City of Pontiac
General Employees' Retirement System
Annual Actuarial Valuation Report
December 31, 2019

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June 15, 2020

Retirement Board
City of Pontiac General Employees' Retirement System
Pontiac, Michigan

Dear Board Members:

Submitted in this report are the results of the December 31, 2019 actuarial valuation of the liabilities, funded position and contribution requirements associated with benefits provided by the City of Pontiac General Employees' Retirement System. The purpose of the valuation was to measure the System's funding progress, provide related valuation results and determine the employer contribution for the 2021-2022 fiscal year. This report should not be relied upon for any other purpose. This report may be provided to parties other than the Retirement Board only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The valuation was based upon the actuarial assumptions and methods adopted by the Retirement Board, information furnished by the Retirement System, including System benefits, financial transactions, and individual members, terminated members, retirees and beneficiaries. Data was checked for internal and year to year consistency, but was not audited by us. As a result, we are unable to assume responsibility for the accuracy or completeness of the data provided.

Future actuarial measurements may differ significantly from those presented in this report due to such factors as experience differing from that anticipated by actuarial assumptions, changes in plan provisions, actuarial assumptions/methods or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. This valuation assumes the continuing ability of the plan sponsor to make any contributions necessary to fund this plan. A determination of the plan sponsor's ability to make any necessary contributions in the future is beyond the scope of our expertise and was not performed by GRS.

This report was prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, this report is complete and accurate and the valuation was conducted in accordance with standards of practice prescribed by the Actuarial Standards Board in compliance with the applicable State statutes. Louise M. Gates and James D. Anderson are independent of the plan sponsor and are Members of the American Academy of Actuaries (MAAA) who meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. It is our opinion that the actuarial assumptions used for the valuation produce results which are reasonable.

Respectfully submitted,

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SECTION A

EXECUTIVE SUMMARY

1. Computed Employer Contributions – Fiscal Year Beginning July 1, 2021

The computed City contributions are as follows:

Computed Employer Contributions
$0

2. Reasons for Change

There are three general reasons why contributions change from one valuation to the next. The first is a change in the benefits or eligibility conditions of the plan. The second is a change in the valuation assumptions used to predict future occurrences. The third is the difference during the year between the plan's actual experience and what the assumptions predicted. Although there was no change in the employer contribution from the prior year, there was an increase in the Retirement System's funding surplus measured using the actuarial value of assets.

There were no changes in actuarial assumptions since the last valuation of the System. However, the following plan change was reported to the actuary and is reflected in this valuation of the System:

- The plan will extend the $400 per month stipend benefit payment to all eligible pension benefit recipients through the earlier of August 2020 or when CPREA litigation is resolved. This provision increased System liabilities by approximately $3.4 million.

3. System Experience

For the year ended December 31, 2019, System experience was overall favorable. The recognized rate of return on System assets during calendar year 2019 was higher than long term expectations. This experience was offset in part by additional stipend payments made during the last 4 months of calendar year 2019 per City Council resolution. Additional information related to System assets is shown on pages C-3 and C-4 of this report.

4. Reserve Transfers

In accordance with Ordinance Section 92-39(6), we have calculated the actuarial liability for members who have already retired (and their beneficiaries). This amount, along with the reported retiree reserve account balance is shown below:

Retiree Liability	$ 243,207,146
Retiree Reserve	236,546,714
Difference	$ 6,660,432

The Board may wish to transfer the difference shown above from the pension reserve fund to the retirement reserve fund.

5. System Funded Percent

The System's funding percent based on the actuarial value of assets is 190.8% as of December 31, 2019. As of December 31, 2018, the funding percent was 182.3%. If the market value of assets were used for this measurement as of December 31, 2019 the result would be a funding percent of 200.1%.

Unless otherwise indicated, a funding status measurement presented in this report is based upon the System's actuarial accrued liability and the actuarial value of System assets. It is important to note that the funding status measurement presented in this report is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations and the need for or the amount of future employer contributions.

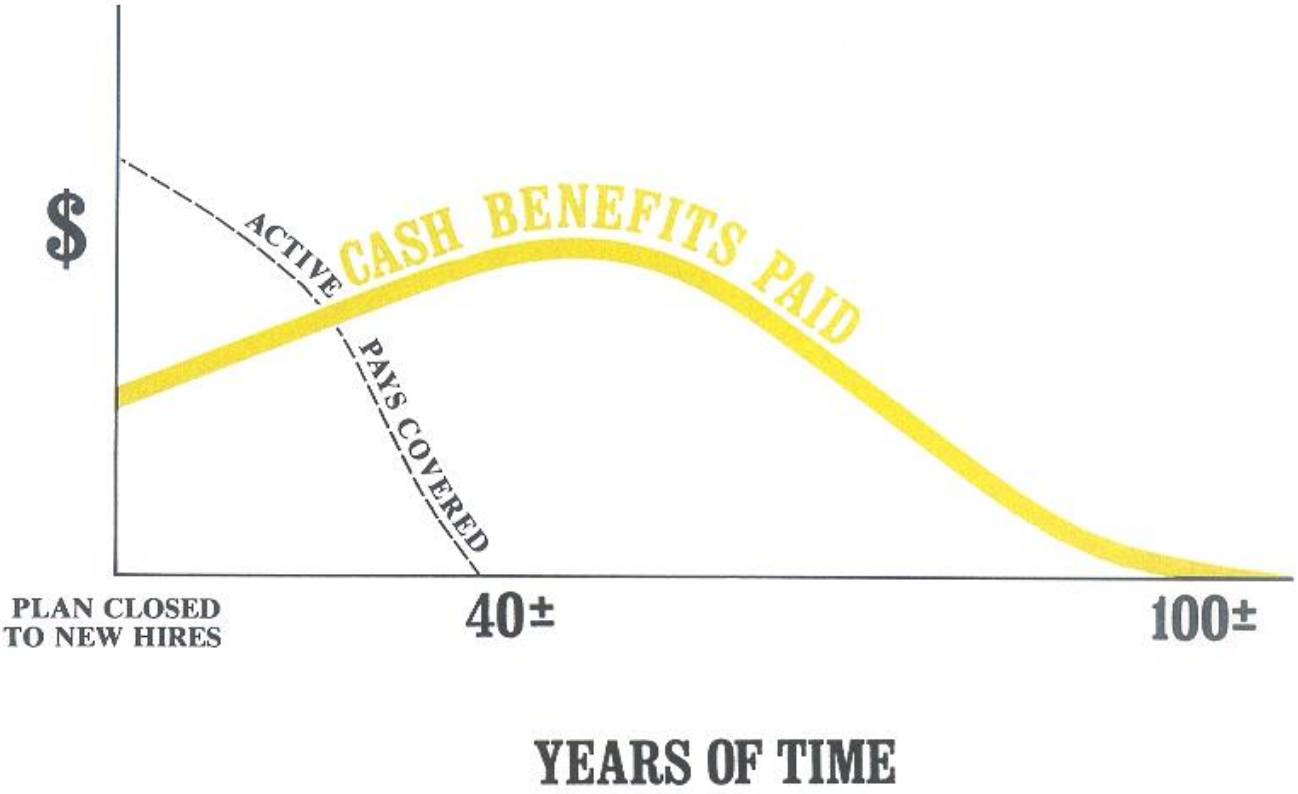
6. Other

Michigan Public Act 202 of 2017 (the Act) has created new reporting and other requirements for local units of government. Recently, the Michigan Department of Treasury (DOT) issued new guidance on uniform actuarial assumptions needed in connection with the Act. The actuarial assumptions currently being used in the annual valuations of the System differ from those prescribed by the DOT for reporting purposes under the Act. In the absence of any assumption changes, a separate valuation of the System will be needed.

We understand that assets may be removed from the GERS trust in connection with an IRS filing by the City. It is important to note that a reduction in trust assets will reduce the margin for investment and other risks in the future. If GERS investment experience falls below long term expectations, City contributions to the GERS may be required in the future. Before any assets are removed from the GERS trust, we recommend an analysis of future investment and other risks to enable stakeholders to better understand the possible range of future outcomes and assess the associated risks.

In addition, we recommend an experience study of the GERS including a review and update of System assumptions before any assets are removed from the GERS trust. Experience studies are now required by State law (the Act) for governmental employers who sponsor defined benefit plans.

A CLOSED PENSION PLAN



A plan becomes closed when no new hires are admitted to active membership. The persons covered by the plan at the time of closing continue their normal activities and continue to be covered by the plan, until the last survivor dies.

CASH BENEFITS LINE. After a pension plan becomes closed, the usual pattern is for cash benefits to continue to increase for decades of time. Eventually the cash benefits will peak, and then gradually decrease over more decades of time, ultimately to zero. The last cash benefit is likely to occur a century after the time the plan is closed.

The precise amounts of cash benefits cannot be known now, and must be estimated by assumptions of future experiences in a variety of financial risk areas.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the actuarial liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the actuarial liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the System's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. **Investment risk** – actual investment returns may differ from the expected returns;
2. **Asset/Liability mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the actuarial liability and assets and consequently altering the funded status and contribution requirements;
3. **Contribution risk** – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. **Salary and Payroll risk** – actual salaries and total payroll may differ from expected, resulting in actual future actuarial liability and contributions differing from expected;
5. **Longevity risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and
6. **Other demographic risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future actuarial liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

SECTION B

VALUATION RESULTS

Computed Employer Contribution for the Fiscal Year Beginning July 1, 2021

	Contributions for	Expressed as Dollar Amounts
A	Normal Cost of Benefits	
	Age & Service	$ 178,839
	Disability	24,217
	Death-in-service	6,398
	Total Normal Cost	209,454
B	Member Contributions	0.00
C	Employer Normal Cost	209,454
D	UAL Credit*	(18,131,322)
E	Total Employer Contribution (D+C)	0

** Unfunded Accrued Liabilities (UAL) were amortized over a period of 30 years using level dollar financing.*

Determination of Unfunded Actuarial Accrued Liability as of December 31, 2019

A. Accrued Liability		
1. For retirees and beneficiaries	$	243,207,146
2. For vested and other terminated members		7,547,186
3. For present active members		
a. Value of expected future benefit payments		6,823,248
b. Value of future normal costs		1,248,462
c. Active member accrued liability: (a) - (b)		5,574,786
4. Total accrued liability		256,329,118
B. Valuation Assets		489,107,377
C. Unfunded Accrued Liability: (A.4) - (B)		(232,778,259)
D. Funding Ratio: (B) / (A.4)		190.8%

The accrued liability for current retirees and beneficiaries shown above includes a liability for stipend benefit payments guaranteed through August 2020.

Development of Experience Gain/(Loss)
Period Ended December 31, 2019

Actual experience will never (except by coincidence) exactly match assumed experience. It is hoped that gains and losses will cancel each other over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) is shown below.

(1)	UAAL at start of period	$(215,815,395)
(2)	Normal cost for period	233,616
(3)	Actual contributions	0
(4)	Interest accrual on (1), (2) and (3)	(15,098,901)
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	(230,680,680)
(6)	Change from plan provisions	3,402,001
(7)	Assumption changes	0
(8)	Expected UAAL after changes: (5) + (6) + (7)	(227,278,679)
(9)	Actual UAAL at end of period	(232,778,259)
(10)	Gain/(loss): (8) - (9)	5,499,580

SECTION C

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

Summary of Benefit Provisions as of December 31, 2019

Regular Retirement

Employee Group	Eligibility ^		Benefit Multiplier^	Post Retirement Adjustments+
	Age	Years of Service		
Teamsters #214	50 55 60	with 30 or with 25 or with 10	2.50%	2.00% of original retirement income for 18 years
MAPE –hired after 6/30/16	60 Any	with 10 or with 30	1.50%	2.50% of original retirement income for 14 years
-hired before 7/1/16	50 55	with 25 or with 10	2.00%	
PPFDA	50 60	with 25 or with 10	2.25%	2.00% of original retirement income for 18 years
SAEA	50 60	with 25 or with 10	3.00%/2.50%/1.00%	2.00% of original retirement income for 18 years
AFSCME #2002/PPMA	50 60	with 25 or with 10	2.50%	2.00% of original retirement income for 18 years
Non-Union	50 55 60	with 25 or with 20 or with 10	2.50%	2.00% of original retirement income for 18 years
PMEA			2.00%	2.00% of original retirement income for 14 years
Hospital	55 60	with 25 or with 10	2.00%	Not eligible

+ *Varies by retirement date.*

^ *Varies by retirement date and /or hire or other effective date. For SAEA the 3.0% multiplier applies to the first 20 years of service, 2.5% for the next 5 years and 1% thereafter.*

Summary of Benefit Provisions
as of December 31, 2019

Eligibility	Amount
DEFERRED RETIREMENT	
10 or more years of service, benefit begins at age 60 (age 55 for MAPE if hired before 7/1/16); or with 25 or more years of service, benefit begins at age 55 (age 50 for MAPE if hired before 7/1/16).	Computed as a regular retirement but based upon service and final average earnings at termination date.
DUTY DEATH-IN-SERVICE	
No age or service requirements.	Payable upon expiration of workers compensation to the survivors of a member who died in the line of duty. Same amount that was paid by worker's compensation to widow, dependent widower, children under 18 and dependent parents.
NON-DUTY DEATH-IN-SERVICE	
10 years of service.	Computed as a regular retirement but actuarially reduced in accordance with a 100% joint and survivor election provided the member has an Option II election form on file with the Retirement Office.
DUTY DISABILITY	
No age or service requirements.	Computed as a regular retirement benefit. Upon termination of worker's compensation additional service credit is granted for period in receipt of worker's compensation and benefit is recomputed. Minimum benefit prior to voluntary retirement age is the greater of a) 15% of final average earnings, or b) an amount equal to worker's compensation benefit.
NON-DUTY DISABILITY	
10 or more years of service.	Same as a regular retirement, with a minimum benefit of 15% of final average earnings.
MEMBER CONTRIBUTIONS	
None	

The Retirement System is closed to all new City employees except for new employees of the MAPE employment group.

Reported Financial Information at Market Value
Year Ended December 31, 2019

Revenue and Disbursements

Market Value of Assets Beginning of Year:	$454,185,173
Audit Adjustment	(11,250)
Revenues:	
a. Member contributions	
b. Employer contributions	
c. Net investment income	87,449,398
d. Total	87,449,398
Disbursements:	
a. Pension benefits and refunds	28,114,053
b. Administrative expenses	697,195
c. Total	28,811,248
Market Value of Assets End of Year:	$512,812,073

The net market value yield on plan assets during calendar year 2019 was 19.71%.

Assets and Reserves as of December 31, 2019

Assets:		**Reserve Accounts:**	
a. Cash and Short Term [1]	$ 16,626,946	a. Employee contributions	$ 293,555
b. Interest and Dividends	177,830	b. Reserve for retired benefit payments	236,546,714
c. Fixed Income	121,186,083	c. Reserve for employer contributions	275,971,804
d. Equities	317,910,034		
e. Real Estate	46,358,389		
f. Other	11,310,255		
g. Accounts Payable	(757,464)	Total	$512,812,073
Total	$ 512,812,073		

[1] *Includes receivables / "pre-paid amounts".*

Development of Valuation Assets

	2018	2019
A. Funding Value Beginning of Year	$478,026,270	$478,099,013
B. Market Value End of Year	454,185,173	512,812,073
C. Market Value Beginning of Year	506,436,676	454,185,173
D. Non-Investment Net Cash Flow	(28,199,310)	(28,125,303)
E. Investment Income		
E1. Market Total: B - C - D	(24,052,193)	86,752,203
E2. Assumed Rate	7.00%	7.00%
E3. Amount for Immediate Recognition: 7.00% x (A + D/2)	32,474,863	32,482,545
E4. Amount for Phased-In Recognition: E1-E3	(56,527,056)	54,269,658
F. Phased-In Recognition of Investment Income		
F1. Current Year: E4/5	(11,305,411)	10,853,932
F2. First Prior Year	7,102,601	(11,305,411)
F3. Second Prior Year	0	7,102,601
F4. Third Prior Year	0	0
F5. Fourth Prior Year	0	0
F6. Total Recognized Investment Gain/(Loss)	(4,202,810)	6,651,122
G. Funding Value End of Year: A + D + E3 + F6	**$478,099,013**	**$489,107,377**
H. Difference Between Market & Funding Value	(23,913,840)	23,704,696
I. Recognized Rate of Return	**6.09%**	**8.43%**
J. Market Value Rate of Return	**(4.89)%**	**19.71%**

Note: Item D above includes an audit adjustment of $11,250 in calendar year 2019

Retirees and Beneficiaries as of December 31, 2019
Tabulated by Retirement Type

Age	Age and Service		Death-in-Service Survivor		Disability		Totals	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
Under 20								
20 - 24	1	$ 2,579	1	$ 23,468			2	$ 26,047
25 - 29	2	8,229			1	$ 10,937	3	19,166
30 - 34								
35 - 39	2	8,578	1	45,544			3	54,122
40 - 44	2	15,766	1	12,114	2	18,368	5	46,248
45 - 49	18	295,152			1	6,581	19	301,733
50 - 54	23	484,864			1	27,929	24	512,793
55 - 59	61	1,417,104	4	55,770	2	32,324	67	1,505,198
60 - 64	130	2,930,835	2	29,687	9	203,594	141	3,164,116
65 - 69	201	5,670,789	3	78,600	18	325,644	222	6,075,033
70-74	194	4,193,219	3	49,264	4	102,339	201	4,344,822
75-79	157	2,690,041	5	79,152	10	136,564	172	2,905,757
80-84	94	1,512,543	1	8,916	9	117,830	104	1,639,289
85-89	89	1,504,883	3	24,649	9	71,409	101	1,600,941
90+	40	567,329			1	3,479	41	570,808
Totals	**1,014**	**$21,301,911**	**24**	**$407,164**	**67**	**$1,056,998**	**1,105**	**$22,766,073**

Valuation Division	Number	Total Benefits
General	691	$ 18,877,282
Hospital	414	3,888,791

The annual benefits shown in the schedule above do not include the temporary stipend benefit of $400 per month.

Inactive Members as of December 31, 2019
Tabulated by Attained Age

Inactive members included in the valuation and their estimated annual pension benefits are summarized in the table below. An inactive member is a person who has left covered employment after becoming eligible for a retirement benefit, but has not yet applied for a retirement allowance, and who has not withdrawn his or her accumulated contributions from the Employees' Savings Fund.

Valuation Division	Number of Members	Estimated Benefits
General	93	$834,016
Hospital	20	41,099
Total	113	$875,115

Active Members as of December 31, 2019
by Age and Years of Service

Age	Years of Service on Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	1							1	$ 26,432
25-29	4							4	119,503
30-34	1							1	30,446
35-39	1			1				2	96,191
40-44	1		1		1			3	152,073
45-49			2	1	2			5	421,119
50-54			1		3			4	183,188
55-59	1			2		1		4	195,877
60									
61			1					1	59,809
62		1						1	62,061
70+			1					1	45,066
Totals	**9**	**1**	**6**	**4**	**6**	**1**	**0**	**27**	**$1,391,765**

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

Age: 45.5 years
Service: 11.4 years
Annual Pay: $ 51,547

The chart above includes 10 non-union employees and 17 MAPE employee members of the System.

SECTION D

ACTUARIAL METHODS, ACTUARIAL ASSUMPTIONS AND GLOSSARY

Valuation Methods

The Individual Entry-Age Actuarial Cost Method is a method for determining the normal cost and the allocation of benefit values between service rendered before and after the valuation date. It has the following characteristics:

(i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement; and
(ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

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

Financing Unfunded Actuarial Accrued Liabilities - As of the valuation date, System assets exceed System Actuarial Accrued Liabilities resulting in a funding surplus. This surplus was amortized over an open 30-year period using a level dollar amortization method.

Valuation Assets - The funding value of assets recognizes assumed investment income fully each year. Differences between actual and assumed investment income are phased-in over a closed 5-year period. During periods when investment performance exceeds the assumed rate, funding value of assets will tend to be lower than market value. During periods when investment performance is less than the assumed rate, funding value of assets will tend to be greater than market value. The funding value of assets is unbiased with respect to market value. At any time it may be either greater or less than market value.

Actuarial Assumptions Used for the Valuation

Investment Return: 7.00% per year net of administrative and investment expenses. The assumed real rate of investment return is in excess of either wage or price inflation. Considering a wage inflation assumption of 2.5% and a price inflation assumption of 2.25% the 7% nominal return translates into a real rate of investment return of 4.50% over wage inflation and 4.75% over price inflation. This assumption was first used for the December 31, 2016 valuation.

Pay Projections: These assumptions are used to project current pays to those upon which benefits will be based. The base economic assumption was first used for the December 31, 2016 valuation.

Sample Ages	Annual Rate of Pay Increase for Sample Ages		
	Base (Economic)	Merit & Longevity	Total
20	2.50%	4.90%	7.40%
25	2.50	3.70	6.20
30	2.50	2.90	5.40
35	2.50	2.10	4.60
40	2.50	1.60	4.10
45	2.50	1.40	3.90
50	2.50	1.30	3.80
55	2.50	1.10	3.60
60	2.50	1.10	3.60

Other Liability Adjustments: Retirement liabilities were loaded by 8.25% for non-union members (7.0% for MAPE members) to account for the member's right to use lump sum payments for unused sick leave at retirement.

Mortality: The RP-2014 Healthy Annuitant Mortality Table (unadjusted) projected to 2021 using a static projection based on the 2-dimensional MP-2014 improvement scales. This assumption was first used for the December 31, 2016 valuation. Sample values follow:

Sample Ages	Future Life Expectancy (Years)	
	Men	Women
50	33.50	36.20
55	29.15	31.69
60	24.96	27.26
65	20.91	22.97
70	17.05	18.88
75	13.44	15.06
80	10.17	11.58

This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement. The membership size in this group is not sufficiently large to determine if there is a margin for mortality improvements. However, based upon our experience with a broad cross section of public sector plans similar in nature to this plan, it is our opinion that there is a provision for future mortality improvement in the current mortality assumption.

Rates of Separation from Active Membership: The rates do not apply to members eligible to retire and do not include separation on account of death or disability. This assumption measures the probabilities of members remaining in City employment.

Sample Ages	Completed Years of Service	% of Active Members Separating within Next Year All Members
ALL	0	20.00%
	1	18.00%
	2	15.00%
	3	12.00%
	4	10.00%
25	5 & Over	7.00%
30		6.00%
35		4.75%
40		3.50%
45		2.40%
50		1.50%
55		1.00%
60		1.00%
65		1.00%

Rates of Disability: These rates represent the probabilities of active members becoming disabled.

Sample Ages	Percent Becoming Disabled within Next Year All Members
20	0.42%
25	0.42
30	0.45
35	0.51
40	0.67
45	0.92
50	1.36
55	2.20

All disabilities were assumed to be non-duty disabilities.

Rates of Retirement: These rates are used to measure the probabilities of an eligible member retiring during the next year.

Percent of Active Members Retiring within One Year	
All Members	
Ages	**%**
50	35%
51	30
52	25
53	25
54	25
55	25
56	25
57	50
58	50
59	50
60	20
61	25
62	30
63	30
64	25
65	50
66	100

Eligibility for retirement benefits is shown in Section C of this report.

Glossary

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." Under the actuarial cost method used the "AAL" differs somewhat from the value of future payments based on benefits earned as of the valuation date.

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

Actuarial Assumptions - Estimates of future plan experience with respect to rates of mortality, disability, retirement, investment income and salary increases. Decrement assumptions (rates of mortality, separation 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 appropriate 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 normal costs to be paid in the future and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent - Benefits whose actuarial present values are equal.

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 contributions of interest and principal, as opposed to a lump sum payment.

Experience Gain (Loss) - A measure of the difference between actual experience and experience anticipated by a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Normal Cost - The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." An amortization payment toward the unfunded actuarial accrued liability is in addition to the normal cost.

Glossary

Plan Termination Liability - The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for the future service and salary. The termination liability will generally be less than the liabilities computed on a "going-concern" basis and is not normally determined in a routine actuarial valuation.

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

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

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

SECTION E

OTHER FINANCIAL DISCLOSURES

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Entry Age Accrued Liability (b)	Unfunded AAL (UAAL) (b) – (a)	Funded Percent (a) / (b)	Valuation Payroll (c)	UAAL as a % of Valuation Payroll [(b) – (a)] / (c)
12/31/1998	$315,420,281	$194,984,577	$ (120,435,704)	161.8 %	$18,362,384	- -
12/31/1999@	350,846,897	209,172,136	(141,674,761)	167.7	18,747,510	- -
12/31/2000@	378,063,942	217,942,909	(160,121,033)	173.5	18,728,688	- -
12/31/2001@#	395,743,819	227,901,435	(167,842,384)	173.6	19,887,803	- -
12/31/2002@	393,214,033	235,422,367	(157,791,666)	167.0	20,039,136	- -
12/31/2003	394,367,065	247,396,857	(146,970,208)	159.4	20,807,612	- -
12/31/2004	394,807,254	258,365,787	(136,441,467)	152.8	21,320,477	- -
12/31/2005	391,409,757	260,103,260	(131,306,497)	150.5	16,751,815	- -
12/31/2006	409,983,490	266,457,429	(143,526,061)	153.9	14,996,753	- -
12/31/2007	433,028,186	257,940,349	(175,087,837)	167.9	N/A	- -
12/31/2008	416,678,512	261,497,756	(155,180,756)	159.3	N/A	- -
12/31/2009	405,193,572	255,720,207	(149,473,365)	158.5	N/A	- -
12/31/2010	399,573,669	253,866,554	(145,707,115)	157.4	N/A	- -
12/31/2011	383,349,729	249,739,988	(133,609,741)	153.5	N/A	- -
12/31/2012	369,621,671	247,968,743	(121,652,928)	149.1	N/A	- -
12/31/2013	396,857,874	279,931,726	(116,926,148)	141.8	N/A	- -
12/31/2014	413,418,482	270,139,151	(143,279,331)	153.0	N/A	- -
12/31/2015#	417,151,476	252,615,769	(164,535,707)	165.1	1,528,731	- -
12/31/2016#@	466,143,339	264,736,702	(201,406,637)	176.1	1,540,472	- -
12/31/2017@	478,026,270	267,204,399	(210,821,871)	178.9	1,450,352	- -
12/31/2018	478,099,013	262,283,618	(215,815,395)	182.3	1,427,628	- -
12/31/2019	489,107,377	256,329,118	(232,778,259)	190.8	1,391,765	- -

Results for the 2007-2015 valuations were prepared by previous actuarial firms and are shown here for comparison.

 # Assumption/method change.

@ Plan provision changes.

Schedule of Employer Contributions

Valuation Date December 31,	Fiscal Year Beginning July 1,	Actuarially Computed Employer Contribution[1]
1998		$598,231
1999 [2]		133,572
2000 [2]		158,921
2001 [2,3]		140,226
2002 [2]		49,456
2003	2005	49,163
2004	2006	0
2005	2007	0
2006	2008	0
2007	2009	0
2008	2010	0
2009 [2]	2011	0
2010	2012	0
2011	2013	0
2012	2014	0
2013	2015	0
2014	2016	0
2015 [3]	2017	0
2016 [3]	2018	0
2017 [2]	2019	0
2018	2020	0
2019	2021	0

[1] *For years prior to 2016, information was provided by the Retirement System. Contribution amounts for valuation years 2007-2015 were prepared by prior actuaries.*

[2] *Plan provision change*

[3] *Assumption/method change*

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June 15, 2020

Ms. Deborah Munson
Executive Director
City of Pontiac General Employees'
Retirement System
2201 Auburn Road, Suite B
Auburn Hills, Michigan 48326

Dear Deborah:

Enclosed are 25 copies of the report of the December 31, 2019 annual actuarial valuation of the pension liabilities covering the City of Pontiac General Employees' Retirement System.

Sincerely,

Louise Gates

Louise M. Gates, ASA, FCA, MAAA

Enclosures

One Towne Square | Suite 800 | Southfield, Michigan 48076-3723