

**CITY OF MADISON HEIGHTS GENERAL
OTHER POSTEMPLOYMENT BENEFITS
ACTUARIAL VALUATION REPORT
AS OF JUNE 30, 2016**

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January 16, 2017

Ms. Melissa Marsh
Assistant City Manager
City of Madison Heights
300 West 13 Mile Road
Madison Heights, Michigan 48071

Dear Ms. Marsh:

Submitted in this report are the results of an Actuarial Valuation of the benefit values for General Employees associated with the employer financed retiree health care provided by the City of Madison Heights. The date of the valuation was June 30, 2016, effective for the fiscal years beginning July 1, 2017 and July 1, 2018. This report was prepared at the request of the City of Madison Heights.


The actuarial calculations were prepared for purposes of complying with the requirements of Statements No. 43 and No. 45 of the Governmental Accounting Standards Board (GASB). The calculations reported herein have been made on a basis consistent with our understanding of these accounting standards. Determinations of the liability associated with the benefits described in this report for purposes other than satisfying the City's financial reporting requirements may produce significantly different results. This report may be provided to parties other than the City of Madison Heights only in its entirety and only with the permission of the City of Madison Heights. GRS is not responsible for any unauthorized use of this report.

The valuation was based upon information, furnished by the City, concerning retiree health care benefits, individual members, and asset information. Data was checked for internal consistency, but was not audited.

To the best of our knowledge, this report is complete and accurate and was made in accordance with generally recognized actuarial methods.

Brad Lee Armstrong and Heidi G. Barry are independent of the plan sponsor, Members of the American Academy of Actuaries (MAAA), and together meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,



Brad Lee Armstrong, ASA, EA, FCA, MAAA



Heidi G. Barry, ASA, MAAA

BLA/HGB:mrb

C2601

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Annual Required Contribution

This report presents the Annual Required Contribution calculated in compliance with the accounting requirements of 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.

The Annual Required Contribution (ARC) for the fiscal year beginning July 1, 2017 was determined to be \$2,632,909. Actual claims and premiums paid on behalf of retirees including the implicit subsidy may be treated as employer contributions in relation to the ARC if paid from outside of plan assets. The expected employer portion of the claims and premium amounts paid is estimated to be \$1,549,579 for the fiscal year beginning July 1, 2017.

For additional details, please see Section B of the report.

Additional OPEB Reporting Requirements

In addition to the annual OPEB cost described above, employers will have to disclose a Net OPEB Obligation (or asset). The Net OPEB Obligation is the cumulative difference between annual OPEB costs 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 13 g. 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.

EXECUTIVE SUMMARY

Liabilities and Assets

The present value of all benefits expected to be paid to current plan members as of June 30, 2016 is \$40,253,771. The actuarial accrued liability, which is the portion of the above amounts attributable to service accrued by plan members as of June 30, 2016, is \$37,824,307. (These results are based on a 6.5% discount rate.) The assets currently set aside for GASB OPEB purposes as of June 30, 2016 are \$9,886,708.

Assumption & Method Changes

Assumptions have been updated for the June 30, 2016 valuation to maintain consistency with MERS. In particular, the mortality table used has been updated to the RP-2000 Mortality Table projected to 2020 using scale BB, set back 0 years for men and 0 years for women, and the wage inflation assumption has been lowered to 4% for the June 30, 2016 OPEB valuation. Please see Section D for a complete listing of the assumption tables.

The City has been contributing less than the full ARC for several years. Therefore, in conjunction with reviewing capital market assumptions, we have lowered the assumed rate of return to 6.5%. The assumed return for the June 30, 2014 valuation was 7.0%.

After reviewing election patterns from the past several years, the election percentage assumption of current actives choosing two-person coverage when eligible for retiree health care benefits was increased to 80% from 70%.

Annual premium increases, or health care trend rates, were reset to assume a 9% increase in 2017 grading down to the ultimate trend rate of 4% in 2028.

SECTION A
VALUATION RESULTS

**DEVELOPMENT OF THE ANNUAL REQUIRED CONTRIBUTION
FOR THE OTHER POSTEMPLOYMENT BENEFITS
AS OF JULY 1, 2017**

Contributions for	Development of the Annual Required Contribution for July 1, 2017 - June 30, 2018						
	Dept Heads/Non- Union	Supervisors	Municipal	Dispatchers	DPS	Courthouse	Total
Normal Cost							
Normal Retirement	\$ 50,933	\$ 17,529	\$ 67,107	\$ 26,182	\$ 71,721	\$ 21,131	\$ 254,603
Early Retirement	3,074	1,746	4,086	3,522	7,797	0	20,225
Termination Benefits	0	161	1,177	602	3,090	1,557	6,587
Death-in-Service	790	253	1,039	487	1,545	267	4,381
Disability	703	0	0	278	0	356	1,337
Life Insurance	<u>176</u>	<u>69</u>	<u>208</u>	<u>70</u>	<u>221</u>	<u>44</u>	<u>788</u>
Total Normal Cost	\$ 55,676	\$ 19,758	\$ 73,617	\$ 31,141	\$ 84,374	\$ 23,355	\$ 287,921
Amortization of Unfunded Actuarial Accrued Liabilities	\$339,327	\$303,062	\$420,717	\$50,103	\$ 1,019,933	\$ 211,846	\$2,344,988
Amortization period	24 years	24 years	24 years	24 years	20 years	20 years	
Annual Required Contribution (ARC)	\$395,003	\$322,820	\$494,334	\$ 81,244	\$1,104,307	\$235,201	\$2,632,909
Projected Payroll for the Fiscal Year Beginning July 1, 2017	\$878,160	\$229,739	\$692,538	\$231,703	\$735,605	\$222,429	\$2,990,174
Annual Required Contribution (ARC) as a Percentage of Projected Payroll	44.98%	140.52%	71.38%	35.06%	150.12%	105.74%	88.05%
Annual Required Contribution (ARC) for the Fiscal Year Beginning July 1, 2018	\$392,876	\$322,420	\$492,538	\$ 81,847	\$1,101,014	\$235,518	\$2,626,213
Projected Payroll for the Fiscal Year Beginning July 1, 2018	\$844,615	\$225,089	\$675,644	\$236,191	\$ 706,891	\$225,448	\$2,913,878
Annual Required Contribution (ARC) as a Percentage of Projected Payroll	46.52%	143.24%	72.90%	34.65%	155.75%	104.47%	90.13%

The assumptions used to calculate the liabilities shown above include a 6.5% investment return rate.

The unfunded actuarial accrued liabilities were amortized as a level dollar amount over 20 years for Court and DPS and 24 years for other groups. A 30-year amortization period for unfunded actuarial accrued liabilities is the maximum period that complies with GASB requirements.

The ARC year beginning July 1, 2016 was \$2,177,595 or 71.44% of payroll.

DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY
AS OF JUNE 30, 2016

	Dept Heads/Non- Union	Supervisors	Municipal	Dispatchers	DPS	Courthouse	Total
A. Present Value of Future Benefits							
1. Retirees and Beneficiaries	\$3,534,344	\$4,400,522	\$4,352,130	\$ 0	\$12,799,710	\$ 2,390,983	\$27,477,689
2. Vested Terminated Members	0	0	0	0	0	0	0
3. Active Members	<u>2,448,716</u>	<u>879,576</u>	<u>3,316,398</u>	<u>1,129,176</u>	<u>4,025,578</u>	<u>976,638</u>	<u>12,776,082</u>
Total Present Value of Future Benefits	\$5,983,060	\$5,280,098	\$7,668,528	\$1,129,176	\$16,825,288	\$3,367,621	\$40,253,771
B. Present Value of Future Employer Normal Costs	428,439	163,674	551,774	349,914	749,817	185,846	2,429,464
C. Present Value of Future Contributions from Current Active Members	0	0	0	0	0	0	0
D. Actuarial Accrued Liability (A.-B.-C.)	5,554,621	5,116,424	7,116,754	779,262	16,075,471	3,181,775	37,824,307
E. Market Value of Assets ¹	1,451,895	1,337,357	1,860,213	203,687	4,201,888	831,668	9,886,708
F. Unfunded Actuarial Accrued Liability (D.-E.)	\$4,102,726	\$3,779,067	\$5,256,541	\$ 575,575	\$11,873,584	\$2,350,107	\$27,937,599
G. Funded Ratio (E./D.)	26.1%	26.1%	26.1%	26.1%	26.1%	26.1%	26.1%

¹ Allocated based on Actuarial Accrued Liability.

The assumptions used to calculate the liabilities shown above include a 6.5% investment return rate.

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.

The Unfunded Actuarial Accrued Liability as of June 30, 2014 was \$22,847,113 and the funded ratio was 29.0%.

COMMENTS

COMMENT A: The Annual Required Contribution (ARC) has increased from the last valuation. Factors contributing to this increase include, but are not limited to:

- Lower than expected asset return (7.0% expected vs. 2.9% actual in FY15 & 0.3% actual in FY16)
- Partial ARC contributions in FY15 & FY16
- Updating the mortality assumption to the RP-2000 Mortality Table projected to 2020 using scale BB
- Lowering assumed rate of investment return to 6.5% from 7.0%
- Increasing the election percentage assumption of members choosing two-person coverage to 80%
- Resetting of health care trend cost rates (9% in 2017, grading to 4.0% in 2028)

Partially offsetting these factors were decreases due to:

- Lower medical rates than projected

COMMENT B: One of the key assumptions used in any valuation of the cost of postemployment benefits is the rate of return on Plan assets. Higher assumed investment returns will result in a lower ARC. Lower assumed returns will result in a higher ARC. The City has been contributing less than the full ARC for several years. Therefore, in conjunction with reviewing capital market assumptions, we have lowered the assumed rate of return to 6.5%. This assumes continuation of the trend for the City toward contributing 100% of the ARC during fiscal years 2017, 2018, and 2019. The assumed return for the June 30, 2014 valuation was 7.0%.

COMMENT C: Based on the number of Plan members as of this valuation, the Plan Sponsor is required by GASB to perform actuarial valuations at least biennially unless there are significant changes in the OPEB. It is our understanding that the City will need to comply with GASB Statement No. 74 reporting effective with the fiscal year ending June 30, 2017 and GASB Statement No. 75 reporting effective with the fiscal year ending June 30, 2018. Please verify the next required valuation with the auditor.

COMMENTS (CONTINUED)

The GASB issued Statements 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 Statements No. 74 and No. 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 auditor for final determination of which standards will be applicable. Please contact us to discuss implementation of the recent GASB standards.

COMMENT D: The contribution rates shown include amortization of the unfunded actuarial accrued liability over 24 years for non-Court/DPS members, and 20 years for Court/DPS members beginning July 1, 2017. A shorter amortization period would result in a higher ARC.

COMMENT E: Actual claims and/or premiums paid on behalf of retirees may be treated as employer contributions in relation to the ARC if paid from outside of plan assets. For the fiscal year ending June 30, 2018, the amount of estimated claims and/or premiums paid by the employer on behalf of retirees including the effect of the implicit rate subsidy under GASB is \$1,549,579. For the fiscal year ending June 30, 2019, the amount of estimated claims and/or premiums paid by the employer on behalf of retirees including the effect of the implicit rate subsidy under GASB is \$1,702,183.

COMMENT F: All groups are now closed to new entrants, therefore, their unfunded actuarial accrued liability is amortized as a level dollar amount in order to comply with GASB requirements.

COMMENT G: For purposes of computing the Unfunded Actuarial Accrued Liability, the assets were allocated for all members based on the associated Actuarial Accrued Liability of the groups. Going forward, we recommend either segregating these funds or tracking contribution and benefit payments separately and allocating income on a pro rata basis.

COMMENTS (CONCLUDED)

COMMENT H: Although there is significant uncertainty that the Affordable Care act (ACA) will survive three years in the current political environment, it currently has a provision for an excise tax on certain levels of benefits. 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 limited guidance about how the tax would be applied, though there is considerable latitude in grouping of participants for tax purposes. Combining early retiree and Medicare eligible (post-65) retiree costs is allowed and can keep plans under the thresholds for a longer period of time. For this valuation, a 7% load was applied to the health care liabilities for the future excise tax, based on the current plan provisions and assumptions. We have not identified any other specific provision of the ACA that would be expected to have a significant impact on the measured obligation.

SECTION B

RETIREE PREMIUM RATE DEVELOPMENT

RETIREE PREMIUM RATE DEVELOPMENT

Initial premium rates were developed for the two classes of retirees (pre-65 and post-65). The rates were calculated by using actual paid claims and exposure data for the period of January 2014 to September 2016, adjusted for catastrophic claims, plus the load for administration, network access fees, and stop loss premiums. The Self-insured Medical and prescription drug data were provided by the City of Madison Heights. The Medical data was analyzed for the pre-65 and post-65 participants separately since Medicare is available for the post-65 participants and has a significant impact on the claim experience. Furthermore, since the prescription drug claims and the medical claims exhibit different trends and claim payment patterns, we analyzed these claims separately as well. There are very few post-65 members that are using the self-insured program since most have chosen the Medicare Advantage program, therefore since the self-insured data is not credible for this portion of the benefit program we used strictly the MA rates.

The benefit options available to future retirees are different than current retirees. We have developed separate premium rates for future retirees in order to reflect the benefit differences.

Age graded and sex distinct premiums are utilized by this valuation. 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.

RETIREE PREMIUM RATE DEVELOPMENT (CONCLUDED)

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

Future Retirees

For Those Not Eligible for Medicare

Age	Male	Female
45	\$ 463.99	\$ 640.37
50	604.17	744.28
55	795.02	868.05
60	1,026.82	1,011.06

For Those Eligible for Medicare

Age	Male	Female
65	\$ 592.16	\$ 558.53
70	645.08	624.21
75	692.83	676.05

Current Retirees

For Those Not Eligible for Medicare

Age	Male	Female
45	\$ 621.87	\$ 858.26
50	809.74	997.52
55	1,065.53	1,163.40
60	1,376.19	1,355.07

For Those Eligible for Medicare

Age	Male	Female
65	\$ 875.88	\$ 826.13
70	954.15	923.29
75	1,024.78	999.95

Alex Rivera 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.



Alex Rivera, FSA, EA, MAAA, FCA

SECTION C

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

**CITY OF MADISON HEIGHTS GENERAL
OTHER POSTEMPLOYMENT BENEFITS
SUMMARY OF BENEFITS AS OF JUNE 30, 2016**

PLAN PARTICIPANTS

Employees of the City of Madison Heights Retiree Health Care Plan are eligible to receive retiree health care benefits.

NORMAL RETIREMENT BENEFITS

Eligibility conditions for retiree health care benefits under a normal retirement are as follows:

Non-Union and Department Heads Members: Age 55 with 25 years of service. Employees hired after 9/28/2009 will not have retiree health care benefits. Instead, they will have a Health Care Savings Plan (established through MERS) and will purchase their own insurance.

Supervisors and Assistants Members: Age 55 with 25 years of service. Employees hired after 8/24/2009 will not have retiree health care benefits. Instead, they will have a Health Care Savings Plan (established through MERS) and will purchase their own insurance.

MEU Members: Age 55 with 25 years of service. Employees hired after 5/27/2009 will not have retiree health care benefits. Instead, they will have a Health Care Savings Plan (established through MERS) and will purchase their own insurance.

Court Members: Age 55 with 25 years of service. Employees hired after 10/1/2006 will not have retiree health care benefits. Instead, they will have a Health Care Savings Plan (established through MERS) and will purchase their own insurance. (5 current Court employees have opted for a HSA in lieu of retiree health care – they have not been included in the valuation.)

DPS Members: Age 55 with 25 years of service. Employees hired after 7/1/2005 will not have retiree health care benefits. Instead, they will have a Health Care Savings Plan (established through MERS) and will purchase their own insurance.

DEFERRED RETIREMENT BENEFITS

City of Madison Heights does not provide deferred retiree health care coverage for members terminating employment with less than 25 years of service.

DUTY DISABILITY RETIREMENT BENEFITS

Eligibility conditions for retiree health care benefits under a duty disability retirement are as follows:

Non-Union and Dept Head Members: No age or service restrictions. Benefits commence immediately.

MEU and DPS Members: Health insurance continues for 18 months from date of injury.

Supervisors and Assistants: Health insurance continues for two years from date of injury.

**CITY OF MADISON HEIGHTS GENERAL
OTHER POSTEMPLOYMENT BENEFITS
SUMMARY OF BENEFITS AS OF JUNE 30, 2016**

NON-DUTY DISABILITY RETIREMENT BENEFITS

City of Madison Heights General Retirement Health Care Plan does not provide retiree health care coverage for members retiring under non-duty disability retirement with less than 25 years.

DUTY DEATH-IN-SERVICE RETIREMENT BENEFITS

Eligibility conditions for retiree health care benefits under a duty death retirement are as follows:

All Members: No age or service restrictions. Benefits commence immediately.

NON-DUTY DEATH-IN-SERVICE RETIREMENT BENEFITS

Eligibility conditions for retiree health care benefits under a non-duty death retirement are as follows:

All Members: 25 years of service. Benefits commence immediately.

BENEFITS FOR RETIRED EMPLOYEES

All Members:

Member: City pays 100% of the premiums for base plan. Prescription benefits will mirror active employees.

Department Heads and Non-Union Spouse: City pays 100% of premiums for retiree's spouse at time of retirement. Coverage continues to surviving spouses of deceased retirees. (Limited to spouse at time of retirement.) Prescription benefits will mirror active employees.

Supervisors & Assistants, MEU and DPS Spouse: City continues to pay 100% of premiums for the City plan. Prescription benefits will mirror active employees.

If retiree obtains employment from an employer who provides medical coverage, the member, spouse and eligible dependent are not covered by City's coverage where applicable for duration of employment.

NON-MEDICARE AND MEDICARE-ELIGIBLE PROVISIONS

All retirees are required to enroll in Medicare Part A and B once eligible.

**CITY OF MADISON HEIGHTS GENERAL
OTHER POSTEMPLOYMENT BENEFITS
SUMMARY OF BENEFITS AS OF JUNE 30, 2016**

LIFE INSURANCE COVERAGE

City provides life insurance coverage of retirees in the amount of \$10,000.

This is a brief summary of the City of Madison Heights General Other Postemployment Benefit provisions. In the event that any description contained herein differs from the actual eligibility or benefit, the appropriate employee contract or governing document will prevail.

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

NON-UNION/DEPARTMENT HEADS

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34									
35-39									
40-44			2					2	\$ 222,334
45-49				1				1	97,010
50-54				1	1	1		3	345,677
55-59				1	1	1		3	229,104
60-64									
65 & Over									
Totals			2	3	2	2		9	\$ 894,125

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

Age: 51.3
Service: 20.1
Annual Pay: \$99,347

SUPERVISORS & ASSISTANTS

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34									
35-39		1						1	\$ 74,848
40-44									
45-49					1			1	65,201
50-54						1		1	80,955
55-59									
60-64									
65 & Over									
Totals		1			1	1		3	\$ 221,004

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

Age: 46.9 years
Service: 19.5 years
Annual Pay: \$73,668

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

MEU

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34									
35-39			1					1	\$ 47,241
40-44			1					1	47,232
45-49				1	1	1		3	150,621
50-54			1	1	1			3	149,530
55-59				1		1		2	94,452
60-64				1				1	47,727
65 & Over		1			1		1	3	163,006
Totals		1	3	4	3	2	1	14	\$ 699,809

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

Age: 54.0 years
Service: 20.9 years
Annual Pay: \$49,986

DISPATCHERS

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34			1					1	\$ 57,869
35-39									
40-44				2				2	101,866
45-49					1			1	59,084
50-54			1					1	578
55-59									
60-64									
65 & Over									
Totals			2	2	1			5	\$ 219,397

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

Age: 43.2 years
Service: 15.9 years
Annual Pay: \$43,879

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

COURT

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34									
35-39									
40-44					1			1	\$ 52,465
45-49					1			1	60,332
50-54									
55-59				1				1	50,227
60-64									
65 & Over				1				1	49,700
Totals				2	2			4	\$ 212,724

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

Age: 50.9 years
Service: 19.9 years
Annual Pay: \$53,181

DPS

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34			1					1	\$ 54,721
35-39			3					3	151,125
40-44									
45-49					1	1		2	70,803
50-54			1	1	1	1	1	5	287,067
55-59				1		1		2	112,780
60-64					1			1	65,632
65 & Over									
Totals			5	2	3	3	1	14	\$ 742,128

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

Age: 47.9 years
Service: 20.5 years
Annual Pay: \$53,009

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

DEPT HEADS/NON-UNION

Attained Age	Number of Retirees		
	Male	Female	Total
Under 55	1	0	1
55-59	1	0	1
60-64	0	0	0
65 & Over	3	3	6
Totals	5	3	8

SUPERVISORS

Attained Age	Number of Retirees		
	Male	Female	Total
Under 55	0	0	0
55-59	1	0	1
60-64	3	2	5
65 & Over	3	0	3
Totals	7	2	9

MUNICIPAL

Attained Age	Number of Retirees		
	Male	Female	Total
Under 55	0	1	1
55-59	0	0	0
60-64	0	1	1
65 & Over	3	10	13
Totals	3	12	15

COURTHOUSE

Attained Age	Number of Retirees		
	Male	Female	Total
Under 55	0	2	2
55-59	0	0	0
60-64	0	0	0
65 & Over	1	2	3
Totals	1	4	5

DPS

Attained Age	Number of Retirees		
	Male	Female	Total
Under 55	1	0	1
55-59	5	1	6
60-64	3	0	3
65 & Over	17	0	17
Totals	26	1	27

SECTION D

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;
- (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. The Unfunded Actuarial Accrued Liabilities (UAAL) were determined using the funding value of assets and actuarial accrued liability calculated as of the valuation date and projected 12 months to the beginning of the fiscal year reflecting anticipated contributions.

NON-UNION, MEU, DEPARTMENT HEADS AND SUPERVISORS & ASSISTANTS - The UAAL amortization payment is the level dollar required to fully amortize the UAAL over a closed 24-year period beginning on the first day of the fiscal year for which the contributions in this report have been calculated.

COURT AND DPS - The UAAL amortization payment is the level dollar required to fully amortize the UAAL over a closed 20-year period beginning on the first day of the fiscal year for which the contributions in this report have been calculated.

The following amortization factors were used in developing the Annual Required Contribution for the fiscal years shown:

	All Other Groups		Court and DPS	
	Fiscal Year Beginning July 1,		Fiscal Year Beginning July 1,	
	2017	2018	2017	2018
Years Remaining	24	23	20	19
Amortization Factor	12.37635	12.14865	11.37285	11.07993

ACTUARIAL ASSUMPTIONS

Rate of Investment Return. 6.5% per year, compounded annually, net of expenses. This assumption is used to equate the value of payments due at different points in time.

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 benefit amounts will be based.

% Increase in Salary at Sample Ages			
Sample Ages	Merit & Seniority	Base (Economic)	Increase Next Year
20	13.00%	4.00%	17.00%
25	6.80%	4.00%	10.80%
30	3.26%	4.00%	7.26%
35	2.05%	4.00%	6.05%
40	1.30%	4.00%	5.30%
45	0.81%	4.00%	4.81%
50	0.52%	4.00%	4.52%
55	0.30%	4.00%	4.30%
60	0.00%	4.00%	4.00%
Ref	331		

The mortality table used to project the mortality experience of plan members is the RP-2000 Mortality Table projected to 2020 using scale BB. For disabled retirees, the regular mortality tables are used with a 10-year set forward in ages to reflect the higher expected mortality rates of disabled members. This table was first used for the June 30, 2016 valuation.

Sample Attained Ages	Probability of Dying Next Year		Future Life Expectancy (Years)	
	Men	Women	Men	Women
50	0.20 %	0.16 %	32.99	35.59
55	0.34	0.25	28.37	30.90
60	0.59	0.41	23.94	26.34
65	1.00	0.76	19.74	21.98
70	1.64	1.32	15.83	17.93
75	2.80	2.21	12.26	14.25
80	4.76	3.60	9.13	10.95
Ref	#744x1sb0yrs0Unisex		#745x1sb0yrs0Unisex	

ACTUARIAL ASSUMPTIONS (CONTINUED)

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

Retirement Age	Percent of Eligible Active Members Retiring within Next Year*
All Divisions	
50	20 %
51	20
52	20
53	20
54	20
55	20
56	20
57	21
58	21
59	21
60	21
61	22
62	22
63	22
64	23
65	25
66	25
67	26
68	28
69	30
70	100
Ref	1,876

* All members who reach eligibility for normal retirement pension benefits before reaching eligibility for retiree health benefits are assumed to retire at the rate of 3% per year during the period when they are not eligible for health.

The rates of early 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 Early within Next Year
All Divisions	
50	1.6 %
51	1.6
52	2.3
53	3.3
54	4.5
55	3.5
Ref	1,799

ACTUARIAL ASSUMPTIONS (CONTINUED)

Rates of separation from active membership are used to estimate the number of employees at each age that are expected to terminate employment before qualifying for retirement benefits. The rates of separation from active membership do not apply to members eligible to retire, and do not include separation on account of death or disability. The assumed rates of separation applied in the current valuation are based on years of service, and scaled up or down according to each group's experience.

Group	Separation Rate Scaling Factor
All Divisions	80%

The base separation rates (see the table below) are multiplied by the scaling factor to obtain the assumed withdrawal rates. Sample rates of separation from active employment, before application of the scaling factor, are shown below.

Years of Service	% of Active Members Separating within Next Year
0	20.00 %
1	17.00
2	14.00
3	11.00
4	9.00
5	6.50
10	5.00
15	3.70
20	3.00
25	2.70
30	2.60
34 and over	2.40
Ref	473

ACTUARIAL ASSUMPTIONS (CONCLUDED)

Rates of disability among active members are used to estimate the incidence of member disability in future years. 85% of disabilities were assumed to be non-duty related and 15% of disabilities were assumed to be duty related.

Sample Ages	Percent Becoming Disabled within Next Year	
	Male	Female
20	0.02 %	0.02 %
25	0.02	0.02
30	0.02	0.02
35	0.06	0.06
40	0.06	0.06
45	0.11	0.11
50	0.24	0.24
55	0.60	0.60
Ref	#612x1	#612x1

Health care trend rates used in the valuation were as shown below.

Year	Medical and Prescription Drugs
2017	9.00 %
2018	8.50
2019	8.00
2020	7.50
2021	7.00
2022	6.50
2023	6.00
2024	5.50
2025	5.00
2026	4.50
2027	4.25
2028 and later	4.00

**GASB STATEMENTS NO. 43 AND NO. 45
REQUIRED SUPPLEMENTARY INFORMATION**

Valuation Date	June 30, 2016
Actuarial Cost Method	Individual Entry Age
Amortization Method	
Non-Union, MEU, Department Heads and Supervisors & Assistants	Level Dollar Closed
Court and DPS	Level Dollar Closed
Remaining Amortization Periods	
Non-Union, MEU, Department Heads and Supervisors & Assistants	24 Years
Court and DPS	20 Years
Asset Valuation Method	Market Value
Actuarial Assumptions:	
Discount Rate	6.5% Per Year
Projected Salary Increases	4.0%
Valuation Health Care Cost Trend Rate	9% in 2017, grading to 4.0% in 2028

SCHEDULE OF FUNDING PROGRESS

Rounded to the Nearest \$1,000

Actuarial Valuation Date June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b)-(a)	Funded Ratio (a)/(b)	Active Member Covered Payroll (c)	Unfunded AAL as a Percentage of Active Member Covered Payroll ((b-a)/c)
2006	\$ 543	\$21,977	\$21,433	2.5 %	\$4,281	500.6 %
2008	2,389	21,497	19,108	11.1	4,371	437.1
2010	3,876	21,930	18,053	17.7	3,848	469.2
2012	6,249	33,130	26,881	18.9	3,650	736.4
2014	9,329	32,177	22,847	29.0	3,137	728.4
2016	9,887	37,824	27,938	26.1	2,989	934.6

This information is presented in draft form for review by the City's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the City's financial statements.

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Decrement Timing:	Decrements of all types are assumed to occur mid-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 percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
Marriage Assumption:	70% of males and 70% 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:	<p>It was assumed that 100% of eligible retirees will elect to receive retiree health care benefits through the City. Of those assumed to elect coverage, 80% 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.</p> <p>For active employees who have opted-out of the City's active health care plan, it was assumed they would elect retiree health care coverage upon retiring.</p> <p>Active members who have chosen an HSA instead of city sponsored retiree healthcare have been excluded from the valuation.</p>
Excise Tax:	All costs were increased by 7% to reflect the projected excise tax from the Affordable Care Act.

APPENDIX A

OVERVIEW

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.

GASB BACKGROUND (CONCLUDED)

Paragraph 13g. of 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 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.

APPENDIX B

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.

GLOSSARY (CONCLUDED)

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 Postemployment Employee Benefits (OPEB) - OPEB are postemployment benefits other than pensions. OPEB generally takes the form of health insurance and dental, vision, prescription drugs or other healthcare benefits.

Reserve Account - An account used to indicate that funds have been set aside for a specific purpose and is 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.



January 17, 2017

Ms. Melissa Marsh
Assistant City Manager
City of Madison Heights
300 West 13 Mile Road
Madison Heights, Michigan 48071

**Re: City of Madison Heights General
Other Postemployment Benefits Valuation**

Dear Ms. Marsh:

Enclosed are thirty copies of our report of the actuarial valuation of the City of Madison Heights General Other Postemployment Benefits.

Respectfully submitted,

Heidi G. Barry, ASA, MAAA

HGB:mr
Enclosures