



The Initial Valuation For

City of Clayton

as of January 31, 2019



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August 26, 2019

City of Clayton
Clayton, Missouri

Ladies and Gentlemen:

Submitted in this report are the results of the actuarial valuation prepared to determine the employer contribution rates required to support, for your employees, the benefits provided by the Missouri Local Government Employees Retirement System (LAGERS). This report contains the information needed to comply with Missouri State disclosure requirements regarding the adoption of LAGERS benefits by a political subdivision (Sections 105.660 - 106.685 RSMo). This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

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

The contribution requirement for benefits likely to accrue as a result of the future service of your employees is described on pages 4 thru 11 as the current cost plus the disability cost. This contribution rate, expressed as a percent of active employee payroll, will depend on the benefit program adopted.

The contribution requirement to pay for benefits likely to result from service rendered by your employees before you join LAGERS is described on pages 4 thru 11 as the prior service cost. The value established for prior service is called the unfunded actuarial accrued liability (these amounts are further described in Appendix I). The prior service cost is the rate of contribution designed to pay for the unfunded actuarial accrued liability over a period of not more than 30 years.

Section 70.730 of the Revised Statutes of Missouri requires participating employers to contribute the current cost, disability cost, and prior service cost (the total employer cost as shown on pages 4 thru 11). These contributions are mandatory after official action has been taken to join the System.

The total annual dollar costs shown on pages 12 and 13 represent the dollar cost of each benefit program for a one year period based on the payroll reported for this actuarial valuation. In budgeting amounts for LAGERS contributions you should consider any changes in payroll which have been made since data was submitted for the valuation and any changes anticipated to be made before the end of the period for which you are preparing the budget.

The actuarial assumptions and methods used to determine the stated costs are described in Appendix II of this report. In our opinion, they do produce results which, in the aggregate, are reasonable. Additional miscellaneous and technical assumptions as well as disclosures required by the actuarial standards of practice may be found in the LAGERS Compiled Annual Actuarial Valuation report as of February 28, 2019.

The computed contributions required for LAGERS participation will permit the System to continue to operate in accordance with the actuarial principles of level cost financing and the State law which governs LAGERS. This valuation assumed the ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our expertise and not performed. Summary provisions of the law as well as benefit illustrations can be found in Appendices III and IV.

Projections needed to comply with Missouri State disclosure requirements (Section 105.665 of the RSMo) regarding the adoption of LAGERS benefits by a political subdivision are available upon request from LAGERS.

Please note that this entire report must be available as public information for at least 45 calendar days prior to the date final official action is taken by your governing body to join the System. You may wish to make notice of this report in the official minutes of the next meeting of your governing body. This action would not be binding on your subdivision, yet would establish the beginning date of the 45 day waiting period.

In accordance with LAGERS Board policy, the employer contribution rates established by this valuation report are valid for purposes of joining the System for a two year period from the date of this valuation which was January 31, 2019. The valuation was based on data furnished from your records concerning individual employees (see Appendix V).

This report includes risk commentary in Appendix VI, but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

If you have any questions concerning this report or LAGERS in general, please contact the LAGERS office in Jefferson City.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the political subdivision as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the actuarial standards of practice issued by the Actuarial Standards Board, and with applicable statutes.

Mita D. Drazilov is a member of the American Academy of Actuaries and meets the Qualification Standards of the Academy of Actuaries to render the actuarial opinions contained herein.

The signing actuary is independent of the plan sponsor.

Respectfully submitted,



Mita D. Drazilov, ASA, FCA, MAAA



Alternate Plan Provisions Affecting Employer Contribution Rates

The law governing LAGERS provides for either a contributory plan or a non-contributory plan, with benefits based on either a 5 year or 3 year Final Average Salary (FAS).

Contributory Plan. Under the contributory plan, each covered member contributes 4% of compensation to LAGERS. If an employee terminates before being eligible for an immediate benefit, the member's contributions, plus any interest credited to the member's individual account, are refunded upon request.

Non-Contributory Plan. Under the non-contributory plan, there is no individual employee contribution to the plan, no individual account maintained for each employee, and no refund paid to employees who terminate before being eligible for a benefit.

The law further provides for nine different benefit programs (benefit formula factors) and allows an employer to elect "rule of 80" eligibility for benefits. Under the rule of 80, employees are eligible for unreduced benefits at the earlier of (i) attainment of their minimum service retirement age or (ii) such time as their years of age plus years of LAGERS credited service equals 80.

In total this allows for 72 different combinations of benefit plans, giving employers considerable latitude in designing the retirement program which they feel best suits their particular situation.

The applicable combinations of these items may be changed from time to time, however, there are limitations on the frequency of changes. A more detailed description of plan provisions may be found in Appendix III of this report.

City of Clayton

Employer Contribution Rates (Contributory Plan - 5 Year FAS) (4% member contributions are additional)

Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-6	General	11.80	8.40	0.50	20.70
	Police	18.20	8.80	0.80	27.80
	Fire	15.60	11.30	1.00	27.90

* Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

City of Clayton

Employer Contribution Rates (Contributory Plan - 3 Year FAS) (4% member contributions are additional)

Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-6	General	12.20	8.80	0.50	21.50
	Police	18.80	9.20	0.80	28.80
	Fire	16.10	11.80	1.00	28.90

* Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

City of Clayton

Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS) (No member contributions)

Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-6	General	12.10	12.00	0.50	24.60
	Police	18.70	12.20	0.80	31.70
	Fire	15.70	15.10	1.00	31.80

* Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

City of Clayton

Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS) (No member contributions)

Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-6	General	12.50	12.40	0.50	25.40
	Police	19.30	12.60	0.80	32.70
	Fire	16.20	15.60	1.00	32.80

* Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

City of Clayton

Employer Contribution Rates (Contributory Plan - 5 Year FAS) (4% member contributions are additional)

Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-6	General	12.90	9.30	0.50	22.70
	Police	19.00	9.30	0.80	29.10
	Fire	16.70	12.10	1.00	29.80

- # The cost for the Rule of 80 provision is very dependent upon the age at hire of the employees. If hiring practices in the future differ from those of the past, the cost for this provision could increase or decrease. The cost shown is based on the age and service characteristics of the present group.
- * Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

City of Clayton

Employer Contribution Rates (Contributory Plan - 3 Year FAS) (4% member contributions are additional)

Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-6	General	13.30	9.70	0.50	23.50
	Police	19.70	9.70	0.80	30.20
	Fire	17.30	12.70	1.00	31.00

- # The cost for the Rule of 80 provision is very dependent upon the age at hire of the employees. If hiring practices in the future differ from those of the past, the cost for this provision could increase or decrease. The cost shown is based on the age and service characteristics of the present group.
- * Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

City of Clayton

Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS) (No member contributions)

Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-6	General	13.20	12.90	0.50	26.60
	Police	19.50	12.70	0.80	33.00
	Fire	16.80	15.90	1.00	33.70

The cost for the Rule of 80 provision is very dependent upon the age at hire of the employees. If hiring practices in the future differ from those of the past, the cost for this provision could increase or decrease. The cost shown is based on the age and service characteristics of the present group.

* Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

City of Clayton

Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS) (No member contributions)

Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-6	General	13.60	13.30	0.50	27.40
	Police	20.20	13.10	0.80	34.10
	Fire	17.40	16.50	1.00	34.90

The cost for the Rule of 80 provision is very dependent upon the age at hire of the employees. If hiring practices in the future differ from those of the past, the cost for this provision could increase or decrease. The cost shown is based on the age and service characteristics of the present group.

* Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

City of Clayton

Employer Contribution Dollars Regular Retirement Eligibility

Employer contributions are payable monthly, and each month's actual dollar contribution will be the contribution percent multiplied by the payroll during the month. If payroll during your first year of LAGERS participation equals the annual payroll reported for this valuation, the approximate employer dollar contribution for the year would be as follows:

Contributory Plan

5 Year FAS			
Benefit Program	General	Police	Fire
L-6	1,249,959	1,104,960	904,834

3 Year FAS			
Benefit Program	General	Police	Fire
L-6	1,298,267	1,144,706	937,265

Non-Contributory Plan

5 Year FAS			
Benefit Program	General	Police	Fire
L-6	1,485,459	1,259,972	1,031,316

3 Year FAS			
Benefit Program	General	Police	Fire
L-6	1,533,767	1,299,719	1,063,748

PLEASE NOTE THAT THE ABOVE INFORMATION IS BASED ON THE PERSONNEL AND PAYROLL DATA SUBMITTED FOR THE ACTUARIAL VALUATION. IN BUDGETING AMOUNTS FOR LAGERS CONTRIBUTIONS YOU SHOULD CONSIDER ANY CHANGES WHICH HAVE BEEN MADE SINCE DATA WAS SUBMITTED FOR THE VALUATION AND ANY CHANGES ANTICIPATED TO BE MADE BEFORE THE END OF THE PERIOD FOR WHICH YOU ARE PREPARING THE BUDGET.

City of Clayton

Employer Contribution Dollars Rule of 80 Retirement Eligibility

Employer contributions are payable monthly, and each month's actual dollar contribution will be the contribution percent multiplied by the payroll during the month. If payroll during your first year of LAGERS participation equals the annual payroll reported for this valuation, the approximate employer dollar contribution for the year would be as follows:

Contributory Plan

5 Year FAS			
Benefit Program	General	Police	Fire
L-6	1,370,728	1,156,630	966,454

3 Year FAS			
Benefit Program	General	Police	Fire
L-6	1,419,036	1,200,352	1,005,371

Non-Contributory Plan

5 Year FAS			
Benefit Program	General	Police	Fire
L-6	1,606,228	1,311,643	1,092,936

3 Year FAS			
Benefit Program	General	Police	Fire
L-6	1,654,536	1,355,364	1,131,853

PLEASE NOTE THAT THE ABOVE INFORMATION IS BASED ON THE PERSONNEL AND PAYROLL DATA SUBMITTED FOR THE ACTUARIAL VALUATION. IN BUDGETING AMOUNTS FOR LAGERS CONTRIBUTIONS YOU SHOULD CONSIDER ANY CHANGES WHICH HAVE BEEN MADE SINCE DATA WAS SUBMITTED FOR THE VALUATION AND ANY CHANGES ANTICIPATED TO BE MADE BEFORE THE END OF THE PERIOD FOR WHICH YOU ARE PREPARING THE BUDGET.

City of Clayton

Employees and Payroll Included in the Valuation

	General	Police	Fire
Number of Employees	93	48	35
Annual Payroll	\$ 6,038,451	\$ 3,974,675	\$ 3,243,133

Information regarding the age and service characteristics of the employees is contained in Appendix V.

APPENDIX I

UNFUNDED ACTUARIAL ACCRUED LIABILITY

Unfunded Actuarial Accrued Liability (UAAL)

If the decision is made to join LAGERS the governing body also must decide how much credit to grant employees for their service before the membership date. The options are to cover 25%, 50%, 75% or 100% of prior service. The granting of prior service credit results in the establishment of an actuarial accrued liability. Because your political subdivision will not have established an asset balance with the System as of the membership date, the value established for prior service is an unfunded actuarial accrued liability.

The policy of the LAGERS Board of Trustees provides that unfunded liabilities are to be paid for by level percent of payroll contributions over a period of 30 years. The contribution rates shown on pages 4 through 11 as the "Prior Service Cost" are designed to pay for the applicable unfunded actuarial accrued liability. This procedure will allow your political subdivision to retire the unfunded actuarial accrued liability in an orderly fashion over a period of years without the need for an immediate large payment upon joining the System.

Should the governing body elect to grant credit for 100% of the employees' prior service, the unfunded actuarial accrued liability as of the date of this valuation would be as follows:

City of Clayton

Regular Retirement Eligibility

Benefit Group	Employee Group	Contributory		Non-Contributory	
		UAAL (5 Year FAS)	UAAL (3 Year FAS)	UAAL (5 Year FAS)	UAAL (3 Year FAS)
L-6	General	12,574,737	13,013,151	12,907,803	13,348,611
	Police	12,743,457	13,198,060	13,083,574	13,544,496
	Fire	8,888,150	9,197,078	8,959,991	9,268,987

City of Clayton

Unfunded Actuarial Accrued Liability (UAAL)

Rule of 80 Retirement Eligibility

Benefit Group	Employee Group	Contributory		Non-Contributory	
		UAAL (5 Year FAS)	UAAL (3 Year FAS)	UAAL (5 Year FAS)	UAAL (3 Year FAS)
L-6	General	13,704,473	14,188,226	14,018,535	14,505,167
	Police	13,302,066	13,780,513	13,646,536	14,132,170
	Fire	9,519,757	9,858,319	9,596,384	9,935,462

APPENDIX II

SUMMARY OF FINANCIAL ASSUMPTIONS

Summary of Assumptions Used in Actuarial Valuations

Assumptions Adopted by Board of Trustees After Consulting With Actuary

1. The investment return rate used in making the valuations was 7.25% per year, net of investment expenses, compounded annually. This rate of return is not the assumed real rate of return. The real rate of return is the rate of investment return in excess of the inflation rate. The price inflation rate used in making the valuations was 2.50% and the wage inflation rate used in making the valuations was 3.25%. The investment return rate translates to an assumed real rate of return over price inflation of 4.75% and over wage inflation of 4.00%. Adopted 2011 and 2016.
2. The healthy retiree mortality tables, for post-retirement mortality, used in evaluating allowances to be paid were the RP-2014 Healthy Annuitant mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The disabled retiree mortality tables, for post-retirement mortality, used in evaluating allowances to be paid were the RP-2014 disabled mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The pre-retirement mortality tables used were the RP-2014 employees mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. For both the post-retirement and pre-retirement tables, the base year for males was then established to be 2017. Mortality rates for a particular calendar year are determined by applying the MP-2015 mortality improvement scale to the above described tables. Adopted 2016.
3. The probabilities of withdrawal and disability from service, together with individual pay increase assumptions, are shown in Schedule 1. Adopted 2016.
4. The probabilities of retirement with an age and service allowance are shown in Schedule 2. Adopted 2016.
5. Post-retirement cost of living allowances are assumed to be 2.50% per year. Adopted 2016.
6. Total active member payroll is assumed to increase a year, which is the portion of the individual pay increase assumptions attributable to wage inflation. In effect, this assumes no change in the number of active members per employer. Adopted 2016.
7. An individual entry-age actuarial cost method of valuation was used in determining age and service allowance actuarial liabilities and normal cost. Adopted 1986.
8. The data about persons now covered was furnished by the political subdivision. Although examined for general reasonableness, the data was not audited by us.

Schedule 1.

Separations From Active Employment (Not Including Death-In-Service) Before Age & Service Retirement and Individual Pay Increase Assumptions

		Percent of Active Members Separating Within Next Year							
Sample Ages	Years of Service	General Members				Police		Fire	
		Men		Women		Disability	Withdrawal	Disability	Withdrawal
All	0	19.00%		22.00%		18.00%		10.00%	
	1	17.00		20.00		17.00		8.00	
	2	15.00		17.00		16.00		7.00	
	3	13.00		14.00		13.00		6.00	
	4	11.00		13.00		12.00		6.00	
25	5 & Over	0.09%	7.30	0.02%	10.80	0.10%	9.80	0.06%	5.00
30		0.12	6.50	0.03	8.90	0.11	7.80	0.10	4.00
35		0.15	5.00	0.06	7.40	0.16	6.10	0.23	2.80
40		0.21	3.70	0.10	5.70	0.22	4.40	0.35	2.20
45		0.30	3.00	0.16	4.20	0.34	3.20	0.56	1.80
50		0.44	2.40	0.24	3.30	0.53	1.80	0.85	1.00
55		0.68	1.80	0.34	2.50	0.88	1.00	1.31	0.50
60		1.02	1.00	0.48	1.20		0.00		0.00
65			0.00		0.00		0.00		0.00

Sample Ages	Percent Increase in Individual's Pay During Next Year	
	General & Police	Fire
25	6.55%	7.15%
30	5.75	6.05
35	5.25	5.15
40	4.75	4.45
45	4.25	4.15
50	3.85	3.85
55	3.65	3.65
60	3.55	3.25
65	3.25	3.25

Schedule 2.

Percent of Eligible Active Members Retiring Within Next Year Without Rule of 80 Eligibility

Early Retirement

Retirement Ages	General Members		Retirement Ages	Police	Fire
	Men	Women			
55	3.00%	3.00%	50	2.50%	2.50%
56	3.00%	3.00%	51	2.50%	2.50%
57	3.00%	3.00%	52	2.50%	2.50%
58	3.00%	3.00%	53	2.50%	2.50%
59	3.00%	3.00%	54	2.50%	2.50%

Normal Retirement

Retirement Ages	General Members		Retirement Ages	Police	Fire
	Men	Women			
60	10%	10%	55	10%	13%
61	10	10	56	10	13
62	25	15	57	10	13
63	20	15	58	10	13
64	20	15	59	10	13
65	25	25	60	10	15
66	25	25	61	10	15
67	20	25	62	25	20
68	20	25	63	20	20
69	20	20	64	20	20
70	100	100	65	100	100

Schedule 2. (Continued)

Percent of Eligible Active Members Retiring Within Next Year With Rule of 80 Eligibility

Retirement Ages	General Members		Police	Fire
	Men	Women		
50	15%	15%	25%	25%
51	15	15	25	20
52	15	15	15	20
53	15	15	15	20
54	15	15	15	20
55	15	15	15	20
56	15	15	15	20
57	15	15	15	25
58	15	15	15	25
59	15	15	15	25
60	15	15	15	35
61	15	15	25	35
62	30	15	30	45
63	30	15	30	45
64	30	20	30	45
65	30	25	100	100
66	30	25		
67	30	25		
68	30	25		
69	30	25		
70	100	100		

APPENDIX III

SUMMARY OF LAGERS PROVISIONS

Missouri Local Government Employees Retirement System

Brief Summary of LAGERS

Benefits and Conditions Evaluated and/or Considered as of February 28, 2019

(Section references are to RSMo)

Voluntary Retirement. Sections 70.645 & 70.600. A member may retire with an age & service allowance after both (i) completing 5 years of credited service, and (ii) attaining the minimum service retirement age.

The minimum service retirement age is age 60 for a general employee and age 55 for a police or fire employee. Optionally, employers may also elect to provide for unreduced benefits for employees whose combination of years of age and years of service equals 80 or more.

Final Average Salary. Section 70.600. The average of a member's monthly compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) of credited service producing the highest monthly average, which period is contained within the 120 consecutive months of credited service immediately preceding retirement.

Age & Service Allowance. Section 70.655. The allowance, payable monthly for life, equals a specified percent of a member's final average salary multiplied by the number of years of credited service. Each employer elects the percent applicable to its members, from the following programs:

L-1 Benefit Program:	1.00% for life
L-3 Benefit Program:	1.25% for life
L-7 Benefit Program:	1.50% for life
L-12 Benefit Program:	1.75% for life
L-6 Benefit Program:	2.00% for life
LT-4(65) Benefit Program:	1.00% for life, plus 1.00% to age 65
LT-5(65) Benefit Program:	1.25% for life, plus 0.75% to age 65
LT-8(65) Benefit Program:	1.50% for life, plus 0.50% to age 65
LT-14(65) Benefit Program:	1.75% for life, plus 0.25% to age 65

The only LT benefit programs available for adoption after August 1, 1994 are the LT(65) programs.

Benefit programs L-9 and LT-10(65) are unavailable for adoption after August 1, 2005.

Benefit program L-11, available only to groups not covered by social security, provides for 2.5% for life.

Subsequent to joining the System the governing body can elect to change benefit programs for the employees, but not more often than once every 2 years.

Early Allowance. Section 70.670. A member may retire with an early allowance after both (i) completing 5 years of credited service, and (ii) attaining age 55 if a general employee or age 50 if a police or fire employee.

The early allowance amount, payable monthly for life, is computed in the same manner as an age & service allowance, based upon the service and earnings record to time of early retirement, but reduced to reflect the fact that the age when payments begin is younger than the minimum service retirement age. The amount of the reduction is 1/2 of 1% (.005) for each month the age at retirement is younger than the minimum service retirement age.

Deferred Allowance. Section 70.675. If a member leaves LAGERS-covered employment (i) before attaining the early retirement age, and (ii) after completing 5 years of credited service, the member becomes eligible for a deferred allowance; provided the former member lives to the minimum service retirement age and does not withdraw the accumulated contributions.

The deferred allowance amount, payable monthly for life from the minimum service retirement age, is computed in the same manner as an age & service allowance, based upon the service and earnings record to time of leaving LAGERS coverage.

Deferred allowances are also payable any time after reaching the early retirement age, with the reduction for early retirement noted on the previous page.

Non-Duty Disability Allowance. Section 70.680. A member with 5 or more years of credited service who becomes totally and permanently disabled from other than duty-connected causes becomes eligible to receive a non-duty disability allowance computed in the same manner as an age & service allowance, based upon the service & earnings record to time of disability.

Duty Disability Allowance. Section 70.680. A member regardless of credited service who becomes totally and permanently disabled from duty-connected causes becomes eligible to receive a duty disability allowance computed in the same manner as an age & service allowance, based upon the earnings record to time of disability but based upon the years of credited service the member would have completed had the member continued in LAGERS-covered employment to age 60.

Death-in-Service. Section 70.661. Upon the death of a member who had completed 5 years of credited service, the eligible surviving dependents receive the following benefits:

- (a) The surviving spouse receives an allowance equal to the Option A allowance (joint and 75% survivor benefit) computed based upon the deceased members' service & earnings record to time of death.
- (b) When no spouse benefit is payable, the dependent children under age 18 (age 23 if they are full time students) each receive an equal share of 60% of an age & service allowance computed based upon the deceased member's service & earnings record to time of death.
- (c) If the death is determined to be duty related, the 5 year service requirement is waived and the benefit is based on years of credited service the member would have completed had the member continued in LAGERS-covered employment to age 60.

Benefit Changes After Retirement. Section 70.655. For retirements effective after September 28, 1975, there is an annual redetermination of monthly benefit amount, beginning the October first following 12 months of retirement. As of each October first the amount of each eligible benefit is redetermined as follows:

- (a) Subject to the maximum in (b), the redetermined amount is the amount other-wise payable multiplied by: 100% plus up to 4%, as determined by the LAGERS Board of Trustees, for each full year of retirement.
- (b) The redetermined amount may not exceed the amount otherwise payable multiplied by the ratio of the Consumer Price Index for the immediately preceding month of June to the Consumer Price Index for the month of June immediately preceding retirement.

Member Contributions. Sections 70.690 & 70.705. Each member contributes 4% of compensation beginning after completion of sufficient employment for 6 months of credited service.

If a member leaves LAGERS-covered employment before an allowance is payable, the accumulated contributions are refunded to the member. If the member dies, his accumulated contributions are refunded to a designated beneficiary.

The law governing LAGERS also has a provision for the adoption of a non-contributory plan in which the full cost of LAGERS participation is paid by the employer. Adoption of the non-contributory provisions may be done at the time of membership or a later date; however, a change from contributory to non-contributory or vice-versa may not be made more frequently than every 2 years. Under the non-contributory provisions there is no individual account maintained for each employee and no refund of contributions if an employee terminates before being eligible for a benefit.

Employer Contributions. Section 70.730. Each employer contributes the remainder amounts necessary to finance the employees' participation in LAGERS. Contributions to LAGERS are determined based upon level-percent-of-payroll principles, so that contribution rates do not have to increase over decades of time.

APPENDIX IV

BENEFIT ILLUSTRATIONS

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(L-1 Benefit Program is Years of Credited Service
times: 1.00% of FAS ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 525	\$ 930	\$1,455	97%
2,000	700	1,076	1,776	89%
2,500	875	1,223	2,098	84%
3,000	1,050	1,370	2,420	81%
3,500	1,225	1,516	2,741	78%
4,000	1,400	1,662	3,062	77%
25 Years of Service:				
\$1,500	\$ 375	\$ 930	\$1,305	87%
2,000	500	1,076	1,576	79%
2,500	625	1,223	1,848	74%
3,000	750	1,370	2,120	71%
3,500	875	1,516	2,391	68%
4,000	1,000	1,662	2,662	67%
15 Years of Service:				
\$1,500	\$225	\$ 930	\$1,155	77%
2,000	300	1,076	1,376	69%
2,500	375	1,223	1,598	64%
3,000	450	1,370	1,820	61%
3,500	525	1,516	2,041	58%
4,000	600	1,662	2,262	57%

¹ "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

³ Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(L-3 Benefit Program is Years of Credited Service
times: 1.25% of FAS ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 656	\$ 930	\$1,586	106%
2,000	875	1,076	1,951	98%
2,500	1,094	1,223	2,317	93%
3,000	1,313	1,370	2,683	89%
3,500	1,531	1,516	3,047	87%
4,000	1,750	1,662	3,412	85%
25 Years of Service:				
\$1,500	\$ 469	\$ 930	\$1,399	93%
2,000	625	1,076	1,701	85%
2,500	781	1,223	2,004	80%
3,000	938	1,370	2,308	77%
3,500	1,094	1,516	2,610	75%
4,000	1,250	1,662	2,912	73%
15 Years of Service:				
\$1,500	\$281	\$ 930	\$1,211	81%
2,000	375	1,076	1,451	73%
2,500	469	1,223	1,692	68%
3,000	563	1,370	1,933	64%
3,500	656	1,516	2,172	62%
4,000	750	1,662	2,412	60%

¹ "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

³ Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(L-7 Benefit Program is Years of Credited Service
times: 1.50% of FAS ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 788	\$ 930	\$1,718	115%
2,000	1,050	1,076	2,126	106%
2,500	1,313	1,223	2,536	101%
3,000	1,575	1,370	2,945	98%
3,500	1,838	1,516	3,354	96%
4,000	2,100	1,662	3,762	94%
25 Years of Service:				
\$1,500	\$ 563	\$ 930	\$1,493	100%
2,000	750	1,076	1,826	91%
2,500	938	1,223	2,161	86%
3,000	1,125	1,370	2,495	83%
3,500	1,313	1,516	2,829	81%
4,000	1,500	1,662	3,162	79%
15 Years of Service:				
\$1,500	\$338	\$ 930	\$1,268	85%
2,000	450	1,076	1,526	76%
2,500	563	1,223	1,786	71%
3,000	675	1,370	2,045	68%
3,500	788	1,516	2,304	66%
4,000	900	1,662	2,562	64%

¹ "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

³ Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(L-12 Benefit Program is Years of Credited Service
times: 1.75% of FAS ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 919	\$ 930	\$1,849	123%
2,000	1,225	1,076	2,301	115%
2,500	1,531	1,223	2,754	110%
3,000	1,838	1,370	3,208	107%
3,500	2,144	1,516	3,660	105%
4,000	2,450	1,662	4,112	103%
25 Years of Service:				
\$1,500	\$ 656	\$ 930	\$1,586	106%
2,000	875	1,076	1,951	98%
2,500	1,094	1,223	2,317	93%
3,000	1,313	1,370	2,683	89%
3,500	1,531	1,516	3,047	87%
4,000	1,750	1,662	3,412	85%
15 Years of Service:				
\$1,500	\$ 394	\$ 930	\$1,324	88%
2,000	525	1,076	1,601	80%
2,500	656	1,223	1,879	75%
3,000	788	1,370	2,158	72%
3,500	919	1,516	2,435	70%
4,000	1,050	1,662	2,712	68%

¹ "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

³ Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(L-6 Benefit Program is Years of Credited Service
times: 2.00% of FAS ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$1,050	\$ 930	\$1,980	132%
2,000	1,400	1,076	2,476	124%
2,500	1,750	1,223	2,973	119%
3,000	2,100	1,370	3,470	116%
3,500	2,450	1,516	3,966	113%
4,000	2,800	1,662	4,462	112%
25 Years of Service:				
\$1,500	\$ 750	\$ 930	\$1,680	112%
2,000	1,000	1,076	2,076	104%
2,500	1,250	1,223	2,473	99%
3,000	1,500	1,370	2,870	96%
3,500	1,750	1,516	3,266	93%
4,000	2,000	1,662	3,662	92%
15 Years of Service:				
\$1,500	\$ 450	\$ 930	\$1,380	92%
2,000	600	1,076	1,676	84%
2,500	750	1,223	1,973	79%
3,000	900	1,370	2,270	76%
3,500	1,050	1,516	2,566	73%
4,000	1,200	1,662	2,862	72%

¹ "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

³ Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(LT-4(65) Benefit Program is Years of Credited Service
times: 2.00% of FAS ¹ to age 65)
1.00% of FAS ¹ at age 65)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 525	\$ 930	\$1,050	\$1,455	70%	97%
2,000	1,400	700	1,076	1,400	1,776	70%	89%
2,500	1,750	875	1,223	1,750	2,098	70%	84%
3,000	2,100	1,050	1,370	2,100	2,420	70%	81%
3,500	2,450	1,225	1,516	2,450	2,741	70%	78%
4,000	2,800	1,400	1,662	2,800	3,062	70%	77%
25 Years of Service:							
\$1,500	\$ 750	\$ 375	\$ 930	\$ 750	\$1,305	50%	87%
2,000	1,000	500	1,076	1,000	1,576	50%	79%
2,500	1,250	625	1,223	1,250	1,848	50%	74%
3,000	1,500	750	1,370	1,500	2,120	50%	71%
3,500	1,750	875	1,516	1,750	2,391	50%	68%
4,000	2,000	1,000	1,662	2,000	2,662	50%	67%
15 Years of Service:							
\$1,500	\$ 450	\$225	\$ 930	\$ 450	\$1,155	30%	77%
2,000	600	300	1,076	600	1,376	30%	69%
2,500	750	375	1,223	750	1,598	30%	64%
3,000	900	450	1,370	900	1,820	30%	61%
3,500	1,050	525	1,516	1,050	2,041	30%	58%
4,000	1,200	600	1,662	1,200	2,262	30%	57%

¹ "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

³ Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(LT-5(65) Benefit Program is Years of Credited Service
times: 2.00% of FAS ¹ to age 65)
1.25% of FAS ¹ at age 65)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 656	\$ 930	\$1,050	\$1,586	70%	106%
2,000	1,400	875	1,076	1,400	1,951	70%	98%
2,500	1,750	1,094	1,223	1,750	2,317	70%	93%
3,000	2,100	1,313	1,370	2,100	2,683	70%	89%
3,500	2,450	1,531	1,516	2,450	3,047	70%	87%
4,000	2,800	1,750	1,662	2,800	3,412	70%	85%
25 Years of Service:							
\$1,500	\$ 750	\$ 469	\$ 930	\$ 750	\$1,399	50%	93%
2,000	1,000	625	1,076	1,000	1,701	50%	85%
2,500	1,250	781	1,223	1,250	2,004	50%	80%
3,000	1,500	938	1,370	1,500	2,308	50%	77%
3,500	1,750	1,094	1,516	1,750	2,610	50%	75%
4,000	2,000	1,250	1,662	2,000	2,912	50%	73%
15 Years of Service:							
\$1,500	\$ 450	\$281	\$ 930	\$ 450	\$1,211	30%	81%
2,000	600	375	1,076	600	1,451	30%	73%
2,500	750	469	1,223	750	1,692	30%	68%
3,000	900	563	1,370	900	1,933	30%	64%
3,500	1,050	656	1,516	1,050	2,172	30%	62%
4,000	1,200	750	1,662	1,200	2,412	30%	60%

¹ "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

³ Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(LT-8(65) Benefit Program is Years of Credited Service
times: 2.00% of FAS ¹ to age 65)
1.50% of FAS ¹ at age 65)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 788	\$ 930	\$1,050	\$1,718	70%	115%
2,000	1,400	1,050	1,076	1,400	2,126	70%	106%
2,500	1,750	1,313	1,223	1,750	2,536	70%	101%
3,000	2,100	1,575	1,370	2,100	2,945	70%	98%
3,500	2,450	1,838	1,516	2,450	3,354	70%	96%
4,000	2,800	2,100	1,662	2,800	3,762	70%	94%
25 Years of Service:							
\$1,500	\$ 750	\$ 563	\$ 930	\$ 750	\$1,493	50%	100%
2,000	1,000	750	1,076	1,000	1,826	50%	91%
2,500	1,250	938	1,223	1,250	2,161	50%	86%
3,000	1,500	1,125	1,370	1,500	2,495	50%	83%
3,500	1,750	1,313	1,516	1,750	2,829	50%	81%
4,000	2,000	1,500	1,662	2,000	3,162	50%	79%
15 Years of Service:							
\$1,500	\$ 450	\$338	\$ 930	\$ 450	\$1,268	30%	85%
2,000	600	450	1,076	600	1,526	30%	76%
2,500	750	563	1,223	750	1,786	30%	71%
3,000	900	675	1,370	900	2,045	30%	68%
3,500	1,050	788	1,516	1,050	2,304	30%	66%
4,000	1,200	900	1,662	1,200	2,562	30%	64%

¹ "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

³ Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(LT-14(65) Benefit Program is Years of Credited Service
times: 2.00% of FAS ¹ to age 65)
1.75% of FAS ¹ at age 65)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 919	\$ 930	\$1,050	\$1,849	70%	123%
2,000	1,400	1,225	1,076	1,400	2,301	70%	115%
2,500	1,750	1,531	1,223	1,750	2,754	70%	110%
3,000	2,100	1,838	1,370	2,100	3,208	70%	107%
3,500	2,450	2,144	1,516	2,450	3,660	70%	105%
4,000	2,800	2,450	1,662	2,800	4,112	70%	103%
25 Years of Service:							
\$1,500	\$ 750	\$ 656	\$ 930	\$ 750	\$1,586	50%	106%
2,000	1,000	875	1,076	1,000	1,951	50%	98%
2,500	1,250	1,094	1,223	1,250	2,317	50%	93%
3,000	1,500	1,313	1,370	1,500	2,683	50%	89%
3,500	1,750	1,531	1,516	1,750	3,047	50%	87%
4,000	2,000	1,750	1,662	2,000	3,412	50%	85%
15 Years of Service:							
\$1,500	\$ 450	\$ 394	\$ 930	\$ 450	\$1,324	30%	88%
2,000	600	525	1,076	600	1,601	30%	80%
2,500	750	656	1,223	750	1,879	30%	75%
3,000	900	788	1,370	900	2,158	30%	72%
3,500	1,050	919	1,516	1,050	2,435	30%	70%
4,000	1,200	1,050	1,662	1,200	2,712	30%	68%

¹ "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

³ Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

APPENDIX V

AGE AND SERVICE CHARACTERISTICS OF EMPLOYEES

City of Clayton - General

January 31, 2019

By Attained Age and Years of Service

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
Under 20									
20-24	3							3	\$ 128,176
25-29	9							9	\$ 423,709
30-34	10	3						13	\$ 837,663
35-39	9	2	2					13	\$ 716,219
40-44	2	2	1	2	1			8	\$ 530,944
45-49	3	3	2	2	1			11	\$ 742,796
50-54	2		4	3	3	2		14	\$ 1,056,816
55-59	2	2	4	3			4	15	\$ 1,067,156
60-64		1		2			3	6	\$ 412,114
65-69									
70 & Over	1							1	\$ 122,858
Totals	41	13	13	12	5	2	7	93	\$ 6,038,451

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

Age: 44.0 years.

Benefit Service: 10.6 years.

Annual Pay: \$ 64,930.

City of Clayton - Police

January 31, 2019

By Attained Age and Years of Service

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
Under 20									
20-24									
25-29	1							1	\$ 62,575
30-34	4	5						9	\$ 685,806
35-39	2	1	12					15	\$ 1,211,368
40-44			1	3				4	\$ 349,396
45-49	1			4	1			6	\$ 472,879
50-54			1	1	3	1	1	7	\$ 620,988
55-59					2		1	3	\$ 274,629
60-64							2	2	\$ 167,600
65-69							1	1	\$ 129,434
70 & Over									
Totals	8	6	14	8	6	1	5	48	\$ 3,974,675

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

Age: 42.5 years.

Benefit Service: 15.0 years.

Annual Pay: \$ 82,806.

City of Clayton - Fire

January 31, 2019

By Attained Age and Years of Service

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
Under 20									
20-24	1							1	\$ 76,175
25-29	1							1	\$ 71,449
30-34		6						6	\$ 507,461
35-39	1	4	1					6	\$ 495,289
40-44	1	2	3	2				8	\$ 751,469
45-49				5	3			8	\$ 800,488
50-54				1		1		2	\$ 217,426
55-59			1				1	2	\$ 239,849
60-64						1		1	\$ 83,527
65-69									
70 & Over									
Totals	4	12	5	8	3	2	1	35	\$ 3,243,133

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

Age: 41.9 years.

Benefit Service: 12.9 years.

Annual Pay: \$ 92,661.

APPENDIX VI

RISK COMMENTARY

Risk Commentary

The determination of the accrued liability and the actuarially determined contribution (i.e., total employer contribution rate) 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 accrued 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 Plan'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 Risk** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued 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 accrued liability, contributions and contribution rates 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 accrued 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.

The computed contribution rates shown on pages 4 thru 11 may be considered as a minimum contribution rate for the selected benefit provisions that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

Risk Commentary (Concluded)

PLAN MATURITY MEASURES

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures are described below.

RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

DURATION OF ACTUARIAL ACCRUED LIABILITY

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the liability would increase approximately 10% if the assumed rate of return were lowered 1%.

ADDITIONAL RISK ASSESSMENT

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.



August 26, 2019 E-mail

Mr. Robert Wilson, Executive Secretary
Missouri Local Government
Employees Retirement System
P.O. Box 1665
Jefferson City, Missouri 65102

Dear Bob:

Enclosed is the report of the January 31, 2019 Initial Actuarial Valuation of LAGERS benefits for the employees of

City of Clayton

Sincerely,

A handwritten signature in black ink that reads "Mita Drazilov". The signature is written in a cursive, flowing style.

Mita D. Drazilov, ASA, FCA, MAAA

MDD:wp

August 26, 2019

City of Clayton
Clayton, Missouri

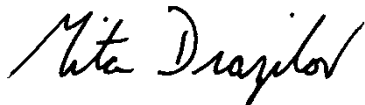
Ladies and Gentlemen:

This report contains projections needed to comply with Missouri state disclosure requirements (Section 105.660 of the RSMo) regarding the adoption of LAGERS benefits by a political subdivision. This report is intended to be a supplement to the January 31, 2019 Initial Valuation for the City of Clayton dated August 26, 2019.

The actuarial assumptions and methods used to determine the stated costs are described in Appendix II of the Initial Valuation Report. In our opinion, they do produce results which, in the aggregate, are reasonable. Additional miscellaneous and technical assumptions as well as disclosures required by the actuarial standards of practice may be found in the LAGERS Compiled Annual Actuarial Valuation report as of February 28, 2019.

Mita Drazilov is a member of the American Academy of Actuaries and meets the Qualification Standards of the Academy of Actuaries to render the actuarial opinions herein.

Respectfully submitted,



Mita D. Drazilov, ASA, FCA, MAAA

City of Clayton - General

Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars	
2019	\$ 6,038,451	20.7%	\$1,249,959	\$ 12,574,737
2020	6,234,701	20.7	1,290,583	12,747,009
2021	6,437,329	20.7	1,332,527	12,907,741
2022	6,646,542	20.7	1,375,834	13,055,314
2023	6,862,555	20.7	1,420,549	13,187,968
2024	7,085,588	20.7	1,466,717	13,303,789
2025	7,315,870	20.7	1,514,385	13,400,698
2026	7,553,636	20.7	1,563,603	13,476,434
2027	7,799,129	20.7	1,614,420	13,528,548
2028	8,052,601	20.7	1,666,888	13,554,380

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - General

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars	
2019	\$ 6,038,451	21.5%	\$1,298,267	\$ 13,013,151
2020	6,234,701	21.5	1,340,461	13,191,429
2021	6,437,329	21.5	1,384,026	13,357,765
2022	6,646,542	21.5	1,429,007	13,510,483
2023	6,862,555	21.5	1,475,449	13,647,762
2024	7,085,588	21.5	1,523,401	13,767,621
2025	7,315,870	21.5	1,572,912	13,867,909
2026	7,553,636	21.5	1,624,032	13,946,286
2027	7,799,129	21.5	1,676,813	14,000,217
2028	8,052,601	21.5	1,731,309	14,026,950

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - General

Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)

(0% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars	
2019	\$ 6,038,451	24.6%	\$1,485,459	\$ 12,907,803
2020	6,234,701	24.6	1,533,736	13,084,638
2021	6,437,329	24.6	1,583,583	13,249,627
2022	6,646,542	24.6	1,635,049	13,401,109
2023	6,862,555	24.6	1,688,189	13,537,276
2024	7,085,588	24.6	1,743,055	13,656,165
2025	7,315,870	24.6	1,799,704	13,755,641
2026	7,553,636	24.6	1,858,194	13,833,383
2027	7,799,129	24.6	1,918,586	13,886,877
2028	8,052,601	24.6	1,980,940	13,913,394

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - General

Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)

(0% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars	
2019	\$ 6,038,451	25.4%	\$1,533,767	\$ 13,348,611
2020	6,234,701	25.4	1,583,614	13,531,485
2021	6,437,329	25.4	1,635,082	13,702,108
2022	6,646,542	25.4	1,688,222	13,858,763
2023	6,862,555	25.4	1,743,089	13,999,581
2024	7,085,588	25.4	1,799,739	14,122,530
2025	7,315,870	25.4	1,858,231	14,225,403
2026	7,553,636	25.4	1,918,624	14,305,800
2027	7,799,129	25.4	1,980,979	14,361,121
2028	8,052,601	25.4	2,045,361	14,388,543

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - General

Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars	
2019	\$ 6,038,451	22.7%	\$1,370,728	\$ 13,704,473
2020	6,234,701	22.7	1,415,277	13,892,222
2021	6,437,329	22.7	1,461,274	14,067,394
2022	6,646,542	22.7	1,508,765	14,228,226
2023	6,862,555	22.7	1,557,800	14,372,798
2024	7,085,588	22.7	1,608,428	14,499,025
2025	7,315,870	22.7	1,660,702	14,604,641
2026	7,553,636	22.7	1,714,675	14,687,182
2027	7,799,129	22.7	1,770,402	14,743,978
2028	8,052,601	22.7	1,827,940	14,772,131

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - General

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars	
2019	\$ 6,038,451	23.5%	\$1,419,036	\$ 14,188,226
2020	6,234,701	23.5	1,465,155	14,382,603
2021	6,437,329	23.5	1,512,772	14,563,959
2022	6,646,542	23.5	1,561,937	14,730,468
2023	6,862,555	23.5	1,612,700	14,880,143
2024	7,085,588	23.5	1,665,113	15,010,826
2025	7,315,870	23.5	1,719,229	15,120,170
2026	7,553,636	23.5	1,775,104	15,205,624
2027	7,799,129	23.5	1,832,795	15,264,425
2028	8,052,601	23.5	1,892,361	15,293,572

Notes regarding the above projections:

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- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - General

Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)

(0% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars	
2019	\$ 6,038,451	26.6%	\$1,606,228	\$ 14,018,535
2020	6,234,701	26.6	1,658,430	14,210,587
2021	6,437,329	26.6	1,712,330	14,389,774
2022	6,646,542	26.6	1,767,980	14,554,291
2023	6,862,555	26.6	1,825,440	14,702,176
2024	7,085,588	26.6	1,884,766	14,831,296
2025	7,315,870	26.6	1,946,021	14,939,332
2026	7,553,636	26.6	2,009,267	15,023,764
2027	7,799,129	26.6	2,074,568	15,081,862
2028	8,052,601	26.6	2,141,992	15,110,660

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - General

Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)

(0% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars	
2019	\$ 6,038,451	27.4%	\$1,654,536	\$ 14,505,167
2020	6,234,701	27.4	1,708,308	14,703,886
2021	6,437,329	27.4	1,763,828	14,889,293
2022	6,646,542	27.4	1,821,153	15,059,521
2023	6,862,555	27.4	1,880,340	15,212,539
2024	7,085,588	27.4	1,941,451	15,346,141
2025	7,315,870	27.4	2,004,548	15,457,928
2026	7,553,636	27.4	2,069,696	15,545,291
2027	7,799,129	27.4	2,136,961	15,605,405
2028	8,052,601	27.4	2,206,413	15,635,203

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - Police

Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars	
2019	\$ 3,974,675	27.8%	\$1,104,960	\$ 12,743,457
2020	4,103,852	27.8	1,140,871	12,918,040
2021	4,237,227	27.8	1,177,949	13,080,928
2022	4,374,937	27.8	1,216,232	13,230,481
2023	4,517,122	27.8	1,255,760	13,364,915
2024	4,663,928	27.8	1,296,572	13,482,290
2025	4,815,506	27.8	1,338,711	13,580,500
2026	4,972,010	27.8	1,382,219	13,657,253
2027	5,133,600	27.8	1,427,141	13,710,066
2028	5,300,442	27.8	1,473,523	13,736,245

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
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- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - Police

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars	
2019	\$ 3,974,675	28.8%	\$1,144,706	\$ 13,198,060
2020	4,103,852	28.8	1,181,909	13,378,871
2021	4,237,227	28.8	1,220,321	13,547,570
2022	4,374,937	28.8	1,259,982	13,702,458
2023	4,517,122	28.8	1,300,931	13,841,687
2024	4,663,928	28.8	1,343,211	13,963,250
2025	4,815,506	28.8	1,386,866	14,064,963
2026	4,972,010	28.8	1,431,939	14,144,454
2027	5,133,600	28.8	1,478,477	14,199,151
2028	5,300,442	28.8	1,526,527	14,226,264

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - Police

Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)

(0% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars	
2019	\$ 3,974,675	31.7%	\$1,259,972	\$ 13,083,574
2020	4,103,852	31.7	1,300,921	13,262,817
2021	4,237,227	31.7	1,343,201	13,430,053
2022	4,374,937	31.7	1,386,855	13,583,598
2023	4,517,122	31.7	1,431,928	13,721,620
2024	4,663,928	31.7	1,478,465	13,842,128
2025	4,815,506	31.7	1,526,515	13,942,959
2026	4,972,010	31.7	1,576,127	14,021,760
2027	5,133,600	31.7	1,627,351	14,075,983
2028	5,300,442	31.7	1,680,240	14,102,861

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
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- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - Police

Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)

(0% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars	
2019	\$ 3,974,675	32.7%	\$1,299,719	\$ 13,544,496
2020	4,103,852	32.7	1,341,960	13,730,054
2021	4,237,227	32.7	1,385,573	13,903,181
2022	4,374,937	32.7	1,430,604	14,062,135
2023	4,517,122	32.7	1,477,099	14,205,019
2024	4,663,928	32.7	1,525,104	14,329,772
2025	4,815,506	32.7	1,574,670	14,434,155
2026	4,972,010	32.7	1,625,847	14,515,732
2027	5,133,600	32.7	1,678,687	14,571,865
2028	5,300,442	32.7	1,733,245	14,599,690

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - Police

Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars	
2019	\$ 3,974,675	29.1%	\$1,156,630	\$ 13,302,066
2020	4,103,852	29.1	1,194,221	13,484,302
2021	4,237,227	29.1	1,233,033	13,654,331
2022	4,374,937	29.1	1,273,107	13,810,440
2023	4,517,122	29.1	1,314,483	13,950,767
2024	4,663,928	29.1	1,357,203	14,073,288
2025	4,815,506	29.1	1,401,312	14,175,803
2026	4,972,010	29.1	1,446,855	14,255,920
2027	5,133,600	29.1	1,493,878	14,311,048
2028	5,300,442	29.1	1,542,429	14,338,375

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - Police

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars	
2019	\$ 3,974,675	30.2%	\$1,200,352	\$ 13,780,513
2020	4,103,852	30.2	1,239,363	13,969,304
2021	4,237,227	30.2	1,279,643	14,145,448
2022	4,374,937	30.2	1,321,231	14,307,172
2023	4,517,122	30.2	1,364,171	14,452,546
2024	4,663,928	30.2	1,408,506	14,579,473
2025	4,815,506	30.2	1,454,283	14,685,675
2026	4,972,010	30.2	1,501,547	14,768,674
2027	5,133,600	30.2	1,550,347	14,825,785
2028	5,300,442	30.2	1,600,733	14,854,094

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - Police

Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)

(0% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars	
2019	\$ 3,974,675	33.0%	\$1,311,643	\$ 13,646,536
2020	4,103,852	33.0	1,354,271	13,833,491
2021	4,237,227	33.0	1,398,285	14,007,923
2022	4,374,937	33.0	1,443,729	14,168,075
2023	4,517,122	33.0	1,490,650	14,312,036
2024	4,663,928	33.0	1,539,096	14,437,729
2025	4,815,506	33.0	1,589,117	14,542,898
2026	4,972,010	33.0	1,640,763	14,625,090
2027	5,133,600	33.0	1,694,088	14,681,646
2028	5,300,442	33.0	1,749,146	14,709,680

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - Police

Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)

(0% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars	
2019	\$ 3,974,675	34.1%	\$1,355,364	\$ 14,132,170
2020	4,103,852	34.1	1,399,414	14,325,779
2021	4,237,227	34.1	1,444,894	14,506,418
2022	4,374,937	34.1	1,491,854	14,672,269
2023	4,517,122	34.1	1,540,339	14,821,353
2024	4,663,928	34.1	1,590,399	14,951,519
2025	4,815,506	34.1	1,642,088	15,060,431
2026	4,972,010	34.1	1,695,455	15,145,548
2027	5,133,600	34.1	1,750,558	15,204,116
2028	5,300,442	34.1	1,807,451	15,233,148

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - Fire

Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 3,243,133	27.9%	\$904,834	\$ 8,888,150
2020	3,348,535	27.9	934,241	9,009,916
2021	3,457,362	27.9	964,604	9,123,525
2022	3,569,726	27.9	995,954	9,227,834
2023	3,685,742	27.9	1,028,322	9,321,597
2024	3,805,529	27.9	1,061,743	9,403,463
2025	3,929,209	27.9	1,096,249	9,471,961
2026	4,056,908	27.9	1,131,877	9,525,493
2027	4,188,758	27.9	1,168,663	9,562,328
2028	4,324,893	27.9	1,206,645	9,580,587

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - Fire

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 3,243,133	28.9%	\$937,265	\$ 9,197,078
2020	3,348,535	28.9	967,727	9,323,077
2021	3,457,362	28.9	999,178	9,440,635
2022	3,569,726	28.9	1,031,651	9,548,569
2023	3,685,742	28.9	1,065,179	9,645,591
2024	3,805,529	28.9	1,099,798	9,730,302
2025	3,929,209	28.9	1,135,541	9,801,181
2026	4,056,908	28.9	1,172,446	9,856,574
2027	4,188,758	28.9	1,210,551	9,894,690
2028	4,324,893	28.9	1,249,894	9,913,584

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - Fire

Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)

(0% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars	
2019	\$ 3,243,133	31.8%	\$1,031,316	\$ 8,959,991
2020	3,348,535	31.8	1,064,834	9,082,742
2021	3,457,362	31.8	1,099,441	9,197,270
2022	3,569,726	31.8	1,135,173	9,302,422
2023	3,685,742	31.8	1,172,066	9,396,943
2024	3,805,529	31.8	1,210,158	9,479,470
2025	3,929,209	31.8	1,249,488	9,548,522
2026	4,056,908	31.8	1,290,097	9,602,487
2027	4,188,758	31.8	1,332,025	9,639,620
2028	4,324,893	31.8	1,375,316	9,658,027

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - Fire

Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)

(0% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 3,243,133	32.8%	\$1,063,748	\$ 9,268,987
2020	3,348,535	32.8	1,098,319	9,395,971
2021	3,457,362	32.8	1,134,015	9,514,448
2022	3,569,726	32.8	1,170,870	9,623,226
2023	3,685,742	32.8	1,208,923	9,721,007
2024	3,805,529	32.8	1,248,214	9,806,380
2025	3,929,209	32.8	1,288,781	9,877,813
2026	4,056,908	32.8	1,330,666	9,933,639
2027	4,188,758	32.8	1,373,913	9,972,053
2028	4,324,893	32.8	1,418,565	9,991,094

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - Fire

Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 3,243,133	29.8%	\$966,454	\$ 9,519,757
2020	3,348,535	29.8	997,863	9,650,176
2021	3,457,362	29.8	1,030,294	9,771,859
2022	3,569,726	29.8	1,063,778	9,883,580
2023	3,685,742	29.8	1,098,351	9,984,006
2024	3,805,529	29.8	1,134,048	10,071,689
2025	3,929,209	29.8	1,170,904	10,145,055
2026	4,056,908	29.8	1,208,959	10,202,392
2027	4,188,758	29.8	1,248,250	10,241,845
2028	4,324,893	29.8	1,288,818	10,261,402

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - Fire

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 3,243,133	31.0%	\$1,005,371	\$ 9,858,319
2020	3,348,535	31.0	1,038,046	9,993,376
2021	3,457,362	31.0	1,071,782	10,119,386
2022	3,569,726	31.0	1,106,615	10,235,080
2023	3,685,742	31.0	1,142,580	10,339,078
2024	3,805,529	31.0	1,179,714	10,429,879
2025	3,929,209	31.0	1,218,055	10,505,854
2026	4,056,908	31.0	1,257,641	10,565,230
2027	4,188,758	31.0	1,298,515	10,606,086
2028	4,324,893	31.0	1,340,717	10,626,338

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - Fire

Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)

(0% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 3,243,133	33.7%	\$1,092,936	\$ 9,596,384
2020	3,348,535	33.7	1,128,456	9,727,853
2021	3,457,362	33.7	1,165,131	9,850,515
2022	3,569,726	33.7	1,202,998	9,963,135
2023	3,685,742	33.7	1,242,095	10,064,370
2024	3,805,529	33.7	1,282,463	10,152,759
2025	3,929,209	33.7	1,324,143	10,226,715
2026	4,056,908	33.7	1,367,178	10,284,513
2027	4,188,758	33.7	1,411,611	10,324,284
2028	4,324,893	33.7	1,457,489	10,343,998

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Clayton - Fire

Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)

(0% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars	
2019	\$ 3,243,133	34.9%	\$1,131,853	\$ 9,935,462
2020	3,348,535	34.9	1,168,639	10,071,576
2021	3,457,362	34.9	1,206,619	10,198,572
2022	3,569,726	34.9	1,245,834	10,315,172
2023	3,685,742	34.9	1,286,324	10,419,984
2024	3,805,529	34.9	1,328,130	10,511,496
2025	3,929,209	34.9	1,371,294	10,588,065
2026	4,056,908	34.9	1,415,861	10,647,905
2027	4,188,758	34.9	1,461,877	10,689,081
2028	4,324,893	34.9	1,509,388	10,709,492

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.