



**City of Lansing
Employees' Retirement System**

**Actuarial Valuation of Retiree Healthcare Benefits
as of January 1, 2016**

June, 2017

Contents

Executive Summary.....	1
Section 1: Actuarial Computations.....	3
1.1: Summary of Actuarial Liabilities.....	4
1.2: Actuarially Determined Contribution, Fully Pre-Funded Basis.....	5
1.3: Actuarially Determined Contribution, Partial Pre-Funded Basis.....	6
Section 2: Summary of Participant Data.....	7
Section 3: Outline of Actuarial Assumptions and Methods.....	9
3.1: Actuarial Cost Method.....	10
3.2: Actuarial Assumptions.....	11
Section 4: Highlights of Plan Provisions.....	14
Glossary of Actuarial Terms.....	30
Appendix: Benefit Costs by Group.....	31

Executive Summary

This report presents the results of an actuarial review and analysis of the City of Lansing Employees' Retirement System Retiree Healthcare Benefits Plan (the Plan) as of January 1, 2016.

A comparative summary of the status of the Plan is as follows:

	January 1, 2016
Plan Membership	
Active	374
<u>Inactive/Receiving Benefits</u>	<u>917</u>
Total Plan Participants	1,291
Valuation Results (\$ millions)*	
Actuarial Accrued Liability (AAL)	\$ 187.3
<u>Plan Assets</u>	<u>45.6</u>
Unfunded Accrued Liability	\$ 141.7
Funding Ratio	24.3%
Actuarially Determined Contribution (\$ millions)	
Total ADC (% of Payroll), partial pre-funding	\$ 10.6 (51%)
Total ADC (% of Payroll), fully prefunded	\$ 11.9 (58%)

* Fully pre-funded basis.

Purpose of the Report

This Report presents the results of an actuarial review and analysis of the Retiree Healthcare Plan as of January 1, 2016. The purposes of this Report are:

- To establish the basis for GASB74, to be implemented as of June 30, 2017, and
- To present and discuss other issues associated with funding progress/strategies and Plan costs.

Actuarial Certification

In this study, we conducted an examination of all participant data for reasonableness and consistency, but did not audit such data. Actuarial liabilities and costs are based on the Entry Age Normal Cost Method. Under this method, the Actuarially Determined Contribution (ADC, or employer cost) provides for current cost (normal cost) plus an amount to amortize the unfunded actuarial accrued liability (UAAL).

We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices. The first undersigned is a member of the American Academy of Actuaries, and meets the Qualification Standards to provide the actuarial opinions herein.

Respectfully Submitted,



Gregory M. Stump, FSA, EA, FCA, MAAA
Chief Actuary



Marshal Banks
Senior Consultant

Section 1: Actuarial Computations

1.1: Summary of Actuarial Liabilities

	1/1/2016	
	Partial Pre-Funded Basis*	Fully Pre-Funded Basis
Discount Rate	5.75%	7.25%
Actuarial Accrued Liability		
Active Members	\$ 53,770,435	\$ 41,508,293
Inactive Members	<u>172,050,441</u>	<u>145,781,842</u>
Total Actuarial Liability	\$ 225,820,876	\$ 187,290,135
Normal Cost, Beginning of Year	\$ 1,549,003	\$ 1,017,022
Expected Benefit Payments	\$ 9,637,181	

* Statutory pre-funding requires a contribution to the OPEB trust from the City equal to 2.50% of payroll contribution for Old Plan and UAW members and 4.00% of payroll for New Plan members. The rate shown above is an estimate.

1.2: Actuarially Determined Contribution, Fully Pre-Funded Basis

The results shown below are based on full pre-funding of OPEB. This means that in addition to the benefits (i.e., claims and premium costs for retirees) for the year, supplemental amounts would be contributed and invested to increase funds in the OPEB Trust, which would eventually be used to finance all benefits.

An additional amount of about \$0.9 million would be required this year to fully pre-fund. Because the assets are generally invested the same as the pension fund, the discount rate used for this basis is the same as the expected return used for pension funding. This results in lower actuarial liabilities and costs.

	1/1/2016
<i>Discount Rate</i>	7.25%
Actuarial Accrued Liability (AAL)	\$ 187,290,135
<u>Plan Assets</u>	<u>45,570,448</u>
Unfunded AAL	\$ 141,719,687
Amortization of Unfunded AAL	\$ 8,849,864
Employer Normal Cost	1,017,022
<u>Interest to End of Year</u>	<u>715,349</u>
Actuarially Determined Contribution	\$ 10,582,235
Percentage of Payroll	51.4%
Expected Benefits to be Paid	\$ 9,637,181
Additional Contributions to trust	\$945,054

1.3: Actuarially Determined Contribution, Partial Pre-Funded Basis

The results shown below are based on partial pre-funding. This means that, in addition to the pay-as-you-go cost, some level of prefunding would be set aside. In this case, the additional amount is currently about \$0.8 million, based on our understanding of the statutory pre-funding provisions*. The actual discount rate for GASB 74 purposes will be determined as of June 30, 2017.

	1/1/2016
<i>Discount Rate</i>	5.75%
Actuarial Accrued Liability (AAL)	\$ 225,820,876
<u>Plan Assets</u>	<u>45,570,448</u>
Unfunded AAL	\$ 180,250,428
Amortization of Unfunded AAL	\$ 9,706,555
Employer Normal Cost	1,549,003
<u>Interest to End of Year</u>	<u>647,195</u>
Actuarially Determined Contribution	\$ 11,902,753
Percentage of Payroll	57.8%
Expected Benefits to be Paid	\$ 9,637,181
Additional Contributions to trust*	\$ 800,000

* Statutory pre-funding requires a contribution to the OPEB trust from the City equal to 2.50% of payroll contribution for Old Plan and UAW members and 4.00% of payroll for New Plan members.

Section 2: Summary of Participant Data

Participant Summary

	January 1, 2016		
	UAW	All Others	Total
Active Participants			
Number	136	238	374
Average Age	48.8	49.3	49.1
Average Service	14.4	12.9	13.4
Inactive Participants			
Number Receiving Benefits	227	638	865
Average Age	66.7	69.0	68.4
Number Terminated Vested			52
Average Age			48.8

Retiree Coverage Summary

Level of Coverage	UAW	All Others	Total
Single	105	331	436
Multiple	121	308	429
Total Retirees Covered	226	639	865

For this study, we relied on the data provided by the City. We did not verify or audit the information, but did review it for reasonableness. There were a number of changes and assumptions made during our review that are reflected in the final valuation database, including the following:

- Multiple retiree records under the same retiree Social Security number were combined into one record. Coverage level was assigned on this basis, rather than the reported coverage level.
- If there was a date of birth discrepancy with the pension data, the pension data date of birth was used.
- Status code for disabled and beneficiary retirees were taken from the pension data.

Section 3: Outline of Actuarial Assumptions and Methods

3.1: Actuarial Cost Method

Actuarial Cost Method

The Entry Age Normal Actuarial Cost Method, with level dollar normal cost, is used for this valuation. The cost equals the sum of the normal cost and the amount necessary to amortize the unfunded actuarial liability as a level percent of payroll over a closed period of 30 years, decreasing by 1 year to an ultimate period of 15 years (26 years remaining as of January 1, 2016).

Plan Assets

The Plan is funded by a trust agreement established pursuant to Section 501(c)(9) of the Internal Revenue Code, which allows for the formation of a Voluntary Employees Beneficiary Association (VEBA). In addition, Plan assets are available in a separate reserve of the Employee's Retirement System pension trust. For this study, assets are used at market value, without any smoothing of investment gains and losses.

Changes in Actuarial Methods since Prior Valuation

There has been one change in methods since the prior valuation. The Entry Age cost method is now applied as a level percentage of pay, in preparation for GASB 74 implementation. The impact of this change was a slight decrease in cost.

3.2: Actuarial Assumptions

- Valuation Date All assets and liabilities are computed as of January 1, 2016.
- Investment Return The annual rate of return on trust fund assets is assumed to be 7.25%. The annual return of non-trust fund assets is assumed to be 4.00%. Each of these is net of expenses and including inflation.
- Inflation The underlying annual rate of inflation is assumed to be 3.10%.

The basis for the non-healthcare related assumptions for this study is the analysis conducted for the Retirement System for purposes of the annual actuarial valuation to fund pension benefits. All of the assumptions were updated based on an Experience study conducted in 2016.

- Mortality RP2000 Tables, with blue collar adjustments. For Disabled members, the disabled versions of these tables are assumed. Each of these tables is projected to 2026 using Scale BB. For pre-retirement deaths, a 50% factor is applied to these tables.
- Retirement Rates of retirement vary based on the age of the member as shown below. Rate is applied only if the member is eligible to retire.

Age	Assumed Rate - UAW	Assumed Rate - All Others
50-54	50%	55%
55-57	30%	55%
58	30%	15%
59	30%	5%
60-64	30%	15%
65	100%	60%
66-69	100%	25%
70+	100%	100%

Termination of Employment

Rates of termination are based on years of service, with sample rates as follows:

Years of Service	UAW	All Others-Male	All Others-Female
0	10.0%	22.0%	33.0%
1	7.0%	18.7%	28.1%
2	5.0%	15.9%	23.8%
3	5.0%	13.5%	20.3%
4	5.0%	11.5%	17.3%
5	4.0%	9.8%	14.6%
10	1.0%	4.3%	6.5%
15	1.0%	0.0%	0.0%
20+	0.5%	0.0%	0.0%

Disability

Rates of disability vary based on the age of the member as shown below. Half of all disabilities are assumed to be duty related. Representative rates of disability:

Age	Assumed Rate
20	0.020%
30	0.020%
40	0.065%
50	0.205%
60	0.450%

Healthcare costs

The following represents expected healthcare claims and expenses for 2016, based on the age and gender of the retiree and dependents.

Age	Male	Female
45	\$ 3,513	\$ 4,370
50	4,483	5,577
55	6,026	6,724
60	8,339	7,786
65	4,343	4,343
70	5,035	5,035
75	5,697	5,697
80	6,077	6,077
85+	6,230	6,230

Dental costs are expected to be \$367 per year for each covered member and spouse. Vision claims are expected to be \$67.32 per year, except for the District Court group (member pays full premium). The costs above were updated based on recent claims/expense information and standard aging rates.

Medicare Part B Reimbursements Medicare Part B Reimbursements are assumed to be \$1,462.80 per year.

Healthcare trend The following increases are assumed for future healthcare claims and premiums:

Year	Pre-65 Rate	Post-65 Rate
2016	6.5%	4.5%
2017	6.0%	4.5%
2018	5.5%	4.5%
2019	5.0%	4.5%
2020+	4.5%	4.5%

The basis for these rates is a consolidated version of the Getzen Model. Dental and Vision costs are assumed to increase at 4.5% per year.

Participation 100% of eligible members are assumed to elect coverage upon retirement.

Family Composition All Plan members who are currently married are assumed to be married upon retirement. Male spouses are assumed to be three years older than their wives. 8% of retirees are assumed to have children covered, up to age 26. Retirees are assumed to be 30 years older than their children.

Section 4: Highlights of Plan Provisions

4.1: Teamsters 214 (Supervisory and NS)

The following is an outline of the information used as the basis for this actuarial valuation. It does not imply a promise or obligation on behalf of the City, and does not take the place of applicable ordinances and collective bargaining agreements.

Date of Hire	Normal Retirement Eligibility	Deferred Retirement Eligibility	Benefits Payable for Healthcare, Dental, and Vision
Before 10/29/1990	1) Age 58 with 15 years of service 2) Age 50 with 25 years of service 3) Rule of 65 with minimum of 8 years of service	At least 8 years of service; benefit payable at age 58 or Rule of 65	City pays dental, vision, and 100% of retiree City-paid plan coverage for the retiree, spouse, and eligible dependents if Joint & Survivor pension option is elected, but only through the retiree's lifetime if straight life pension option is elected. City-paid plan design changes as active plan changes.
From 10/29/1990 to 12/7/2008	Age 55 with 15 years of service or Age 50 with 25 years of service	At least 15 years of service; benefit is payable at termination or age 55; whichever is later	
From 12/8/2008 to 9/16/2012	Age 55 with 15 years of service or Age 50 with 25 years of service	At least 15 years of service; benefit is payable at termination or age 55; whichever is later	City pays dental, vision, and retiree healthcare City-paid plan coverage for the retiree only, up to the State of Michigan annually determined hard cap amount. Spouses and dependents are not covered, but coverage can be purchased with 100% of the cost born by the retiree. City-paid retiree dental coverage remains for spouse and eligible dependents for those hired after 12/8/2008. City-paid plan design changes as active plan changes.
From 9/17/2012 to 12/31/2014	Age 50 with 25 years of service	25 years of service; benefit is payable at termination or age 55; whichever is later.	
On or after 1/1/2015	Not eligible for defined benefit retiree healthcare; dental and vision coverage at age 50 with 25 years of service, payable at later of termination or age 55.		

Disability and Death Retirement (Duty Related) Eligibility: No age or service requirement. Disability benefits payable when member begins to receive disability pension benefits.

Disability and Death Retirement (Non-Duty Related) Eligibility: Same vesting as deferred retirement eligibility. Age requirement is waived with a minimum of 10 years of service.

Medicare Coverage Eligibility: City provides Medicare Part B premium reimbursement and retiree healthcare, dental, and vision benefits supplemental to Medicare coverage when participants become Medicare eligible for those hired prior to 1/1/2015. Those hired on or after 1/1/2015 are not eligible for Medicare Part B premium reimbursement or supplemental retiree healthcare, but are eligible for dental and vision benefits.

Opt Out Benefit: Retirees who opt out of health care coverage are eligible to receive \$1,800 in any year in which they do not receive coverage from another source.

4.2.1: Teamsters 243, Supervisory and CTP (formerly Teamsters 580)

The following is an outline of the information used as the basis for this actuarial valuation. It does not imply a promise or obligation on behalf of the City, and does not take the place of applicable ordinances and collective bargaining agreements.

Date of Hire	Normal Retirement Eligibility	Deferred Retirement Eligibility	Benefits Payable for Healthcare, Dental, and Vision
Before 7/1/1987	1) Age 58 with 8 years of service 2) Age 50 with 25 years of service 3) Rule of 65 (age plus service) with minimum of 8 years of service	At least 8 years of service; benefits payable at age 58 or Rule of 65 points	<u>Retired before 2/20/2004:</u> City pays dental, vision, and 100% of retiree healthcare City-paid plan coverage for spouse and eligible dependents if Joint & Survivor option is elected, but only through the retiree's lifetime if straight life pension option is elected.
From 7/1/1987 to 10/28/1990	1) Age 58 with 15 years of service 2) Age 50 with 25 years of service 3) Rule of 65 (age plus service) with minimum of 15 years of service	At least 15 years of service; benefit is payable at termination or age 55, whichever is later	<u>Retired on or after 2/20/2004:</u> City pays dental, vision, and 100% of retiree healthcare City-paid plan coverage, up to the State of Michigan annually determined hard cap amount for spouse and eligible dependents if Joint & Survivor option is elected, but only through the retiree's lifetime if straight life pension option is elected. Retiree contributions toward City-paid plan coverage are capped at the lesser of 1% of pension benefit or \$125 annually for single coverage, \$225 for 2-party coverage, or \$325 for family coverage for City-paid plan. Retiree pays full cost of buy-up to optional insurance election. City-paid plan design changes as active plan changes.
From 10/29/1990 to 2/8/2010	Age 58 with 15 years of service or Age 50 with 25 years of service	At least 15 years of service; benefit is payable at termination or age 55, whichever is later	
From 2/9/2010 to 5/18/2014	Age 50 with 25 years of service	25 years of service; benefit is payable at termination or age 55, whichever is later	
On or after 5/19/2014	Not eligible for defined benefit retiree healthcare; age 50 and 25 years of service for dental and vision coverage, payable at later of termination or age 55.		

Disability and Death Retirement (Duty Related) Eligibility: No age or service requirement. Disability benefits payable when member begins to receive disability pension benefits.

Disability and Death Retirement (Non-Duty Related) Eligibility: Same vesting as deferred retirement eligibility. Age requirement is waived with a minimum of 10 years of service.

Medicare Coverage Eligibility: City provides Medicare Part B premium reimbursement and retiree healthcare, dental and vision benefits supplemental to Medicare coverage when participants become Medicare-eligible for those hired prior to 5/19/2014. Those hired on or after 5/19/2014 are not eligible for Medicare Part B premium reimbursement or supplemental retiree healthcare, but are eligible for dental and vision benefits.

Opt Out Benefit: Retirees who opt out of health care coverage are eligible to receive \$1,800 in any year in which they do not receive coverage from another source.

4.2.2: Teamsters 243, District Court (formerly Teamsters 580, District Court)

The following is an outline of the information used as the basis for this actuarial valuation. It does not imply a promise or obligation on behalf of the City, and does not take the place of applicable ordinances and collective bargaining agreements.

Date of Hire	Normal Retirement Eligibility	Deferred Retirement Eligibility	Benefits Payable for Healthcare, Dental, and Vision*
Before 6/1/2010	Age 58 with 15 years of service or Age 50 with 25 years of service	At least 15 years of service and age 55	City pays dental and 100% of retiree City-paid plan coverage for the retiree, spouse, and eligible dependents, up to the State of Michigan annually determined hard cap amount for the spouse and eligible dependents if Joint and Survivor pension option is elected, but only through the retiree's lifetime if straight life pension option is elected. Retiree contribution toward City-paid plan coverage is capped at 1% of monthly pension benefit. City-paid plan design changes as active plan changes.
From 6/1/2010 to 3/31/2014	Age 50 with 25 years of service	At least 25 years of service and age 55	
From 4/1/2014 to 6/30/2016	Age 50 with 25 years of service	At least 25 years of service and age 55	City pays dental and 100% of retiree healthcare City-paid plan coverage for the retiree only, up to the State of Michigan annually determined hard cap amount, with coverage up to Medicare eligibility. City-paid healthcare is not provided for Medicare-eligible retirees, but they are still eligible for dental and vision* coverage. Spouses and dependents are not covered for healthcare before or after Medicare eligibility, but they are eligible for dental and vision* coverage. City-paid plan design changes as active plan changes.
On or after 7/1/2016	Not eligible for defined benefit retiree healthcare; age 50 and 25 years of service for dental and vision* coverage, payable at later of termination or age 55.		

*Teamsters 243 District Court retirees pay the full cost of vision coverage, if selected.

Disability and Death Retirement (Duty Related) Eligibility: No age or service requirement. Disability benefits payable when member begins to receive disability pension benefits.

Disability and Death Retirement (Non-Duty Related) Eligibility: Same vesting as deferred retirement eligibility. Age requirement is waived with a minimum of 10 years of service.

Medicare Coverage Eligibility: City provides Medicare Part B premium reimbursement and retiree healthcare, dental, and vision* benefits supplemental to Medicare coverage when participants become Medicare-eligible for those hired prior to 4/1/2014. Those hired on or after 4/1/2014 are not eligible for Medicare Part B premium reimbursement or supplemental retiree healthcare, but are eligible for City-paid dental and retiree-paid vision* benefits.

Opt Out Benefit: Retirees who opt out of health care coverage are eligible to receive \$1,800 in any year in which they do not receive coverage from another source.

4.3: UAW (Full Time, Local 2256)

The following is an outline of the information used as the basis for this actuarial valuation. It does not imply a promise or obligation on behalf of the City, and does not take the place of applicable ordinances and collective bargaining agreements.

Date of Hire	Normal Retirement Eligibility	Deferred Retirement Eligibility	Benefits Payable for Healthcare, Dental, and Vision
Before 12/1/1989	Age 58 with 8 years of service or Age 50 with 25 years of service	At least 8 years of service, payable when retiree is eligible for Normal Retirement.	<u>Retired prior to 7/1/2010:</u> City pays dental, vision, and 100% of retiree healthcare City-paid plan coverage for the retiree, spouse, and eligible dependents if Joint & Survivor pension option is elected, but only through the retiree's lifetime if straight life pension option is elected.
From 12/1/1989 to 3/7/2010	Age 58 with 15 years of service or Age 50 with 25 years of service	At least 15 years of service, payable when retiree is eligible for Normal Retirement.	<u>Retired on or after 7/1/2010 and before 10/1/2014:</u> City pays dental, vision and retiree healthcare plan coverage for retiree, spouse and eligible dependents if Joint & Survivor option is elected, but only through the retiree's lifetime if straight life pension option is elected. Retiree contributions toward City-paid plan coverage are the lesser of 1% of pension benefit or \$125 annually for single coverage, \$225 for 2-party coverage, or \$325 for family coverage.
From 3/8/2010 to 10/20/2013	Age 50 with 25 years of service	25 years of service, payable when retiree is eligible for Normal Retirement.	<u>Retired on or after 10/1/2014:</u> City pays dental, vision, and healthcare City-paid plan coverage, up to the State of Michigan annually determined hard cap amount for the retiree, spouse, and eligible dependents if Joint & Survivor option is elected, but only through the retiree's lifetime if straight life pension option is elected. Retiree contributions toward City-paid plan coverage are capped at the lesser of 1% of the retiree's pension benefit or \$125 annually for single coverage, \$225 for 2-party coverage, or \$325 for family coverage for City-paid plan. City paid plan design changes as active plan changes. Participants electing optional insurance coverage pay the full cost above the State of Michigan annually determined hard cap amount.

Continued on next page

Date of Hire	Normal Retirement Eligibility	Deferred Retirement Eligibility	Benefits Payable for Healthcare, Dental, and Vision
On or after 10/21/2013	Age 50 with 25 years of service	25 years of service, payable when retiree is eligible for Normal Retirement.	City pays dental, vision, and 100% of retiree health care City-paid plan coverage for the retiree, up to the State of Michigan annually determined hard cap amount, subject to limitation of the retiree contribution to no more than 1% of the retiree's pension benefit, up to Medicare eligibility. City-paid plan design changes as active plan changes. City-paid healthcare is not provided for Medicare-eligible retirees, but they are eligible for dental and vision coverage. Spouses and dependents are not covered for healthcare before or after Medicare eligibility, but they are eligible for dental and vision coverage.

Disability and Death Retirement (Duty Related) Eligibility: No age or service requirement. Disability benefits payable when member begins to receive disability pension benefits.

Disability and Death Retirement (Non-Duty Related) Eligibility: Same vesting as deferred retirement eligibility. Age requirement is waived with a minimum of 10 years of service.

Medicare Coverage Eligibility: City provides Medicare Part B premium reimbursement and retiree healthcare, dental, and vision benefits supplemental to Medicare coverage when participants become Medicare eligible for those hired prior to 10/21/2013. Those hired on or after 10/21/2013 are not eligible for Medicare Part B premium reimbursement or supplemental healthcare benefits, but are eligible for dental and vision benefits.

Opt Out Benefit: Retirees who opt out of health care coverage are eligible to receive \$1,500 prior to January 9, 2017 and \$1,800 after January 9, 2017 in any year in which they do not receive coverage from another source.

4.4: 911 Operators (FOP)

The following is an outline of the information used as the basis for this actuarial valuation. It does not imply a promise or obligation on behalf of the City, and does not take the place of applicable ordinances and collective bargaining agreements.

Eligibility for Healthcare, Dental, and Vision Coverage

Normal Retirement Eligibility:

911 dispatch operations were transferred to Ingham County on 7/1/2012. Accordingly, retiree healthcare liabilities for those employed as of 7/1/2012 were transferred to Ingham County, and the City has no OPEB obligation for those retiring on or after 7/1/2012, except for those that terminated from the City prior to 7/1/2012 and are eligible for a deferred retirement.

Deferred Retirement Eligibility:

Defined benefit pension members hired before 5/1/2004: At least 8 years of service; benefits payable at age 58 or Rule of 65 points

Defined benefit pension members hired on or after 5/1/2004: At least 15 years of service; benefits payable at age 58

Defined Contribution Plan retirement plan member hired on or after 7/1/1992: At least 15 years of service; benefit payable at termination or age 55, whichever is later

Medicare Coverage Eligibility

City provides Medicare Part B premium reimbursement and retiree health care, dental, and vision benefits supplemental to Medicare coverage when participants become Medicare-eligible.

Benefits Payable for Healthcare, Dental, and Vision

City pays dental, vision, and 100% of retiree healthcare City-paid plan coverage for the retiree, spouse, and eligible dependents if Joint & Survivor pension option is elected, but only through the retiree's lifetime if straight life pension option is elected. (See eligibility note above.)

Opt Out Benefit

Retirees who opt out of health care coverage are eligible to receive \$1,800 in any year in which they do not receive coverage from another source.

4.5.1: District Court, Non-Bargaining

The following is an outline of the information used as the basis for this actuarial valuation. It does not imply a promise or obligation on behalf of the City, and does not take the place of applicable ordinances and collective bargaining agreements.

Date of Hire	Normal Retirement Eligibility	Deferred Retirement Eligibility	Benefits Payable for Healthcare, Dental, and Vision*
Before 6/1/2010	Age + Service = 65 with at least 15 years of service	At least 15 years of service, benefits payable at age 58 or Rule of 65 points	City pays dental and 100% of retiree City-paid plan coverage for the retiree, spouse, and eligible dependents, up to the State of Michigan annually determined hard cap amount for the retiree, spouse, and eligible dependents if Joint and Survivor pension option is elected, but only through the retiree's lifetime if straight life pension option is elected. City-paid plan design changes as active plan changes.
From 6/1/2010 to 3/31/2014	At least 25 years of service	At least 25 years of service and age 55	
From 4/1/2014 to 6/30/2016	At least 25 years of service	At least 25 years of service and age 55	City pays dental and 100% of retiree City-paid plan coverage for the retiree only, up to the State of Michigan annually determined hard cap amount. City-paid plan design changes as active plan changes. Spouses and dependents are not covered for healthcare, but they are still eligible for dental and vision* coverage
On or after 7/1/2016	Not eligible for defined benefit retiree healthcare; age 50 and 25 years of service for dental and vision* coverage, payable at later of termination or age 55.		

*District Court non-bargained retirees pay the full cost of vision coverage, if selected.

Disability and Death Retirement (Duty Related) Eligibility: No age or service requirement. Disability benefits payable when member begins to receive disability pension benefits.

Disability and Death Retirement (Non-Duty Related) Eligibility: Same vesting as deferred retirement eligibility. Age requirement is waived with a minimum of 10 years of service.

Medicare Coverage Eligibility: City provides Medicare Part B premium reimbursement and retiree healthcare, dental, and vision* benefits supplemental to Medicare coverage when participants become Medicare-eligible, for those hired prior to 7/1/2016. Those hired on or after 7/1/2016 are not eligible for Medicare Part B premium reimbursement, nor supplemental retiree healthcare, but are eligible for dental and vision* benefits.

Opt Out Benefit: Retirees who opt out of health care coverage are eligible to receive \$1,800 in any year in which they do not receive coverage from another source.

4.5.2: Other Non-Bargaining Supervisory, Non-Bargaining CTP

The following is an outline of the information used as the basis for this actuarial valuation. It does not imply a promise or obligation on behalf of the City, and does not take the place of applicable ordinances and collective bargaining agreements.

Date of Hire	Normal Retirement Eligibility	Deferred Retirement Eligibility	Benefits Payable for Healthcare, Dental, and Vision
Before 10/29/1990	Age + Service = 65 with at least 15 years of service	At least 15 years of service, benefits payable at age 58 or Rule of 65 points	Retired prior to 7/1/2007: City pays dental, vision, and 100% of retiree healthcare City-paid plan coverage for the retiree, spouse, and eligible dependents if Joint & Survivor pension option is elected, but only through the retiree's lifetime if straight life pension option is elected.
From 10/29/1990 to 6/30/2007	At least 15 years of service	At least 15 years of service and age 55	Retired on or after 7/1/2007: City pays dental, vision, and healthcare City-paid plan coverage, up to the State of Michigan annually determined hard cap amount for the retiree, spouse, and eligible dependents if Joint & Survivor option is elected, but only through the retiree's lifetime if straight life pension option is elected.
From 7/1/2007 to 12/31/2015	At least 15 years of service	At least 15 years of service and age 55	City pays dental, vision, and retiree healthcare City-paid plan coverage for the retiree only, up to the State of Michigan annually determined hard cap amount. City-paid plan design changes as active plan changes. Spouses and dependents are not covered, but coverage can be purchased with 100% of the cost born by the retiree. City-paid retiree dental coverage remains for spouse and eligible dependents for those hired after 7/1/2007.
On or after 1/1/2016	Not eligible for defined benefit retiree healthcare; age 50 and 25 years of service for dental and vision coverage, payable at later of termination or age 55.		

Disability and Death Retirement (Duty Related) Eligibility: No age or service requirement. Disability benefits payable when member begins to receive disability pension benefits.

Disability and Death Retirement (Non-Duty Related) Eligibility: Same vesting as deferred retirement eligibility. Age requirement is waived with a minimum of 10 years of service.

Medicare Coverage Eligibility: City provides Medicare Part B premium reimbursement and retiree, dental, and vision benefits supplemental to Medicare coverage when participants become Medicare-eligible. Those hired on or after 7/1/2016 are not eligible for Medicare Part B premium reimbursement, nor supplemental retiree healthcare, but are eligible for dental and vision benefits.

Opt Out Benefit: Retirees who opt out of health care coverage are eligible to receive \$1,800 in any year in which they do not receive coverage from another source.

4.5.3: Mayoral Staff, Executive Management

The following is an outline of the information used as the basis for this actuarial valuation. It does not imply a promise or obligation on behalf of the City, and does not take the place of applicable ordinances and collective bargaining agreements.

Date of Hire	Normal Retirement Eligibility	Deferred Retirement Eligibility	Benefits Payable for Healthcare, Dental, and Vision
Before 10/29/1990	Fire: Age 55 with 10 years of service, or 25 years of service no age requirement Police: Age 55 with 15 years of service, or 25 years of service credit no age requirement Non-Police/Fire: Age + Service is at least 65, with at least 15 years of service	At least 15 years of service; benefit payable at age 58 or Rule of 65	<p><u>Retired prior to 7/1/2007:</u> City pays dental, vision, and 100% of retiree healthcare City-paid plan coverage for the retiree, spouse, and eligible dependents if Joint & Survivor pension option is elected, but only through the retiree's lifetime if straight life pension option is elected.</p> <p><u>Retired on or after to 7/1/2007:</u> City pays dental, vision, and healthcare City-paid plan coverage, up to the State of Michigan annually determined hard cap amount for the retiree, spouse, and eligible dependents if Joint & Survivor option is elected, but only through the retiree's lifetime if straight life pension option is elected.</p>
From 10/29/1990 to 6/30/2007	8 years of service for partial coverage; 15 years of service of full coverage; age 55	At least 8 years of service for partial coverage; 15 years of service for full coverage. Benefit is payable at termination or age 55; whichever is later	<p>City pays:</p> <ul style="list-style-type: none"> • 55% of applicable plan premium after completing 8 years of service and age 55 • 75% of applicable plan premium after completing 12 years of service and age 55 • 100% of applicable plan premium after 15 years of service and age 55 <p><u>Retired prior to 7/1/2007:</u> City pays dental, vision, and above percentage of retiree healthcare City-paid plan coverage for the retiree, spouse, and eligible dependents if Joint & Survivor pension option is elected, but only through the retiree's lifetime if straight life pension option is elected.</p> <p><u>Retired on or after to 7/1/2007:</u> City pays dental, vision, and above percentage healthcare City-paid plan coverage, up to the State of Michigan annually determined hard cap amount for the retiree, spouse, and eligible dependents if Joint & Survivor option is elected, but only through the retiree's lifetime if straight life pension option is elected.</p>

Continued on next page

Date of Hire	Normal Retirement Eligibility	Deferred Retirement Eligibility	Benefits Payable for Healthcare, Dental, and Vision
On or after 7/1/2007	15 years of service and age 55	25 years of service; benefit is payable at termination or age 55; whichever is later	City pays dental, vision, and retiree healthcare City-paid plan coverage for the retiree only, up to the State of Michigan annually determined hard cap amount. Spouses and dependents are not covered, but coverage can be purchased with 100% of the cost born by the retiree. City-paid retiree dental coverage remains for spouse and eligible dependents for those hired after 7/1/2007.

Disability and Death Retirement (Duty Related) Eligibility: No age or service requirement. Disability benefits payable when member begins to receive disability pension benefits.

Disability and Death Retirement (Non-Duty Related) Eligibility: Same vesting as deferred retirement eligibility. Age requirement is waived with a minimum of 10 years of service.

Medicare Coverage Eligibility: City provides Medicare Part B premium reimbursement and retiree healthcare, dental, and vision benefits supplemental to Medicare coverage when participants become Medicare-eligible.

Opt Out Benefit: Retirees who opt out of health care coverage are eligible to receive \$1,800 in any year in which they do not receive coverage from another source.

4.5.4: City Council Staff

The following is an outline of the information used as the basis for this actuarial valuation. It does not imply a promise or obligation on behalf of the City, and does not take the place of applicable ordinances and collective bargaining agreements.

Date of Hire	Normal Retirement Eligibility	Deferred Retirement Eligibility	Benefits Payable for Healthcare, Dental, and Vision
Before 7/1/1987	8 years of service	At least 8 years of service	<p><u>Retired prior to 7/1/2007:</u> City pays dental, vision, and 100% of retiree healthcare City-paid plan coverage for the retiree, spouse, and eligible dependents if Joint & Survivor pension option is elected, but only through the retiree's lifetime if straight life pension option is elected.</p> <p><u>Retired on or after to 7/1/2007:</u> City pays dental, vision, and healthcare City-paid plan coverage, up to the State of Michigan annually determined hard cap amount for the retiree, spouse, and eligible dependents if Joint & Survivor option is elected, but only through the retiree's lifetime if straight life pension option is elected.</p>
From 7/1/1987 to 10/28/1990	15 years of service	At least 15 years of service; benefit is payable at termination or age 55; whichever is later	
From 10/29/1990 to 6/30/2007	8 years of service for partial coverage; 15 years of service of full coverage; age 55	At least 8 years of service for partial coverage; 15 years of service for full coverage. Benefit is payable at termination or age 55; whichever is later	<p>City pays:</p> <ul style="list-style-type: none"> • 55% of applicable plan premium after completing 8 years of service and age 55 • 75% of applicable plan premium after completing 12 years of service and age 55 • 100% of applicable plan premium after 15 years of service and age 55 <p><u>Retired prior to 7/1/2007:</u> City pays dental, vision, and above percentage of retiree healthcare City-paid plan coverage for the retiree, spouse, and eligible dependents if Joint & Survivor pension option is elected, but only through the retiree's lifetime if straight life pension option is elected.</p> <p><u>Retired on or after to 7/1/2007:</u> City pays dental, vision, and above percentage healthcare City-paid plan coverage, up to the State of Michigan annually determined hard cap amount for the retiree, spouse, and eligible dependents if Joint & Survivor option is elected, but only through the retiree's lifetime if straight life pension option is elected.</p>

Continued on next page

Date of Hire	Normal Retirement Eligibility	Deferred Retirement Eligibility	Benefits Payable for Healthcare, Dental, and Vision
From 7/1/2007 to 10/14/2012	15 years of service and age 55	At least 15 years of service; benefit is payable at termination or age 55, whichever is later	City pays dental, vision, and retiree healthcare City-paid plan coverage for the retiree only, up to the State of Michigan annually determined hard cap amount. Spouses and dependents are not covered, but coverage can be purchased with 100% of the cost born by the retiree. City-paid retiree dental coverage remains for spouse and eligible dependents for those hired after 7/1/2007.
On or after 10/15/2012	25 years of service and age 55	At least 25 years of service; benefit is payable at termination or age 55; whichever is later	

Disability and Death Retirement (Duty Related) Eligibility: No age or service requirement. Disability benefits payable when member begins to receive disability pension benefits.

Disability and Death Retirement (Non-Duty Related) Eligibility: Same vesting as deferred retirement eligibility. Age requirement is waived with a minimum of 10 years of service.

Medicare Coverage Eligibility: City provides Medicare Part B premium reimbursement and retiree healthcare, dental, and vision benefits supplemental to Medicare coverage when participants become Medicare-eligible.

Opt Out Benefit: Retirees who opt out of health care coverage are eligible to receive \$1,800 in any year in which they do not receive coverage from another source.

4.5.6: Mayor/City Clerk

The following is an outline of the information used as the basis for this actuarial valuation. It does not imply a promise or obligation on behalf of the City, and does not take the place of applicable ordinances and collective bargaining agreements.

Date Elected	Normal Retirement Eligibility	Deferred Retirement Eligibility	Benefits Payable for Healthcare, Dental, and Vision*
Before 7/1/1987	8 years of service	At least 8 years of service	City pays dental, vision, and retiree healthcare City-paid plan coverage for retiree, spouse, and eligible dependents. <u>Retired prior to 1/1/2006:</u> City pays dental, vision, and retiree healthcare City-paid plan coverage for the retiree, spouse, and eligible dependents.
From 7/1/1987 to 6/30/2007	15 years of service and age 55	At least 15 years of service; benefit is payable at termination or age 55; whichever is later	
From 7/1/2007 to 6/30/2009	15 years of service and age 55; not eligible for vision coverage	At least 15 years of service; benefit is payable at termination or age 55; whichever is later	<u>Retired on or after to 1/1/2006:</u> City pays dental, vision, and healthcare City-paid plan coverage, up to the State of Michigan annually determined hard cap amount for the retiree, spouse, and eligible dependents.
On or after 7/1/2009	15 years of service and age 55; not eligible for vision coverage	At least 15 years of service; benefit is payable at termination or age 55; whichever is later	City pays dental and healthcare City-paid plan coverage, up to the State of Michigan annually determined hard cap amount for the retiree only. Spouses and dependents are not covered, but dental coverage remains for spouse and eligible dependents, for those elected after 7/1/2009.

* Those elected after 7/1/2007 are not eligible for vision coverage.

Disability and Death Retirement (Duty Related) Eligibility: No age or service requirement. Disability benefits payable when member begins to receive disability pension benefits.

Disability and Death Retirement (Non-Duty Related) Eligibility: Same vesting as deferred retirement eligibility. Age requirement is waived with a minimum of 10 years of service.

Medicare Coverage Eligibility: City provides Medicare Part B premium reimbursement and retiree health care, dental, and vision benefits supplemental to Medicare coverage when participants become Medicare-eligible.

Opt Out Benefit: Retirees who opt out of health care coverage are eligible to receive \$1,800 in any year in which they do not receive coverage from another source.

4.5.7: City Council

The following is an outline of the information used as the basis for this actuarial valuation. It does not imply a promise or obligation on behalf of the City, and does not take the place of applicable ordinances and collective bargaining agreements.

Date Elected	Normal Retirement Eligibility	Deferred Retirement Eligibility	Benefits Payable for Healthcare, Dental, and Vision*
Before 7/1/1987	8 years of service	At least 8 years of service	City pays dental, vision, and retiree healthcare City-paid plan coverage for retiree, spouse, and eligible dependents. <u>Retired prior to 1/1/2006:</u> City pays dental, vision, and retiree healthcare City-paid plan coverage for the retiree, spouse, and eligible dependents. <u>Retired on or after to 1/1/2006:</u> City pays dental, vision, and healthcare City-paid plan coverage, up to the State of Michigan annually determined hard cap amount for the retiree, spouse, and eligible dependents.
From 7/1/1987 to 6/30/2007	15 years of service and age 55	At least 15 years of service; benefit is payable at termination or age 55; whichever is later	
From 7/1/2007 to 12/31/2009	15 years of service and age 55; not eligible for vision coverage		
On or after 1/1/2010	Those elected on or after 1/1/2010 are not eligible for Medicare premium reimbursement, dental, vision or supplemental healthcare benefits.		

* Those elected after 7/1/2007 are not eligible for vision coverage.

Disability and Death Retirement (Duty Related) Eligibility: No age or service requirement. Disability benefits payable when member begins to receive disability pension benefits.

Disability and Death Retirement (Non-Duty Related) Eligibility: Same vesting as deferred retirement eligibility. Age requirement is waived with a minimum of 10 years of service.

Medicare Coverage Eligibility: City provides Medicare Part B premium reimbursement and retiree health care, dental, and vision benefits supplemental to Medicare coverage when participants become Medicare-eligible.

Opt Out Benefit: Retirees who opt out of health care coverage are eligible to receive \$1,800 in any year in which they do not receive coverage from another source.

4.5.8: Judges

The following is an outline of the information used as the basis for this actuarial valuation. It does not imply a promise or obligation on behalf of the City, and does not take the place of applicable ordinances and collective bargaining agreements.

Date Taking Office	Normal Retirement Eligibility	Deferred Retirement Eligibility	Benefits Payable for Healthcare, Dental, and Vision*
Before 6/30/1988	8 years of service	At least 8 years of service	City pays dental and retiree healthcare City-paid plan coverage for retiree, spouse, and eligible dependents up to the State of Michigan annually determined hard cap amount. City-paid plan design changes as active District Court Non-Bargained City-paid plan design changes.
From 7/1/1988 to 10/28/1990	15 years of service	At least 15 years of service and age 55	
On or after 10/29/1990	15 years of service and age 55	15 years of service and age 55	

*Retired judges pay the full cost of vision coverage, if selected.

Disability and Death Retirement (Duty Related) Eligibility: No age or service requirement. Disability benefits payable when member begins to receive disability pension benefits.

Disability and Death Retirement (Non-Duty Related) Eligibility: No age or service requirement. Disability benefits payable when member begins to receive disability pension benefits.

Medicare Coverage Eligibility: City provides Medicare Part B premium reimbursement and retiree health care, dental, and vision* benefits supplemental to Medicare coverage when participants become Medicare-eligible.

Opt Out Benefit: Retirees who opt out of health care coverage are eligible to receive \$1,800 in any year in which they do not receive coverage from another source.

The Plan provision summaries shown in this Report were provided by the City and were not independently verified by BCG.

Glossary of Actuarial Terms

Actuarial Accrued Liability

A plan's actuarial accrued liability is the level of assets estimated by the system actuary to be needed as of the valuation date to

- Finance all previously earned benefits for actively employed members of the plan (and their beneficiaries, if applicable) for when they eventually retire, die or terminate with deferred vested benefits
- Finance all currently payable benefits of current pensioners and their beneficiaries (if applicable).

The Actuarial Accrued Liability is not a debt; instead, it is an asset target set by the actuarial cost method to produce an orderly accumulation of assets to pay for the plan's obligations.

Actuarially Determined Contribution (ADC)

The annual cost of the plan, on a funding basis. The ADC is the sum of the Normal Cost and the amortization of unfunded actuarial accrued liability.

Normal Cost

The Normal Cost is calculated as the annual amount necessary to fund each member's benefits from that member's Plan entry date to the end of his or her projected working life.

Other Postemployment Benefits (OPEB)

Postemployment benefits other than pensions. OPEB generally takes the form of health insurance and dental, vision, prescription drugs or other healthcare benefits.

Unfunded Actuarial Accrued Liability

When the actuarial value of assets is below the Actuarial Accrued Liability, there is an Unfunded Actuarial Accrued Liability which must be paid off or amortized on a schedule. When the actuarial value of assets is in excess of the Actuarial Accrued Liability, this can lead to a reduction in future contributions on an amortization schedule.

Appendix: Benefit Costs by Group

Employee Group(s)	# Employees	Total Normal Cost	Normal Cost per Employee [^]
UAW I	121	\$475,048	\$3,926
UAW II	15	\$30,133	\$2,009
T214 I	16	\$41,140	\$2,571
T214 II	2	\$5,974	\$2,987
T214 III *	2	\$4,701	\$2,350
T243 I	125	\$282,563	\$2,261
T243 II *	23	\$15,697	\$682
T243DC I	19	\$44,530	\$2,344
T243DC II	4	\$8,532	\$2,133
All Others	47	\$108,704	\$2,313
All ERS Employees included in the Valuation	374	\$1,017,022	\$2,719

[^] Beginning of Year, fully prefunded (7.25%) basis

* eligible for retiree dental benefits only from this plan (also eligible for City's Health Savings Account)

UAW I: hired before 10/21/2013
UAW II: hired on or after 10/21/2013
T214 I: hired before 12/8/2008
T214 II: hired after 12/8/2008 and before 1/1/2015
T214 III: hired on or after 1/1/2015
T243 I: all except District Court
T243 II: hired on or after 5/19/2014
T243DC I: District Court hired before 4/1/2014
T243DC II: District Court hired on or after 4/1/2014 and before 7/1/2016