WATKINS ROSS
Retirement Plan Consultants, Actuaries and Administrators

June 29, 2017

PERSONAL & CONFIDENTIAL

Ms. Jennifer Rosser
Shiawassee County Road Commission
701 W. Corunna
Corunna, MI 48817

RE: Shiawassee County Road Commission Post-Retirement Health Care Benefits

Dear Jennifer:

Enclosed is a copy of the ***revised*** actuarial report for the Retiree Medical Benefits other than pension plan for the fiscal year ending December 31, 2016. The report was revised to reflect corrected benefit eligibility. This report is intended to assist you in complying with the Governmental Accounting Standards Board Statement Nos. 43 and 45. Your accountants will need much of the information included in this report for your financial statements.

If you have any questions about this report, or if your auditors need any additional information, please call me at (616) 742-9244.

Sincerely,

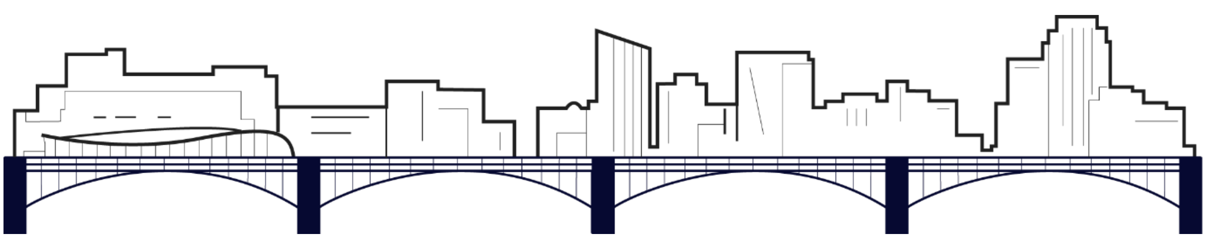
Christian R. Veenstra
President / Enrolled Actuary

Enclosures

Shiawassee County Road Commission Retiree Medical Benefits Plan

Revised Actuarial Valuation Report

for the Fiscal Year Ending December 31, 2016



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Report presented by:

WATKINS ROSS

June 2017

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INTRODUCTION AND CERTIFICATION

Watkins Ross is an independent employee benefits consulting firm providing actuarial and administrative services to clients who sponsor qualified retirement and other post-employment benefits plans. Our firm maintains no relationships with any of our clients that might impair the objectivity of our work.

The calculations summarized in this report involve actuarial calculations that require assumptions about future events. We believe that the assumptions used in the report are within the range of possible assumptions that are reasonable and appropriate for the purposes for which they have been used. However, other assumptions are also reasonable and appropriate and their use would produce different results.

This report was prepared by or under the supervision of employees of Watkins Ross who have obtained, through formal training and actual work experience, the knowledge and skills required to prepare valuations of plans providing post-employment benefits other than pensions.

The schedules included in this report have been prepared in order to provide the information necessary to comply with the GASB Statement Nos. 43 and 45. This information may be used for the preparation of the plan sponsor's financial statements and may be inappropriate for other purposes.

This report was prepared on the basis of participant data provided by the plan sponsor and our understanding of the terms of the plan under which benefits are being provided. We relied upon the data as submitted, and have no reason to believe that any information that would have had a material effect on the results of this valuation was overlooked in the preparation of the report.

The actuary certifying this report represents herself as meeting the Qualification Standards of the American Academy of Actuaries to render actuarial opinions contained in the report.

Prepared by:

Lisa Hayes

Lisa J. Hayes
Senior Pension Analyst

Certified by:

Leah A. Dudley

Leah A. Dudley, ASA, MAAA
Health Actuary

EXECUTIVE SUMMARY

Overview of Results for the Fiscal Year Ending December 31, 2016

	2014	2016
Present value of projected benefits	Not avail.	$ 4,521,083
Actuarial Accrued Liability		
Active employees	Not avail.	1,077,972
Retired employees	Not avail.	3,346,087
Total	$ 6,278,803	$ 4,424,058
Market value of assets	296,805	337,342
Unfunded or (funded) status	5,981,998	4,086,716
Annual Required Contribution (ARC):		
Service cost	$ 50,454	$ 12,782
Amortization of unfunded liability	414,025	517,340
ARC	464,479	530,122
Contributions credited toward Annual Required Contribution:		
Contributions to OPEB trust	Not avail.	$ -0-
Retiree health premiums from general operating funds	Not avail.	304,391
Total OPEB contribution	$ 261,772	$ 304,391

FINANCIAL REPORTING FOR OPEB PLAN TRUST

GASB STATEMENT NO. 43

FOR PERIOD ENDING DECEMBER 31, 2016

FINANCIAL REPORTING FOR OPEB PLAN TRUST

Statement of Estimated Plan Net Assets as of December 31, 2016

Net assets as of December 31, 2016		
Net assets held in trust for post-retirement healthcare benefits	$	337,342

Statement of Changes in Plan Net Assets for the Year Ending December 31, 2016

Contributions	$	-0-
Gain/(Loss)		32,570
Fees		(791)
Benefits paid from trust		-0-
Net increase / (decrease)		31,779
Net assets held in trust		
Beginning of year		305,563
End of year	$	337,342

OPEB Contribution for the Year Ending December 31, 2016

Contributions to OPEB trust	$	-0-
Retiree benefit payments from general operating funds		304,391
Total contributions	$	304,391

FINANCIAL REPORTING FOR OPEB PLAN TRUST

Notes to Plan's Financial Statements

Plan Description

1. The ***Shiawassee County Road Commission Post-Retirement Plan*** is a single employer post-retirement plan administered by the ***Shiawassee County Road Commission***.
2. Membership of the plan consisted of the following for the 2016 valuation:

	2014	2016
Retirees and Beneficiaries	37	38
Active plan Members	15	8
Total plan members	52	46

3. A summary of the plan provisions is shown on page 13 of this report.

Summary of Significant Accounting Policies

1. The financial statements of the ***Shiawassee County Road Commission*** are prepared using a modified accrual basis of accounting. Plan member contributions, if any, are recognized in the period in which the contributions are due. The ***Shiawassee County Road Commission*** will make contributions to a trust to the extent possible. Benefit payments made from general operating funds are considered contribution for OPEB accounting purposes. Benefits and refunds are recognized when due and payable according to the terms of the plan.

2. Plan investments are reported at fair market value.

Contributions and Reserves

1. The ***Shiawassee County Road Commission Retiree Medical Plan*** exists via provisions under the plan and is being funded under the authority of the trustees.

2. The plan's funding policy at this time is to contribute and pay benefits as they come due from general assets or the trust once the balance is sufficient.

3. It is assumed that there is no long-term contract for contributions to the plan.

Concentrations

Accounting rules require that a schedule of assets be prepared to show investments constituting more than 5% of plan assets. This information is not presented in this report but should be available on request from the plan's investment manager.

PLAN SPONSOR ACCOUNTING

GASB STATEMENT NO. 45

FOR PERIOD ENDING DECEMBER 31, 2016

PLAN SPONSOR ACCOUNTING

Notes to Employer's Financial Statements

Plan Description

1. The ***Shiawassee County Road Commission Post-Retirement Plan*** is a single employer plan administered by the ***Shiawassee County Road Commission***.
2. The plan was established by the ***Shiawassee County Road Commission*** and can be amended at its discretion. A summary of the plan provisions is shown on page 13 of this report.
3. Information that can be used to prepare a financial report for the plan can be found on pages 7-9 of this report.

Funding Policy

1. The ***Shiawassee County Road Commission*** has the authority to establish and amend the obligations of the ***Shiawassee County Road Commission*** and plan members to contribute to the plan.
2. Actively employed individuals are currently not obligated to pre-fund retiree medical benefits.
3. The ***Shiawassee County Road Commission*** will, at this time, make contributions on a pay-as-you-go basis with additional amounts as the budget permits

Annual Required Contribution for the Fiscal Year Ending December 31, 2016

1. Service Cost	$	12,782
2. Unfunded Actuarial Accrued Liability (UAAL)		4,086,716
3. Amortization Factor		7.899471
4. Amortization of UAAL = (2) / (3)		517,340
5. Annual Required Contribution (ARC) = (1)+(4)	$	530,122
Annual Required Contribution for the Fiscal Year Ending December 31, 2017	$	567,847

Annual Cost for Other Post-Employment Benefits (OPEB)

	Fiscal Year Ending December 31,	
	2016	**2017**
1. Annual Required Contribution (ARC)	$ 530,122	567,847
2. Interest on Net OPEB Obligation	166,759	172,063
3. Adjustment to ARC	(313,671)	(350,664)
4. Annual OPEB Cost = (1) + (2) + (3)	383,209	389,246
5. Contributions Made	304,391	TBD
6. Increase in Net OPEB Obligation = (4) – (5)	78,818	TBD
7. Net OPEB Obligation (Beginning of Year)	2,477,839	2,556,657
8. Net OPEB Obligation (End of Year) = (6) + (7)	2,556,657	TBD

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Accrued Liability (AAL) (a)	Market Value of Assets (b)	Unfunded AAL (UAAL) (a) – (b)	Funded Ratio (b) / (a)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(a) – (b)] / (c)
12/31/2008[1]	$14,736,962	$ 0	$14,736,962	0.00%	1,200,784	1227%
12/31/2011[1]	12,191,914	229,878	11,962,036	1.89	1,092,679	1095
12/31/2014[1]	6,278,803	296,805	5,981,998	4.73	960,704	623
12/31/2016	4,424,058	337,342	4,086,716	7.63	Not avail.	N/A

Schedule of Employer Contributions

Year Ended 12/31	Annual Required Contribution (a)	Annual OPEB Cost (b)	Contribution from Employees (c)	Contribution from Employer (d)	Total Amount Contributed (c) + (d)	Percentage of ARC Contributed (d) / (a)	Percentage of OPEB Cost Contributed (d) / (b)
2008	$ 928,404	$ 928,404	$0	$ 593,668	$ 593,668	64%	64%
2009	928,404	935,697	0	774,024	774,024	83	83
2010	959,225	969,445	0	600,713	600,713	63	62
2011	810,620	827,314	0	570,318	570,318	70	69
2012	810,620	830,707	0	431,007	431,007	53	52
2013	810,620	835,564	0	380,712	380,712	47	46
2014	464,479	520,485	0	261,772	261,772	56	50
2015	464,479	523,766	0	281,329	281,329	61	54
2016	530,122	383,209	0	304,391	304,391	57	79

[1] Calculated by prior service provider

Development of Net OPEB Obligation

				ARC			Annual OPEB Cost				
Year	Net OPEB Obligation (NOO) BOY[1] (a)	Unfunded Actuarial Accrued Liability (UAAL) (b)	Amortization Factor (c)	Service Cost (d)	Amort. of UAAL (e) = (b) / (c)	Annual Required Contribution (f) = (d) + (e)	Interest on BOY NOO (g)	Adjustment to ARC (h) = (a) / (c)	Annual OPEB Cost[2] (i) = (f)+(g)-(h)	Contribution (j)	Net OPEB Obligation (NOO) End of Year[2] (a)+(i)-(j)
2008	$ -0-	$14,736,962	-	N/A	N/A	$ 928,404	-	-	928,404	593,668	334,736
2009	334,736	N/A	N/A	N/A	N/A	928,404	23,431	16,138	935,697	774,024	496,409
2010	496,409	N/A	N/A	N/A	N/A	959,225	34,748	24,528	969,445	600,713	865,141
2011	865,141	11,962,036	N/A	N/A	N/A	810,620	60,560	43,866	827,314	570,318	1,122,137
2012	1,122,137	N/A	N/A	N/A	N/A	810,620	78,550	58,463	830,707	431,007	1,521,837
2013	1,521,837	N/A	N/A	N/A	N/A	810,620	106,529	81,585	835,564	380,712	1,976,689
2014	1,976,689	5,981,998	N/A	50,454	414,025	464,479	138,368	82,362	520,485	261,772	2,235,402
2015	2,235,402	N/A	N/A	N/A	N/A	464,479	156,478	97,191	523,766	281,329	2,477,839
2016	2,477,839	4,086,716	7.9	12,782	517,340	530,122	166,759	313,671	383,209	304,391	2,556,657

[1] BOY – Beginning of Year

REQUIRED SUPPLEMENTARY INFORMATION

Significant Changes Since Prior Valuation

The gain prior to changes was due to the removal of the cost of coverage for spouses, per benefit clarification, and to demographic changes other than expected

Factors Significantly Affecting Trends

Assumption or method changes:

1. Mortality updated to contemporary tables
2. Retirement rates adopted
3. Trend rates were updated ***from*** National Health Expenditures Table 3 ***to*** 8.0% graded down 0.5% per year for 6 years to 5.0% for pre-65, 5.0% in all years for post-65
4. Salary scale lowered from 1.5% to 1.0%
5. Turnover table updated
6. Discount rate changed from 7.0% to 6.73%

Plan change:

1. No employer paid benefits for those hired after December 31, 1998

The information required for reporting purposes from the most recent actuarial valuation (regarding actuarial methods and assumptions used to determine the ARC) can be found on pages 11-12 of this report.

Reconciliation of Actuarial Liability

The actuarial liability decreased from $6,278,803 as of December 31, 2014 to $4,217,237 as of December 31, 2016. Reconciliation of the liability can be summarized as follows:

a.	Actuarial accrued liability as of December 31, 2014	$ 6,278,803[1]
b.	Gain/loss and assumption changes	(1,854,745)
c.	Plan change	-0-
d.	Actuarial method change	-0-
e.	Actuarial accrued liability as of December 31, 2016	$ 4,424,058

(Gain)/loss and assumption changes – includes changes to: demographics, claims costs, retirement and turnover assumptions, mortality assumptions, medical inflation, salary scale, discount rate and method change from the Alternative Calculation method as calculated by the prior service provider.

[1] Calculated by prior service provider

ACTUARIAL ASSUMPTIONS AND METHODS

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest valuation date follows:

Valuation date	December 31, 2016
Participant data as of	December 31, 2016

Actuarial Methods

Actuarial cost method	Entry Age Normal (level percent of pay)
Amortization method	Level percent, closed
Remaining amortization period	10 years (based on average expected future service)
Asset valuation method	Market value as of December 31, 2016

Actuarial Assumptions

Discount rate – 6.73%
Rationale – Historical asset returns provided by Shiawassee County Road Commission

Salary scale – 1.0%
Rationale – Expected future pay increases provided by Shiawassee County Road Commission

Return on plan assets – 6.73%
Rationale – Historical asset returns provided by Shiawassee County Road Commission

Mortality rate – 2017 IRC 1.430(h) Annuitant and Non-annuitant (sex-distinct)
Rationale – Contemporary tables used for private pension plan funding

Utilization – Eligible employees will elect coverage at retirement consistent with current active coverage; actual coverage used for non-active
Rationale – Based on past employer experience

Turnover rates – Crocker-Sarason-Straight T-3, sample rates below
Rationale – Based on past employer experience

Age	Rate
30	4.8%
35	4.5
40	3.8
45	3.2
50	1.5

Retirement rates – see rates below
Rationale – Based on past employer experience

Age	Rate	Age	Rate
55	18%	61-63	24%
56	15	64	27
57	10	65-69	30
58	15	70	100
59-60	20		

ACTUARIAL ASSUMPTIONS AND METHODS

Marital status – 75% of retirees are assumed to be married at retirement with males three years older than females; actual status used for retirees
Rationale – Based on past employer experience

Annual medical costs – see sample rates below
Rationale – actual annual pre-65 age-graded BCBS premiums for 2017; actual annual post-65 supplemental premiums for 2017

Age	Annual Medical Rate per covered person	Age	Annual Medical Rate per covered person
55	$ 6,503	61	$ 8,194
56	6,803	62	8,378
57	7,106	63	8,608
58	7,430	64	8,748
59	7,590	65+	4,254[1]
60	7,914		

Vision costs – $6.01 per month for single coverage, $9.16 per month for double coverage
Rationale – Actual post-65 2017 monthly vision premiums

Monthly HRA administrative fee – $20.45 per retiree
Rationale – Actual pre-65 HRA premium

Medical, vision and administration inflation rate – Pre-65: 8.0% in 2018 graded down 0.5% per year to an ultimate rate of 5.0%; Post-65: 5.0% in all years
Rationale – Based on market expectations for increases in the cost of medical care

Implicit Subsidy – Not applicable
Rationale – Actual premiums are age-graded

Impact of Healthcare Reform

40% excise tax on "high cost" group health coverage	When aggregated, premiums are not projected to exceed 2020 thresholds for more than 20 years; The thresholds were indexed by CPI plus 1% in 2021 and CPI only beginning in 2022; The CPI is assumed to be 3% in 2021 and following
Individual or plan sponsor decisions	No change in behavior on account of Healthcare Reform was anticipated

Assumption changes since prior valuation

- Mortality tables updated
- Retirement table adopted
- Trend rates updated ***from*** National Health Expenditures Table 3 ***to*** 8.0% graded down 0.5% per year for 6 years to 5.0% for pre-65, 5.0% in all years for post-65
- Salary scale lowered from 1.5% to 1.0%
- Withdrawal rates updated
- Rate of return on assets and discount rate changed from 7.0% to 6.73%

Method change since prior valuation

- Amortization period lowered from 30 years to 10 years consistent with average future working life of active participants

[1] Does not include vision premium

SUMMARY OF PLAN PROVISIONS

Eligibility	
Hired prior to 1996	Minimum of Age 55 with 25 years of service for retiree benefits
Hired after 1996 and prior to December 31, 1998	Minimum of Age 60 with 10 years of service for retiree benefits
Hired on or after December 31, 1998	No retiree benefits
Employer benefits	Payment of medical and vision premiums for the retiree's lifetime; post-65 medical benefits are supplemental to Medicare
Spouse coverage	
Retirement between January 1, 1975 and December 31, 1991	No benefits[1]
Retirement between January 1, 1992 and December 31, 1998	Payment of medical and vision premiums for the spouse's lifetime
Retirement after December 31, 1998	Payment of medical and vision premiums for the spouse's lifetime for retirees with 25 or more years of service at retirement
Retiree contribution	None
Changes since prior valuation	None

[1] Two spouses have paid coverage by special arrangement

GLOSSARY

Actuarial Accrued Liability – The portion of the "actuarial present value of future benefit payments" that is allocated to past eligibility service. Sometimes referred to as "past service liability".

Actuarial Assumptions – Estimates of future plan experience with respect to rate of mortality, disability, turnover, retirement, rate or rates of investment income or salary increases.

Actuarial Cost Method – A method of allocating the dollar amount of the "actuarial present value of future plan benefits" to past, current and future service.

Actuarial Present Value – The dollar value at the valuation date of benefit payments expected to be made in the future, taking into account the time value of money and the probability of payment.

Amortization – Paying off an interest-bearing liability by means of periodic payments of interest and principal.

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.

ARC Adjustment – A modification to the Annual Required Contribution designed to offset the portion of the amortization of unfunded liability already recognized in the OPEB obligation.

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.

Implicit Rate Subsidy – It is common practice for employers to allow retirees to continue in the employer's group health insurance plan, often charging the retiree some portion of the premium charged to active employees. Under the theory that retirees have higher utilization of services, the difference between the true cost of providing retiree coverage and what the retiree is being charged is known as the implicit rate subsidy.

Normal Cost – The portion of the "actuarial present value of future benefit payments" that is allocated to one year of service. Sometimes referred to as "service cost".

Other Postemployment Benefits (OPEB) – OPEB are postemployment benefits other than pensions. OPEB generally takes the form of health insurance as well as dental, vision, prescription drugs or other health care benefits.

OPEB Cost – The portion of the ARC required to be recognized on the balance sheet for the year.

OPEB Obligation – The accumulation on the balance sheet of the net difference between the OPEB cost and contribution/benefit payments.

GLOSSARY

Reserve or Irrevocable Account – Funds that have been set aside specifically for retiree OPEB purposes 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.