunded Actuarial Accrued Liability as of June 30, 2016

A. Present Value of Future Benefits	
1. Retirees and Beneficiaries	$1,409,930
2. Vested Terminated Members	0
3. Active Members	441,273
Total Present Value of Future Benefits	$1,851,203
B. Present Value of Future Employer Normal Costs	110,994
C. Present Value of Future Contributions from Current Active Members	0
D. Actuarial Accrued Liability (AAL)	1,740,209
E. Actuarial Value of Assets (AVA)	1,438,922
F. Unfunded Actuarial Accrued Liability (UAAL)	301,287

DEVELOPMENT OF FUNDING VALUE OF ASSETS

Year Ended June 30:	2015	2016	2017	2018	2019
A. Funding Value Beginning of Year	$3,698,682	$3,761,510			
B. Market Value End of Year	3,364,981	3,352,925			
C. Market Value Beginning of Year	3,379,732	3,364,981			
D. Non-Investment Net Cash Flow	(19,121)	(18,041)			
E. Investment Income					
E1. Market Total: B - C - D	4,370	5,985			
E2. Amount for Immediate Recognition: (7.50%)	276,684	281,437			
E3. Amount for Phased-In Recognition: E1-E2	(272,314)	(275,452)			
F. Phased-In Recognition of Investment Income					
F1. Current Year: 0.25 x E3	(68,079)	(68,863)			
F2. First Prior Year	(65,639)	(68,079)	$(68,863)		
F3. Second Prior Year	(61,017)	(65,639)	(68,079)	$(68,863)	
F4. Third Prior Year	0	(61,015)	(65,640)	(68,077)	$(68,863)
F5. Total Recognized Investment Gain (Loss)	(194,735)	(263,596)	(202,582)	(136,940)	(68,863)
G. Funding Value End of Year: A + D + E2 + F5	3,761,510	3,761,310			
H. Difference between Market & Funding Value	(396,529)	(408,385)			

The Funding Value of Assets recognizes assumed investment income (line E2) fully each year. Differences between actual and assumed investment income (line E3) are phased-in over a closed 4-year period. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than Market Value. The Funding Value of Assets is unbiased with respect to Market Value. At any time it may be either greater or less than Market Value. If actual and assumed rates of investment income are exactly equal for 3 consecutive years, the Funding Value will become equal to Market Value.

COMMENTS

COMMENT A: One of the key assumptions used in any valuation of the cost of post-employment benefits is the rate of return on Plan assets. Higher assumed investment returns will result in a lower ARC. Lower returns will tend to increase the computed ARC. We have calculated the liability and the resulting ARC using an assumed long term rate of investment return of 7.5% per annum. If the Plan Sponsor chooses to pre-fund with contributions less than the ARC (or not pre-fund at all), GASB requires the use of a lower rate of return on assets. Use of such an interest rate would considerably increase the ARC and the net OPEB obligation that is disclosed on the employer's financial statement.

COMMENT B: The contribution amounts shown include amortization of the unfunded actuarial accrued liability over 23 years. A shorter amortization period would result in a higher ARC.

COMMENT C: GASB Statement No. 45 stipulates that Plan assets must be placed in a trust or equivalent arrangement that meets the following criteria:

- Employer contributions to the Plan are irrevocable
- Assets are dedicated to providing benefits to retirants and their beneficiaries
- Assets are legally protected from creditors

It is our understanding that a separate trust was established for the retiree health care plan and that these criteria have been met. Otherwise, the fund asset value cannot be counted in our calculations and contribution requirements may be higher than those shown. **Please consult with legal counsel to determine whether current assets meet the criteria listed above.**

COMMENT D: In total, the contribution amounts increased from those developed in the June 30, 2014 valuation. This is due primarily to lower than expected investment return and greater than expected increase in the premiums associated with uncapped plans.

COMMENT E: The funding value developed as of June 30, 2016 was split between the Police and Fire groups based on the June 30, 2016 market value split provided by the City.

COMMENT F: The "Cadillac" tax is a 40% excise tax paid by the coverage provider (employer and/or insurer) on the value of health plan costs in excess of certain thresholds. The thresholds are $10,200 for one-person coverage or $27,500 for family coverage in 2020. Many plans are below the thresholds today, but are likely to exceed them in the next decade. The thresholds will be indexed at CPI-U, which is lower than the medical inflation rates affecting the cost of the plans. There is considerable uncertainty about how the tax would be applied, and considerable latitude in grouping of participants for tax purposes. Combining early retiree and Medicare eligible (post-65) retiree costs are allowed and can keep plans under the thresholds for a longer period of time. For this valuation, health care liabilities have not been loaded for future or current retirees to reflect expected future excise tax liability due to projected "Cadillac Plan" status. As additional guidance on the legislation is issued, we will review and monitor the impact.

COMMENT G: The GASB issued Statement Nos. 74 and 75 for OPEB valuations similar to the new pension standards. GASB Statement No. 74 for the plan OPEB disclosures is effective for fiscal years beginning after June 15, 2016. GASB Statement No. 75 for employer OPEB disclosures is effective for employer fiscal years beginning after June 15, 2017. The GASB has not yet issued implementation guides for these new standards. These guides will provide additional clarification related to the implementation of Statement Nos. 74 and 75. Our understanding of the application of the recent GASB Statements is stated below, however, GRS consultants are not auditors, and we recommend consultation with your auditors for final determination of which standards will be applicable. The City currently pre-funds the benefits and has the assets set aside in a qualified trust; as a result, the City will need to comply with both GASB Statement Nos. 74 and 75. The information necessary for GASB Statement No. 74 for the June 30, 2017 fiscal year end will be provided at a later date, following the availability of the necessary information and the end of the fiscal year. The basis for the GASB Statement No. 74 information will be in the June 30, 2016 valuation, where roll-forward techniques will be applied.

SECTION B

RETIREE PREMIUM RATE DEVELOPMENT

RETIREE PREMIUM RATE DEVELOPMENT

Uncapped Fire

Initial premium rates were developed for the post-65 retirees only, as there are no pre-65 retirees left in the group. For the post-65 retirees, the fully-insured premium rate provided by the City is used as the basis of the initial per capita cost without adjustments since the rate reflects the demographics of the group.

Age graded and sex distinct premiums are utilized for this group. The premiums developed by the preceding process are appropriate for the unique age and sex distribution currently existing. Over the future years covered by this valuation, the age and sex distribution will most likely change. Therefore, our process "distributes" the average premium over all age/sex combinations and assigns a unique premium for each combination. The age/sex specific premiums more accurately reflect the health care utilization and cost at that age.

The combined monthly one-person medical and drug premiums at select ages are shown below:

For Those Eligible for Medicare		
Age	**Male**	**Female**
65	$ 461.08	$ 434.89
70	502.28	486.03
75	539.46	526.39

For Fire Members Retired After July 1, 1995 and Police Retired Prior to July 1, 2009

The data used for this valuation was the data submitted by the City for the June 30, 2016 valuation of the Police and Fire Retirement System. The data appears to be complete and reasonable.

The monthly rates upon which projected premiums were based for future retirees are shown below:

	Employer-Paid		
Status	**Police^ Retired Before 7/1/09**	**Police Captains^ Retired Before 7/1/09**	**Fire* Retired After 7/1/95**
Before Medicare:			
Single	$ 535.82	$ 527.35	$210.90
Couple	1,129.79	1,157.54	442.90
After Medicare:			
Single	$ 535.82	$ 527.35	$210.90
Couple	1,129.79	1,157.54	442.90

^ *Increases in employer paid annual premiums for Police and Police Captains retired before 7/1/2009 are limited to 5% per year. Retirees are responsible for that portion of the premium increases not provided by the employer.*

* *Individually negotiated premiums were used for firefighters Catt and Core.*

A comparative schedule of pre-65 premium rates used for previous valuations is shown on page B-3.

Year Ending	Police Retired Before 7/1/09 Capped Single	Police Retired Before 7/1/09 Capped Couple	Police Captains Retired Before 7/1/09 Capped Single	Police Captains Retired Before 7/1/09 Capped Couple
2008	$362.67	$ 764.69	$356.92	$ 783.46
2009	380.80	802.92	374.78	822.64
2010	399.84	843.07	393.51	863.77
2011	419.83	885.22	413.91	906.96
2012	440.82	929.48	433.85	952.31
2014	486.00	1,024.75	478.32	1,049.92
2016	535.82	1,129.79	527.35	1,157.54

Year Ending	Fire Capped Single	Fire Capped Couple	Fire Uncapped Single	Fire Uncapped Couple
2008	$210.90*	$442.90*	$734.13	$1,468.26
2009	210.90*	442.90*	787.46	1,117.89
2010	210.90*	442.90*	740.16	1,244.10
2011	210.90*	442.90*	N/A	N/A
2012	210.90*	442.90*	N/A	N/A
2014	210.90*	442.90*	N/A	N/A
2016	210.90*	442.90*	N/A	N/A

**Individually negotiated premiums were used for firefighters Catt and Core.*

For Police Retired After July 1, 2009

The employer is responsible for eighty percent (80%) of the cost of the premium and retirees are responsible for twenty percent (20%) of the cost of the premium. Initial premium rates were developed for the two classes of retirees (pre-65 and post-65). The fully-insured rates provided by the City were utilized to determine the appropriate premium rates. The pre-65 fully-insured premiums are blended rates based on the combined experience of active and pre-65 retired members; therefore, there is an implicit employer subsidy for the non-Medicare eligible retirees since the average costs of providing health care benefits to retirees under age 65 is higher than the average cost of providing health care benefits to active employees. The true per capita cost for the pre-65 retirees is developed by adjusting the demographic differences between the active employees and retirees to reflect this implicit rate subsidy for the retirees. Since the 80%/20% distribution of the premium cost is a relatively recent change, the impact of the implied rate subsidy will be phased-in over two valuations. The impact of the full implied rate subsidy will be fully reflected in the June 30, 2018 valuation.

RETIREE PREMIUM RATE DEVELOPMENT (CONCLUDED)

For the post-65 retirees, the fully-insured premium rate is used as the basis of the initial per capita cost without adjustments since the rate reflects the demographics of the post-65 retiree group.

Age graded and sex distinct premiums are utilized for this group. The premiums developed by the preceding process are appropriate for the unique age and sex distribution currently existing. Over the future years covered by this valuation, the age and sex distribution will most likely change. Therefore, our process "distributes" the average premium over all age/sex combinations and assigns a unique premium for each combination. The age/sex specific premiums more accurately reflect the health care utilization and cost at that age.

The combined monthly one-person medical and drug premiums at select ages are shown below:

For Those Not Eligible for Medicare		
Age	**Male**	**Female**
45	$ 412.48	$ 569.28
50	537.10	661.65
55	706.76	771.67
60	912.82	898.81

For Those Eligible for Medicare		
Age	**Male**	**Female**
65	$ 481.73	$ 454.36
70	524.77	507.80
75	563.62	549.97

James E. Pranschke is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to certify the per capita retiree health care rates shown above.

James E. Pranschke

James E. Pranschke, FSA, MAAA

SECTION C

SUMMARY OF BENEFIT PROVISIONS

City of Traverse City Police and Fire Retiree Health Care Plan
Summary of Benefits as of June 30, 2016

Leaving Employment as a Result of	Eligibility for Benefit	Coverage Provided by Employer		Retiree Health Care Provider(s)	Employer Share of Cost	
		Retiree	Spouse		Retiree	Spouse
Normal Retirement						
Police Officers and Sergeants (retired before July 1, 2009)	10 years of service, retire under the Act 345 Retirement System, and must be receiving an Act 345 Pension.	Medical Prescription drug	Medical Prescription drug	Priority Health	Benefit equivalent to July 1, 1991 premium plus 5.0% annual inflation.	Benefit equivalent to July 1, 1991 premium plus 5.0% annual inflation.
Police Officers and Sergeants (retired on or after July 1, 2009)	10 years of service, retire under the Act 345 Retirement System, and must be receiving an Act 345 Pension.	Medical Prescription drug	Medical Prescription drug	Priority Health	Employer pays 80% of the premium. Retiree is responsible for 20% of the premium.	Employer pays 80% of the premium. Retiree is responsible for 20% of the premium.
Police Officers and Sergeants (hired after July 1, 2009)	Not Eligible	N/A	N/A	N/A	N/A	N/A
Police Captains Unit (retired before July 1, 2009)	10 years of service, retire under the Act 345 Retirement System, and must be receiving an Act 345 Pension.	Medical Prescription drug	Medical Prescription drug	Priority Health	Benefit equivalent to July 1, 1991 premium plus 5.0% annual inflation.	Benefit equivalent to July 1, 1991 premium plus 5.0% annual inflation.
Police Captains Unit (retired on or after July 1, 2009)	10 years of service, retire under the Act 345 Retirement System, and must be receiving an Act 345 Pension.	Medical Prescription drug	Medical Prescription drug	Priority Health	Employer pays 80% of the premium. Retiree is responsible for 20% of the premium.	Employer pays 80% of the premium. Retiree is responsible for 20% of the premium.
Police Captains Unit (hired after July 1, 2009)	Not Eligible	N/A	N/A	N/A	N/A	N/A
Firefighters	Retire under the Retirement System after age 50. 25 years of service at any age. Retired before age 50 with 25 years of service and currently older than age 50.	Medical Prescription drug	Medical Prescription drug	Priority Health (through 7/31/2012) United American Insurance Company (effective 8/1/2012)	Members retiring after July 1, 1995 receive a capped benefit as described in the 7/1/1999 c.b.a. Health care premiums for members retiring prior to July 1, 1995 are fully paid by the City.	Members retiring after July 1, 1995 receive a capped benefit as described in the 7/1/1999 c.b.a. Health care premiums for members retiring prior to July 1, 1995 are fully paid by the City.
Firefighters (hired after July 1, 2009)	Not Eligible	N/A	N/A	N/A	N/A	N/A
Early Retirement						
Police Officers and Sergeants	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
Police Captains Unit	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
Firefighters	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
Deferred Vested Termination	Not Offered	N/A	N/A	N/A	N/A	N/A
Non-Duty Disability						
Police Officers and Sergeants	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
Police Captains Unit	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
Firefighters	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
Duty Disability						
Police Officers and Sergeants	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
Police Captains Unit	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
Firefighters	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
Non-Duty Death-in-Service						
Police Officers and Sergeants	Same as above		Same as above	Same as above		Same as above
Police Captains Unit	Same as above		Same as above	Same as above		Same as above
Firefighters	Same as above		Same as above	Same as above		Same as above
Duty Death-in-Service						
Police Officers and Sergeants	Same as above		Same as above	Same as above		Same as above
Police Captains Unit	Same as above		Same as above	Same as above		Same as above
Firefighters	Same as above		Same as above	Same as above		Same as above

MISCELLANEOUS

- Benefits paid to spouses terminate in event of divorce or remarriage of surviving spouse.
- Retirees are required to have Medicare coverage when they become eligible.
- Retirees are responsible for any portion of the health care premiums not provided by the employer.
- Premiums paid by the retiree for the retiree's share of health care cost for themselves, eligible spouses and dependents are handled outside this Plan. The Plan is intended to fund only the Plan Sponsor paid portion of retiree health care cost.
- Police Officers and Sergeants and Police Captains hired after July 1, 2009 are not eligible for retiree health insurance coverage. Instead the City will add 1.5% to the current 0.5% Defined Contribution RHS, matched by an employee share of 0.5%.
- Firefighters hired after July 1, 2009 are not eligible for retiree health insurance coverage. Instead the City will make a 2% contribution to the Defined Contribution RHS, matched by an employee share of 1.5%.

This is a brief summary of the City of Traverse City Police and Fire Retiree Health Care Plan provisions. In the event that any description contained herein differs from the actual eligibility or benefit, the appropriate Plan Sponsor Ordinance and/or employee contract will prevail.

SECTION D

SUMMARY OF PARTICIPANT DATA

TOTAL ACTIVE MEMBERS AS OF JUNE 30, 2016
BY AGE AND YEARS OF SERVICE

	Years of Service to Valuation Date							Totals	
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 Plus**	**No.**	**Valuation Payroll**
20-24									
25-29									
30-34		2	2					4	$ 262,182
35-39			7					7	469,362
40-44			6	3				9	631,372
45-49			5	3	3	1		12	869,938
50-54			1	3		1		5	401,981
55-59			1					1	65,855
60-64					1			1	84,834
65 & Over									
Totals		**2**	**22**	**9**	**4**	**2**		**39**	**$2,785,524**

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age:	43.5	years
Service:	15.4	years
Annual Pay:	$71,424	

POLICE ACTIVE MEMBERS AS OF JUNE 30, 2016
BY AGE AND YEARS OF SERVICE

	Years of Service to Valuation Date							Totals	
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 Plus**	**No.**	**Valuation Payroll**
20-24									
25-29									
30-34			1					1	$ 64,179
35-39			3					3	203,410
40-44			4	2				6	419,523
45-49			3	3	1	1		8	559,526
50-54				1		1		2	152,463
55-59			1					1	65,855
60-64									
65 & Over									
Totals			**12**	**6**	**1**	**2**		**21**	**$1,464,956**

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age:	44.2	years
Service:	16.0	years
Annual Pay:	$69,760	

FIRE ACTIVE MEMBERS AS OF JUNE 30, 2016
BY AGE AND YEARS OF SERVICE

	Years of Service to Valuation Date							Totals	
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 Plus**	**No.**	**Valuation Payroll**
20-24									
25-29									
30-34		2	1					3	$ 198,003
35-39			4					4	265,952
40-44			2	1				3	211,849
45-49			2		2			4	310,412
50-54			1	2				3	249,518
55-59									
60-64					1			1	84,834
65 & Over									
Totals		**2**	**10**	**3**	**3**			**18**	**$1,320,568**

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age:	42.7	years
Service:	14.7	years
Annual Pay:	$73,365	

TOTAL RETIRED MEMBERS AS OF JUNE 30, 2016
BY ATTAINED AGE

Attained Age	Number of Retirees		
	Male	Female	Total
Under 55	3	0	3
55-59	2	0	2
60-64	4	1	5
65 & Over	26	7	33
Totals	**35**	**8**	**43**

The counts above only include those retirees who have elected to receive retiree health care coverage through the City of Traverse City Police and Fire Health Care Coverages during Retirement.

In addition, one deferred Police member was treated as eligible for retiree health care benefits.

POLICE RETIRED MEMBERS AS OF JUNE 30, 2016 BY ATTAINED AGE

Attained Age	Number of Retirees		
	Male	**Female**	**Total**
Under 55	2	0	2
55-59	0	0	0
60-64	2	0	2
65 & Over	17	2	19
Totals	**21**	**2**	**23**

The counts above only include those retirees who have elected to receive retiree health care coverage through the City of Traverse City Police and Fire Health Care Coverages during Retirement.

In addition, one deferred Police member was treated as eligible for retiree health care benefits.

Fire Retired Members as of June 30, 2016
by Attained Age

Attained Age	Number of Retirees		
	Male	Female	Total
Under 55	1	0	1
55-59	2	0	2
60-64	2	1	3
65 & Over	9	5	14
Totals	**14**	**6**	**20**

The counts above only include those retirees who have elected to receive retiree health care coverage through the City of Traverse City Police and Fire Health Care Coverages during Retirement.

SECTION E

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

VALUATION METHODS

Actuarial Cost Method. Normal cost and the allocation of benefit values between service rendered before and after the valuation date was determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

(i) 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; and

(ii) each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

Actuarial gains (losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

Financing of Unfunded Actuarial Accrued Liabilities. Unfunded actuarial accrued liabilities (UAAL) (full funding credit if assets exceed liabilities) were amortized by a level dollar amount. The UAAL was determined using the funding value of assets and actuarial accrued liability calculated as of the valuation date. The UAAL amortization payment (one component of the contribution requirement), is the level dollar amount required to fully amortized the UAAL over a 23-year period beginning on the valuation date.

Actuarial Value of System Assets. The Actuarial Value of Assets recognizes assumed investment income fully each year. Differences between actual and assumed investment income are phased-in over a closed 4-year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than Market Value.

The rate of investment return (regular interest), net of investment expense, was 7.5% per year, compounded annually. This rate is not the assumed real return which, for funding purposes, is the rate of return in excess of average salary increases. Considering other assumptions used in the valuation, the 7.5% translates to a real return over wage inflation of approximately 3.5%.

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which future contributions will be based.

	% Increase in Salary at Sample Ages				
Sample	Merit and Seniority		Base	Increase Next Year	
Ages	Police	Fire	(Economic)	Police	Fire
20	3.00%	3.00%	4.00%	7.00%	7.00%
25	3.00	3.00	4.00	7.00	7.00
30	2.60	2.60	4.00	6.60	6.60
35	1.10	1.10	4.00	5.10	5.10
40	0.20	0.20	4.00	4.20	4.20
45	0.20	0.20	4.00	4.20	4.20
50	0.20	0.20	4.00	4.20	4.20
55	0.10	0.10	4.00	4.10	4.10
60	0.00	0.00	4.00	4.00	4.00
Ref	100	100	0.04		

The number of active members is assumed to decrease, due to closure of the Plan to new hires.

The mortality table was the RP-2000 Mortality Table projected 20 years with Scale AA.

Sample Attained Ages	Probability of Dying Next Year		Future Life Expectancy (Years)	
	Men	**Women**	**Men**	**Women**
45	0.110%	0.081%	38.50	39.46
50	0.142	0.119	33.72	34.63
55	0.213	0.231	28.98	29.88
60	0.431	0.457	24.36	25.31
65	0.851	0.878	20.00	21.02
70	1.494	1.515	15.98	17.06
75	2.506	2.394	12.28	13.47
80	4.643	3.987	9.01	10.23
Ref	#454x1sb1yrs	#455x1sb0yrs		

This assumption is used to measure the probabilities of each benefit payment being made after retirement. For active members, the probabilities of dying before retirement were based upon of the same mortality table as members dying after retirement and the probabilities of each benefit payment being made after retirement.

The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows:

Retirement Ages	Percent of Eligible Active Members Retiring Within Next Year	
	Police	Fire
45		20%
46		20
47		20
48		20
49		20
50	35%	20
51	25	15
52	20	10
53	15	10
54	15	10
55	15	10
56	15	10
57	15	10
58	25	10
59	30	20
60	100	100
Ref	23	47

Rates of separation from active membership were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

		Percent of Active Members Separating Within Next Year			
		Police		Fire	
Sample Ages	Service Index	Males	Females	Males	Females
ALL	0	15.00%	15.00%	15.00%	15.00%
	1	10.00	10.00	10.00	10.00
	2	8.00	8.00	8.00	8.00
	3	7.00	7.00	7.00	7.00
	4	6.00	6.00	6.00	6.00
20	5 & Over	6.00	6.00	6.00	6.00
25		6.00	6.00	6.00	6.00
30		5.10	5.10	5.10	5.10
35		2.70	2.70	2.70	2.70
40		1.60	1.60	1.60	1.60
45		1.10	1.10	1.10	1.10
50		1.00	1.00	1.00	1.00
55		1.00	1.00	1.00	1.00
60		1.00	1.00	1.00	1.00
65		1.00	1.00	1.00	1.00
Ref		17	17	17	17
		#58x1	#58x1	#58x1	#58x1

Rates of disability among active members.

	Percent Becoming Disabled Within Next Year			
	Police		Fire	
Sample Ages	Males	Females	Males	Females
20	0.08%	0.10%	0.08%	0.10%
25	0.08	0.10	0.08	0.10
30	0.08	0.10	0.08	0.10
35	0.08	0.10	0.08	0.10
40	0.20	0.36	0.20	0.36
45	0.27	0.41	0.27	0.41
50	0.49	0.57	0.49	0.57
55	0.89	0.77	0.89	0.77
60	1.41	1.02	1.41	1.02
65	1.66	1.23	1.66	1.23
Ref	#9x100	#10x100	#9x100	#10x100

Health cost increases – See table below:

	Medical and Drug Trend Rates	
Year Beginning July 1,	Fire Retired Before 7/1/95 and Police Retired On or After 7/1/09	Police Retired Prior to 7/1/09
2017	7.50%	5.00%
2018	7.00	5.00
2019	6.50	5.00
2020	6.00	5.00
2021	5.50	5.00
2022	5.00	5.00
2023	4.50	5.00
2024	4.00	5.00
2025	4.00	5.00
2026	4.00	5.00
2027 & Later	4.00	5.00 *

** Drops to 4.0% in the year 2031.*

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Decrement Operation	Disability and mortality decrements do not operate during the first 5 years of service. Disability also does not operate during retirement eligibility.
Decrement Timing	Normal and Early Retirement are assumed to occur at the beginning of the year. All other decrements were assumed to occur at the end of the year.
Eligibility Testing	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Incidence of Contributions	Contributions are assumed to be received continuously throughout the year based upon the computed dollar amounts shown in this report.
Marriage Assumption	90% of males and 90% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
Medicare Coverage	Assumed to be available for all covered employees on attainment of age 65. Disabled retirees were assumed to be eligible for Medicare coverage at age 65.
Election Percentage	It was assumed that 20% of Police retirees and 10% of Fire retirees would choose not to receive retiree health care benefits through the City. Of those assumed to elect coverage, 90% of Police members and 80% of Fire members were assumed to elect two-person coverage, if eligible. For those that elect two-person coverage, it was assumed that coverage would continue to the spouse upon death of the retiree, if eligible.

APPENDIX

GASB BACKGROUND

The purpose of this valuation is to provide information on the cost associated with providing postemployment benefits other than pensions, or OPEB, to current and former employees. The information is designed to assist you in complying with Governmental Accounting Standards Board (GASB) Statements No. 43 and No. 45. OPEB benefits are most often associated with postemployment health care, but cover almost any benefit not provided through a pension plan, including life insurance, dental and vision benefits. It is important to note that OPEB benefits, by definition, do not include benefits *currently* being provided to active employees – however, this report includes the liabilities for benefits expected to be paid to current active employees in the future when they retire.

GASB Statements No. 43 and No. 45 were released in the spring of 2004. GASB Statement No. 43 covers the accounting rules for OPEB *plans* while GASB Statement No. 45 describes the rules for *employers* sponsoring OPEB plans. Your auditor can assist you in determining which statements apply to your particular situation.

The specific items required to be disclosed on an OPEB sponsor's financial statements are described in detail in GASB Statements No. 43 and No. 45.

GASB Statement No. 45

Among the requirements of Statement No. 45 are recognition each year of an expense called the Annual OPEB Cost, and the accumulation of a liability to be disclosed on the employer's Statement of Net Assets called the Net OPEB Obligation (NOO).

The fundamental items required to determine the Annual OPEB Cost and the NOO are:

- the Annual Required Contribution (ARC)
- the Employer's Contributions in relation to the ARC

Although GASB does not require OPEB contributions, it has chosen to call the base component of the annual OPEB cost the Annual Required Contribution. The ARC is provided in this report.

Paragraph 13g. of GASB Statement No. 45 states:

> "An employer has made a contribution in relation to the ARC if the employer has:
>
> 1. made payments of benefits directly to or on behalf of a retiree or beneficiary,
> 2. made premium payments to an insurer, or
> 3. irrevocably transferred assets to a 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."

For each fiscal year shown in this report, we have provided the ARC and the estimated benefits and/or premiums (based on valuation assumptions).

The NOO is the cumulative difference between the Annual OPEB Cost each year and the Employer's Contribution in relation to the ARC. The Annual OPEB Cost for a year is equal to:

- the ARC, plus
- interest on the prior year's NOO, plus
- amortization of the prior year's NOO.

The Annual OPEB Cost and NOO are generally developed by the Plan Sponsor's auditor based on information contained herein and elsewhere.

GASB Statement No. 43

If the Plan has assets for GASB Statement No. 43 purposes, then certain additional information useful in complying with the Statement is contained in this report.

OPEB PRE-FUNDING

Many employers fund retiree health care benefits using the pay-as-you-go (or cash disbursement) method. Under this method, the employer's annual contribution is equal to the actual disbursements during the year for OPEB for retired employees. This method of funding will result in increasing contributions over time. First, per capita cash disbursements will tend to increase from year-to-year as the cost of health care services, or the utilization of these services, increases. Second, the number of retired members is likely to increase for years to come. The more retirees, the greater the disbursements as a percentage of employee payroll.

A retiree health care plan is similar to a defined benefit pension plan in that promises are made to employees to provide them with a benefit payable at some future date. For defined benefit pension plan sponsors, a common funding objective is to contribute to a fund, annual amounts which will i) remain level as a percentage of active member payroll, and ii) when combined with present assets and future investment return be sufficient to meet the financial obligations of the Plan to current and future retirees.

The GASB statements are not funding requirements. They are accounting standards that require plan sponsors to calculate the annual expense associated with OPEB using certain methods.

The ultimate determination as to the level of pre-funding will be the result of decisions made in an attempt to support benefit security for members and the fiscal management needs of the employer.

GLOSSARY

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent. A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Annual Required Contribution (ARC). The ARC is the normal cost plus the portion of the unfunded actuarial accrued liability to be amortized in the current period. The ARC is an amount that is actuarially determined in accordance with the requirements so that, if paid on an ongoing basis, it would be expected to provide sufficient resources to fund both the normal cost for each year and the amortized unfunded liability.

Governmental Accounting Standards Board (GASB). GASB is the private, nonpartisan, nonprofit organization that works to create and improve the rules U.S. state and local governments follow when accounting for their finances and reporting them to the public.

Medical Trend Rate (Health Care Inflation). The increase in the cost of providing health care benefits over time. Trend includes such elements as pure price inflation, changes in utilization, advances in medical technology, and cost shifting.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Other Post-Employment Employee Benefits (OPEB). OPEB are post-employment benefits other than pensions. OPEB generally takes the form of health insurance and dental, vision, prescription drugs or other health care benefits.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."

Valuation Assets. The value of current plan assets recognized for valuation purposes.