



The Initial Valuation For  
**City of Velda Village Hills**  
as of November 30, 2019



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January 17, 2020

City of Velda Village Hills  
St. Louis, 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 November 30, 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.

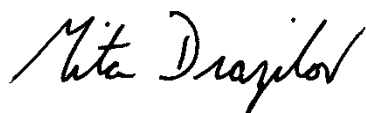
If you have any questions concerning this report or LAGERS in general, please contact the LAGERS office in Jefferson City.

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 Velda Village Hills

### 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-1	General	4.00%	4.10%	0.20%	8.30%
L-3	General	5.10	5.70	0.30	11.10
LT-4(65)	General	4.50	4.80	0.20	9.50
LT-5(65)	General	5.50	6.20	0.30	12.00
L-7	General	6.20	7.40	0.30	13.90
LT-8(65)	General	6.40	7.90	0.30	14.60
L-12	General	7.30	9.10	0.40	16.80
LT-14(65)	General	7.40	9.30	0.40	17.10
L-6	General	8.30	10.90	0.50	19.70

\* 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 Velda Village Hills

### 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			Total Employer Contribution Rate
		Prior Service Cost *	Current Cost	Disability Cost	
L-1	General	4.10%	4.40%	0.20%	8.70%
L-3	General	5.30	6.00	0.30	11.60
LT-4(65)	General	4.70	5.10	0.20	10.00
LT-5(65)	General	5.70	6.60	0.30	12.60
L-7	General	6.40	7.90	0.30	14.60
LT-8(65)	General	6.70	8.10	0.30	15.10
L-12	General	7.50	9.60	0.40	17.50
LT-14(65)	General	7.70	9.70	0.40	17.80
L-6	General	8.60	11.30	0.50	20.40

\* 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 Velda Village Hills

### 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-1	General	4.40%	7.60%	0.20%	12.20%
L-3	General	5.50	9.20	0.30	15.00
LT-4(65)	General	4.90	8.20	0.20	13.30
LT-5(65)	General	5.90	9.70	0.30	15.90
L-7	General	6.60	10.90	0.30	17.80
LT-8(65)	General	6.90	11.30	0.30	18.50
L-12	General	7.70	12.60	0.40	20.70
LT-14(65)	General	7.80	12.80	0.40	21.00
L-6	General	8.80	14.30	0.50	23.60

\* 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 Velda Village Hills

### 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-1	General	4.60%	7.80%	0.20%	12.60%
L-3	General	5.70	9.50	0.30	15.50
LT-4(65)	General	5.10	8.50	0.20	13.80
LT-5(65)	General	6.10	10.10	0.30	16.50
L-7	General	6.90	11.30	0.30	18.50
LT-8(65)	General	7.10	11.60	0.30	19.00
L-12	General	8.00	13.00	0.40	21.40
LT-14(65)	General	8.10	13.20	0.40	21.70
L-6	General	9.10	14.70	0.50	24.30

\* 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 Velda Village Hills

### 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-1	General	4.50%	4.60%	0.20%	9.30%
L-3	General	5.70	6.30	0.30	12.30
LT-4(65)	General	5.60	5.80	0.20	11.60
LT-5(65)	General	6.50	7.20	0.30	14.00
L-7	General	6.90	8.20	0.30	15.40
LT-8(65)	General	7.50	8.70	0.30	16.50
L-12	General	8.10	10.00	0.40	18.50
LT-14(65)	General	8.40	10.30	0.40	19.10
L-6	General	9.30	11.80	0.50	21.60

# 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 Velda Village Hills

### 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-1	General	4.70%	4.80%	0.20%	9.70%
L-3	General	5.90	6.70	0.30	12.90
LT-4(65)	General	5.80	6.10	0.20	12.10
LT-5(65)	General	6.80	7.60	0.30	14.70
L-7	General	7.20	8.50	0.30	16.00
LT-8(65)	General	7.80	9.10	0.30	17.20
L-12	General	8.40	10.40	0.40	19.20
LT-14(65)	General	8.70	10.70	0.40	19.80
L-6	General	9.70	12.30	0.50	22.50

# 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 Velda Village Hills

### 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-1	General	4.90%	8.00%	0.20%	13.10%
L-3	General	6.10	9.80	0.30	16.20
LT-4(65)	General	6.00	9.20	0.20	15.40
LT-5(65)	General	6.90	10.70	0.30	17.90
L-7	General	7.40	11.60	0.30	19.30
LT-8(65)	General	7.90	12.20	0.30	20.40
L-12	General	8.60	13.40	0.40	22.40
LT-14(65)	General	8.90	13.70	0.40	23.00
L-6	General	9.80	15.20	0.50	25.50

# 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 Velda Village Hills

### 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-1	General	5.10%	8.30%	0.20%	13.60%
L-3	General	6.40	10.10	0.30	16.80
LT-4(65)	General	6.20	9.50	0.20	15.90
LT-5(65)	General	7.20	11.10	0.30	18.60
L-7	General	7.60	12.00	0.30	19.90
LT-8(65)	General	8.20	12.60	0.30	21.10
L-12	General	8.90	13.80	0.40	23.10
LT-14(65)	General	9.20	14.10	0.40	23.70
L-6	General	10.20	15.70	0.50	26.40

# 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 Velda Village Hills

## 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
L-1	\$ 6,781
L-3	9,068
LT-4(65)	7,761
LT-5(65)	9,803
L-7	11,355
LT-8(65)	11,927
L-12	13,725
LT-14(65)	13,970
L-6	16,094

3 Year FAS	
Benefit Program	General
L-1	\$ 7,107
L-3	9,477
LT-4(65)	8,169
LT-5(65)	10,293
L-7	11,927
LT-8(65)	12,336
L-12	14,296
LT-14(65)	14,542
L-6	16,666

### Non-Contributory Plan

5 Year FAS	
Benefit Program	General
L-1	\$ 9,967
L-3	12,254
LT-4(65)	10,865
LT-5(65)	12,989
L-7	14,542
LT-8(65)	15,113
L-12	16,911
LT-14(65)	17,156
L-6	19,280

3 Year FAS	
Benefit Program	General
L-1	\$ 10,293
L-3	12,663
LT-4(65)	11,274
LT-5(65)	13,480
L-7	15,113
LT-8(65)	15,522
L-12	17,483
LT-14(65)	17,728
L-6	19,852

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 Velda Village Hills

## 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
L-1	\$ 7,598
L-3	10,048
LT-4(65)	9,477
LT-5(65)	11,437
L-7	12,581
LT-8(65)	13,480
L-12	15,113
LT-14(65)	15,604
L-6	17,646

3 Year FAS	
Benefit Program	General
L-1	\$ 7,924
L-3	10,539
LT-4(65)	9,885
LT-5(65)	12,009
L-7	13,071
LT-8(65)	14,051
L-12	15,685
LT-14(65)	16,175
L-6	18,381

### Non-Contributory Plan

5 Year FAS	
Benefit Program	General
L-1	\$ 10,702
L-3	13,234
LT-4(65)	12,581
LT-5(65)	14,623
L-7	15,767
LT-8(65)	16,666
L-12	18,299
LT-14(65)	18,790
L-6	20,832

3 Year FAS	
Benefit Program	General
L-1	\$ 11,110
L-3	13,725
LT-4(65)	12,989
LT-5(65)	15,195
L-7	16,257
LT-8(65)	17,237
L-12	18,871
LT-14(65)	19,361
L-6	21,567

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 Velda Village Hills

## Employees and Payroll Included in the Valuation

	General
Number of Employees	2
Annual Payroll	\$ 81,694

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



## **APPENDIX I**

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### **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 Velda Village Hills

#### 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-1	General	\$ 57,506	\$ 59,694	\$ 63,531	\$ 65,732
L-3	General	73,240	75,985	79,413	82,193
LT-4(65)	General	64,595	67,039	70,564	73,030
LT-5(65)	General	78,541	81,485	84,679	87,655
L-7	General	88,932	92,199	95,288	98,617
LT-8(65)	General	92,463	95,864	98,809	102,257
L-12	General	104,559	108,333	111,176	115,047
LT-14(65)	General	106,315	110,171	112,925	116,864
L-6	General	120,091	124,384	127,041	131,498

## City of Velda Village Hills

### 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-1	General	\$ 64,824	\$ 67,307	\$ 70,623	\$ 73,129
L-3	General	82,319	85,420	88,288	91,421
LT-4(65)	General	80,422	83,479	86,160	89,234
LT-5(65)	General	94,012	97,550	99,946	103,490
L-7	General	99,778	103,472	105,939	109,705
LT-8(65)	General	107,582	111,557	113,707	117,750
L-12	General	117,169	121,473	123,586	127,995
LT-14(65)	General	121,069	125,520	127,471	132,014
L-6	General	134,484	139,366	141,248	146,261

## **APPENDIX II**

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### **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
		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**

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### **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**

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### **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 <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	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%

<sup>1</sup> "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.

<sup>2</sup> "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.

<sup>3</sup> 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 <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	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%

<sup>1</sup> "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.

<sup>2</sup> "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.

<sup>3</sup> 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 <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	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%

<sup>1</sup> "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.

<sup>2</sup> "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.

<sup>3</sup> 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 <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	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%

<sup>1</sup> "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.

<sup>2</sup> "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.

<sup>3</sup> 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 <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	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%

<sup>1</sup> "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.

<sup>2</sup> "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.

<sup>3</sup> 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 <sup>1</sup> to age 65)**  
**1.00% of FAS <sup>1</sup> at age 65)**

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	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%

<sup>1</sup> "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.

<sup>2</sup> "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.

<sup>3</sup> 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 <sup>1</sup> to age 65)  
1.25% of FAS <sup>1</sup> at age 65)

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	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%

<sup>1</sup> "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.

<sup>2</sup> "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.

<sup>3</sup> 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 <sup>1</sup> to age 65)**  
**1.50% of FAS <sup>1</sup> at age 65)**

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	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%

<sup>1</sup> "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.

<sup>2</sup> "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.

<sup>3</sup> 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 <sup>1</sup> to age 65)  
1.75% of FAS <sup>1</sup> at age 65)

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	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%

<sup>1</sup> "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.

<sup>2</sup> "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.

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

## **APPENDIX V**

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### **AGE AND SERVICE CHARACTERISTICS OF EMPLOYEES**

# City of Velda Village Hills

November 30, 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
<b>Under 20</b>									
20-24									
25-29									
30-34									
35-39			1					1	\$ 42,910
40-44									
45-49									
50-54									
55-59		1						1	\$ 38,784
60-64									
65-69									
<b>70 &amp; Over</b>									
<b>Totals</b>		<b>1</b>	<b>1</b>					<b>2</b>	<b>\$ 81,694</b>

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

- Age: 48.6 years.
- Benefit Service: 8.5 years.
- Annual Pay: \$40,847.



## **APPENDIX VI**

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### **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.



January 17, 2020 E-mail

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

Dear Bob:

Enclosed is the report of the November 30, 2019 Initial Actuarial Valuation of LAGERS benefits for the employees of

City of Velda Village Hills

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

January 17, 2020

City of Velda Village Hills  
St. Louis, Missouri

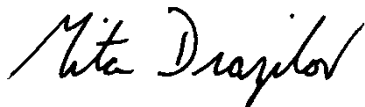
Ladies and Gentlemen:

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 November 30, 2019 Initial Valuation for the City of Velda Village Hills dated January 17, 2020.

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 Velda Village Hills - General

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

(4% member contributions are additional)

### Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 81,694	8.3%	\$6,781	\$ 57,506	11.1%	\$9,068	\$ 73,240	9.5%	\$7,761	\$ 64,595
2020	84,349	8.3	7,001	58,294	11.1	9,363	74,243	9.5	8,013	65,480
2021	87,090	8.3	7,228	59,029	11.1	9,667	75,179	9.5	8,274	66,306
2022	89,920	8.3	7,463	59,704	11.1	9,981	76,039	9.5	8,542	67,064
2023	92,842	8.3	7,706	60,311	11.1	10,305	76,812	9.5	8,820	67,745
2024	95,859	8.3	7,956	60,841	11.1	10,640	77,487	9.5	9,107	68,340
2025	98,974	8.3	8,215	61,284	11.1	10,986	78,051	9.5	9,403	68,838
2026	102,191	8.3	8,482	61,630	11.1	11,343	78,492	9.5	9,708	69,227
2027	105,512	8.3	8,757	61,868	11.1	11,712	78,796	9.5	10,024	69,495
2028	108,941	8.3	9,042	61,986	11.1	12,092	78,946	9.5	10,349	69,628

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 81,694	12.0%	\$9,803	\$ 78,541	13.9%	\$11,355	\$ 88,932	14.6%	\$11,927	\$ 92,463
2020	84,349	12.0	10,122	79,617	13.9	11,725	90,150	14.6	12,315	93,730
2021	87,090	12.0	10,451	80,621	13.9	12,106	91,287	14.6	12,715	94,912
2022	89,920	12.0	10,790	81,543	13.9	12,499	92,331	14.6	13,128	95,997
2023	92,842	12.0	11,141	82,372	13.9	12,905	93,269	14.6	13,555	96,972
2024	95,859	12.0	11,503	83,095	13.9	13,324	94,088	14.6	13,995	97,824
2025	98,974	12.0	11,877	83,700	13.9	13,757	94,773	14.6	14,450	98,537
2026	102,191	12.0	12,263	84,173	13.9	14,205	95,309	14.6	14,920	99,094
2027	105,512	12.0	12,661	84,499	13.9	14,666	95,678	14.6	15,405	99,477
2028	108,941	12.0	13,073	84,660	13.9	15,143	95,861	14.6	15,905	99,667

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 81,694	16.8%	\$13,725	\$ 104,559	17.1%	\$13,970	\$ 106,315	19.7%	\$16,094	\$ 120,091
2020	84,349	16.8	14,171	105,991	17.1	14,424	107,771	19.7	16,617	121,736
2021	87,090	16.8	14,631	107,327	17.1	14,892	109,130	19.7	17,157	123,271
2022	89,920	16.8	15,107	108,554	17.1	15,376	110,378	19.7	17,714	124,680
2023	92,842	16.8	15,597	109,657	17.1	15,876	111,500	19.7	18,290	125,947
2024	95,859	16.8	16,104	110,620	17.1	16,392	112,479	19.7	18,884	127,053
2025	98,974	16.8	16,628	111,426	17.1	16,925	113,298	19.7	19,498	127,978
2026	102,191	16.8	17,168	112,056	17.1	17,475	113,938	19.7	20,132	128,701
2027	105,512	16.8	17,726	112,489	17.1	18,043	114,379	19.7	20,786	129,199
2028	108,941	16.8	18,302	112,704	17.1	18,629	114,597	19.7	21,461	129,446

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 28<sup>th</sup> 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 Velda Village Hills - General

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

(4% member contributions are additional)

### Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 81,694	8.7%	\$7,107	\$ 59,694	11.6%	\$9,477	\$ 75,985	10.0%	\$8,169	\$ 67,039
2020	84,349	8.7	7,338	60,512	11.6	9,784	77,026	10.0	8,435	67,957
2021	87,090	8.7	7,577	61,275	11.6	10,102	77,997	10.0	8,709	68,814
2022	89,920	8.7	7,823	61,976	11.6	10,431	78,889	10.0	8,992	69,601
2023	92,842	8.7	8,077	62,606	11.6	10,770	79,691	10.0	9,284	70,308
2024	95,859	8.7	8,340	63,156	11.6	11,120	80,391	10.0	9,586	70,925
2025	98,974	8.7	8,611	63,616	11.6	11,481	80,977	10.0	9,897	71,442
2026	102,191	8.7	8,891	63,976	11.6	11,854	81,435	10.0	10,219	71,846
2027	105,512	8.7	9,180	64,223	11.6	12,239	81,750	10.0	10,551	72,124
2028	108,941	8.7	9,478	64,346	11.6	12,637	81,906	10.0	10,894	72,262

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 81,694	12.6%	\$10,293	\$ 81,485	14.6%	\$11,927	\$ 92,199	15.1%	\$12,336	\$ 95,864
2020	84,349	12.6	10,628	82,601	14.6	12,315	93,462	15.1	12,737	97,177
2021	87,090	12.6	10,973	83,643	14.6	12,715	94,640	15.1	13,151	98,402
2022	89,920	12.6	11,330	84,599	14.6	13,128	95,722	15.1	13,578	99,527
2023	92,842	12.6	11,698	85,459	14.6	13,555	96,695	15.1	14,019	100,538
2024	95,859	12.6	12,078	86,210	14.6	13,995	97,544	15.1	14,475	101,421
2025	98,974	12.6	12,471	86,838	14.6	14,450	98,255	15.1	14,945	102,160
2026	102,191	12.6	12,876	87,329	14.6	14,920	98,810	15.1	15,431	102,737
2027	105,512	12.6	13,295	87,667	14.6	15,405	99,192	15.1	15,932	103,134
2028	108,941	12.6	13,727	87,834	14.6	15,905	99,381	15.1	16,450	103,331

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 81,694	17.5%	\$14,296	\$ 108,333	17.8%	\$14,542	\$ 110,171	20.4%	\$16,666	\$ 124,384
2020	84,349	17.5	14,761	109,817	17.8	15,014	111,680	20.4	17,207	126,088
2021	87,090	17.5	15,241	111,202	17.8	15,502	113,088	20.4	17,766	127,678
2022	89,920	17.5	15,736	112,473	17.8	16,006	114,381	20.4	18,344	129,138
2023	92,842	17.5	16,247	113,616	17.8	16,526	115,543	20.4	18,940	130,450
2024	95,859	17.5	16,775	114,614	17.8	17,063	116,558	20.4	19,555	131,596
2025	98,974	17.5	17,320	115,449	17.8	17,617	117,407	20.4	20,191	132,555
2026	102,191	17.5	17,883	116,101	17.8	18,190	118,071	20.4	20,847	133,304
2027	105,512	17.5	18,465	116,550	17.8	18,781	118,528	20.4	21,524	133,819
2028	108,941	17.5	19,065	116,773	17.8	19,391	118,754	20.4	22,224	134,075

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 28<sup>th</sup> 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 Velda Village Hills - General

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

(0% member contributions are additional)

### Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2019	\$ 81,694	12.2%	\$9,967	\$ 63,531	15.0%	\$12,254	\$ 79,413	13.3%	\$10,865	\$ 70,564
2020	84,349	12.2	10,291	64,401	15.0	12,652	80,501	13.3	11,218	71,531
2021	87,090	12.2	10,625	65,213	15.0	13,064	81,516	13.3	11,583	72,433
2022	89,920	12.2	10,970	65,959	15.0	13,488	82,448	13.3	11,959	73,261
2023	92,842	12.2	11,327	66,629	15.0	13,926	83,286	13.3	12,348	74,005
2024	95,859	12.2	11,695	67,214	15.0	14,379	84,017	13.3	12,749	74,655
2025	98,974	12.2	12,075	67,704	15.0	14,846	84,629	13.3	13,164	75,199
2026	102,191	12.2	12,467	68,087	15.0	15,329	85,107	13.3	13,591	75,624
2027	105,512	12.2	12,872	68,350	15.0	15,827	85,436	13.3	14,033	75,916
2028	108,941	12.2	13,291	68,481	15.0	16,341	85,599	13.3	14,489	76,061

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2019	\$ 81,694	15.9%	\$12,989	\$ 84,679	17.8%	\$14,542	\$ 95,288	18.5%	\$15,113	\$ 98,809
2020	84,349	15.9	13,411	85,839	17.8	15,014	96,593	18.5	15,605	100,163
2021	87,090	15.9	13,847	86,921	17.8	15,502	97,811	18.5	16,112	101,426
2022	89,920	15.9	14,297	87,915	17.8	16,006	98,929	18.5	16,635	102,586
2023	92,842	15.9	14,762	88,808	17.8	16,526	99,934	18.5	17,176	103,628
2024	95,859	15.9	15,242	89,588	17.8	17,063	100,812	18.5	17,734	104,538
2025	98,974	15.9	15,737	90,241	17.8	17,617	101,546	18.5	18,310	105,299
2026	102,191	15.9	16,248	90,751	17.8	18,190	102,120	18.5	18,905	105,894
2027	105,512	15.9	16,776	91,102	17.8	18,781	102,515	18.5	19,520	106,303
2028	108,941	15.9	17,322	91,276	17.8	19,391	102,711	18.5	20,154	106,506

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2019	\$ 81,694	20.7%	\$16,911	\$ 111,176	21.0%	\$17,156	\$ 112,925	23.6%	\$19,280	\$ 127,041
2020	84,349	20.7	17,460	112,699	21.0	17,713	114,472	23.6	19,906	128,781
2021	87,090	20.7	18,028	114,120	21.0	18,289	115,915	23.6	20,553	130,405
2022	89,920	20.7	18,613	115,425	21.0	18,883	117,240	23.6	21,221	131,896
2023	92,842	20.7	19,218	116,598	21.0	19,497	118,431	23.6	21,911	133,236
2024	95,859	20.7	19,843	117,622	21.0	20,130	119,471	23.6	22,623	134,406
2025	98,974	20.7	20,488	118,479	21.0	20,785	120,341	23.6	23,358	135,385
2026	102,191	20.7	21,154	119,149	21.0	21,460	121,021	23.6	24,117	136,150
2027	105,512	20.7	21,841	119,610	21.0	22,158	121,489	23.6	24,901	136,676
2028	108,941	20.7	22,551	119,838	21.0	22,878	121,721	23.6	25,710	136,937

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 28<sup>th</sup> 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 Velda Village Hills - General

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

(0% member contributions are additional)

### Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 81,694	12.6%	\$10,293	\$ 65,732	15.5%	\$12,663	\$ 82,193	13.8%	\$11,274	\$ 73,030
2020	84,349	12.6	10,628	66,633	15.5	13,074	83,319	13.8	11,640	74,030
2021	87,090	12.6	10,973	67,473	15.5	13,499	84,370	13.8	12,018	74,963
2022	89,920	12.6	11,330	68,244	15.5	13,938	85,335	13.8	12,409	75,820
2023	92,842	12.6	11,698	68,937	15.5	14,391	86,202	13.8	12,812	76,590
2024	95,859	12.6	12,078	69,542	15.5	14,858	86,959	13.8	13,229	77,263
2025	98,974	12.6	12,471	70,049	15.5	15,341	87,592	13.8	13,658	77,826
2026	102,191	12.6	12,876	70,445	15.5	15,840	88,087	13.8	14,102	78,266
2027	105,512	12.6	13,295	70,717	15.5	16,354	88,428	13.8	14,561	78,569
2028	108,941	12.6	13,727	70,852	15.5	16,886	88,597	13.8	15,034	78,719

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 81,694	16.5%	\$13,480	\$ 87,655	18.5%	\$15,113	\$ 98,617	19.0%	\$15,522	\$ 102,257
2020	84,349	16.5	13,918	88,856	18.5	15,605	99,968	19.0	16,026	103,658
2021	87,090	16.5	14,370	89,976	18.5	16,112	101,229	19.0	16,547	104,965
2022	89,920	16.5	14,837	91,005	18.5	16,635	102,386	19.0	17,085	106,165
2023	92,842	16.5	15,319	91,930	18.5	17,176	103,426	19.0	17,640	107,244
2024	95,859	16.5	15,817	92,737	18.5	17,734	104,334	19.0	18,213	108,186
2025	98,974	16.5	16,331	93,413	18.5	18,310	105,094	19.0	18,805	108,974
2026	102,191	16.5	16,862	93,941	18.5	18,905	105,688	19.0	19,416	109,590
2027	105,512	16.5	17,409	94,304	18.5	19,520	106,097	19.0	20,047	110,014
2028	108,941	16.5	17,975	94,484	18.5	20,154	106,300	19.0	20,699	110,224

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 81,694	21.4%	\$17,483	\$ 115,047	21.7%	\$17,728	\$ 116,864	24.3%	\$19,852	\$ 131,498
2020	84,349	21.4	18,051	116,623	21.7	18,304	118,465	24.3	20,497	133,300
2021	87,090	21.4	18,637	118,094	21.7	18,899	119,959	24.3	21,163	134,981
2022	89,920	21.4	19,243	119,444	21.7	19,513	121,330	24.3	21,851	136,524
2023	92,842	21.4	19,868	120,658	21.7	20,147	122,563	24.3	22,561	137,911
2024	95,859	21.4	20,514	121,718	21.7	20,801	123,639	24.3	23,294	139,122
2025	98,974	21.4	21,180	122,605	21.7	21,477	124,540	24.3	24,051	140,135
2026	102,191	21.4	21,869	123,298	21.7	22,175	125,244	24.3	24,832	140,927
2027	105,512	21.4	22,580	123,775	21.7	22,896	125,728	24.3	25,639	141,472
2028	108,941	21.4	23,313	124,011	21.7	23,640	125,968	24.3	26,473	141,742

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 28<sup>th</sup> 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 Velda Village Hills - 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-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 81,694	9.3%	\$7,598	\$ 64,824	12.3%	\$10,048	\$ 82,319	11.6%	\$9,477	\$ 80,422
2020	84,349	9.3	7,844	65,712	12.3	10,375	83,447	11.6	9,784	81,524
2021	87,090	9.3	8,099	66,541	12.3	10,712	84,499	11.6	10,102	82,552
2022	89,920	9.3	8,363	67,302	12.3	11,060	85,465	11.6	10,431	83,496
2023	92,842	9.3	8,634	67,986	12.3	11,420	86,333	11.6	10,770	84,344
2024	95,859	9.3	8,915	68,583	12.3	11,791	87,091	11.6	11,120	85,085
2025	98,974	9.3	9,205	69,083	12.3	12,174	87,725	11.6	11,481	85,705
2026	102,191	9.3	9,504	69,473	12.3	12,569	88,221	11.6	11,854	86,189
2027	105,512	9.3	9,813	69,742	12.3	12,978	88,562	11.6	12,239	86,522
2028	108,941	9.3	10,132	69,875	12.3	13,400	88,731	11.6	12,637	86,687

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2019	\$ 81,694	14.0%	\$11,437	\$ 94,012	15.4%	\$12,581	\$ 99,778	16.5%	\$13,480	\$ 107,582
2020	84,349	14.0	11,809	95,300	15.4	12,990	101,145	16.5	13,918	109,056
2021	87,090	14.0	12,193	96,502	15.4	13,412	102,420	16.5	14,370	110,431
2022	89,920	14.0	12,589	97,605	15.4	13,848	103,591	16.5	14,837	111,694
2023	92,842	14.0	12,998	98,597	15.4	14,298	104,644	16.5	15,319	112,829
2024	95,859	14.0	13,420	99,463	15.4	14,762	105,563	16.5	15,817	113,820
2025	98,974	14.0	13,856	100,188	15.4	15,242	106,332	16.5	16,331	114,649
2026	102,191	14.0	14,307	100,754	15.4	15,737	106,933	16.5	16,862	115,297
2027	105,512	14.0	14,772	101,144	15.4	16,249	107,347	16.5	17,409	115,743
2028	108,941	14.0	15,252	101,337	15.4	16,777	107,552	16.5	17,975	115,964

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2019	\$ 81,694	18.5%	\$15,113	\$ 117,169	19.1%	\$15,604	\$ 121,069	21.6%	\$17,646	\$ 134,484
2020	84,349	18.5	15,605	118,774	19.1	16,111	122,728	21.6	18,219	136,326
2021	87,090	18.5	16,112	120,272	19.1	16,634	124,276	21.6	18,811	138,045
2022	89,920	18.5	16,635	121,647	19.1	17,175	125,697	21.6	19,423	139,623
2023	92,842	18.5	17,176	122,883	19.1	17,733	126,974	21.6	20,054	141,042
2024	95,859	18.5	17,734	123,962	19.1	18,309	128,089	21.6	20,706	142,281
2025	98,974	18.5	18,310	124,865	19.1	18,904	129,022	21.6	21,378	143,317
2026	102,191	18.5	18,905	125,571	19.1	19,518	129,751	21.6	22,073	144,127
2027	105,512	18.5	19,520	126,057	19.1	20,153	130,253	21.6	22,791	144,684
2028	108,941	18.5	20,154	126,298	19.1	20,808	130,502	21.6	23,531	144,960

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 28<sup>th</sup> 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 Velda Village Hills - 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-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 81,694	9.7%	\$7,924	\$ 67,307	12.9%	\$10,539	\$ 85,420	12.1%	\$9,885	\$ 83,479
2020	84,349	9.7	8,182	68,229	12.9	10,881	86,590	12.1	10,206	84,623
2021	87,090	9.7	8,448	69,089	12.9	11,235	87,682	12.1	10,538	85,690
2022	89,920	9.7	8,722	69,879	12.9	11,600	88,684	12.1	10,880	86,670
2023	92,842	9.7	9,006	70,589	12.9	11,977	89,585	12.1	11,234	87,551
2024	95,859	9.7	9,298	71,209	12.9	12,366	90,372	12.1	11,599	88,320
2025	98,974	9.7	9,600	71,728	12.9	12,768	91,030	12.1	11,976	88,963
2026	102,191	9.7	9,913	72,133	12.9	13,183	91,544	12.1	12,365	89,466
2027	105,512	9.7	10,235	72,412	12.9	13,611	91,898	12.1	12,767	89,812
2028	108,941	9.7	10,567	72,550	12.9	14,053	92,073	12.1	13,182	89,983

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 81,694	14.7%	\$12,009	\$ 97,550	16.0%	\$13,071	\$ 103,472	17.2%	\$14,051	\$ 111,557
2020	84,349	14.7	12,399	98,886	16.0	13,496	104,890	17.2	14,508	113,085
2021	87,090	14.7	12,802	100,133	16.0	13,934	106,213	17.2	14,979	114,511
2022	89,920	14.7	13,218	101,278	16.0	14,387	107,427	17.2	15,466	115,820
2023	92,842	14.7	13,648	102,307	16.0	14,855	108,519	17.2	15,969	116,997
2024	95,859	14.7	14,091	103,205	16.0	15,337	109,472	17.2	16,488	118,025
2025	98,974	14.7	14,549	103,957	16.0	15,836	110,269	17.2	17,024	118,885
2026	102,191	14.7	15,022	104,545	16.0	16,351	110,892	17.2	17,577	119,557
2027	105,512	14.7	15,510	104,949	16.0	16,882	111,321	17.2	18,148	120,019
2028	108,941	14.7	16,014	105,149	16.0	17,431	111,534	17.2	18,738	120,248

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 81,694	19.2%	\$15,685	\$ 121,473	19.8%	\$16,175	\$ 125,520	22.5%	\$18,381	\$ 139,366
2020	84,349	19.2	16,195	123,137	19.8	16,701	127,240	22.5	18,979	141,275
2021	87,090	19.2	16,721	124,690	19.8	17,244	128,844	22.5	19,595	143,056
2022	89,920	19.2	17,265	126,116	19.8	17,804	130,317	22.5	20,232	144,692
2023	92,842	19.2	17,826	127,397	19.8	18,383	131,641	22.5	20,889	146,162
2024	95,859	19.2	18,405	128,516	19.8	18,980	132,797	22.5	21,568	147,446
2025	98,974	19.2	19,003	129,452	19.8	19,597	133,764	22.5	22,269	148,520
2026	102,191	19.2	19,621	130,184	19.8	20,234	134,520	22.5	22,993	149,359
2027	105,512	19.2	20,258	130,687	19.8	20,891	135,040	22.5	23,740	149,937
2028	108,941	19.2	20,917	130,937	19.8	21,570	135,298	22.5	24,512	150,223

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 28<sup>th</sup> 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 Velda Village Hills - 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-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 81,694	13.1%	\$10,702	\$ 70,623	16.2%	\$13,234	\$ 88,288	15.4%	\$12,581	\$ 86,160
2020	84,349	13.1	11,050	71,591	16.2	13,665	89,498	15.4	12,990	87,340
2021	87,090	13.1	11,409	72,494	16.2	14,109	90,627	15.4	13,412	88,441
2022	89,920	13.1	11,780	73,323	16.2	14,567	91,663	15.4	13,848	89,452
2023	92,842	13.1	12,162	74,068	16.2	15,040	92,594	15.4	14,298	90,361
2024	95,859	13.1	12,558	74,718	16.2	15,529	93,407	15.4	14,762	91,155
2025	98,974	13.1	12,966	75,262	16.2	16,034	94,087	15.4	15,242	91,819
2026	102,191	13.1	13,387	75,687	16.2	16,555	94,619	15.4	15,737	92,338
2027	105,512	13.1	13,822	75,980	16.2	17,093	94,985	15.4	16,249	92,695
2028	108,941	13.1	14,271	76,125	16.2	17,648	95,166	15.4	16,777	92,872

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 81,694	17.9%	\$14,623	\$ 99,946	19.3%	\$15,767	\$ 105,939	20.4%	\$16,666	\$ 113,707
2020	84,349	17.9	15,098	101,315	19.3	16,279	107,390	20.4	17,207	115,265
2021	87,090	17.9	15,589	102,593	19.3	16,808	108,744	20.4	17,766	116,718
2022	89,920	17.9	16,096	103,766	19.3	17,355	109,987	20.4	18,344	118,052
2023	92,842	17.9	16,619	104,820	19.3	17,919	111,105	20.4	18,940	119,252
2024	95,859	17.9	17,159	105,741	19.3	18,501	112,081	20.4	19,555	120,299
2025	98,974	17.9	17,716	106,511	19.3	19,102	112,897	20.4	20,191	121,175
2026	102,191	17.9	18,292	107,113	19.3	19,723	113,535	20.4	20,847	121,860
2027	105,512	17.9	18,887	107,527	19.3	20,364	113,974	20.4	21,524	122,331
2028	108,941	17.9	19,500	107,732	19.3	21,026	114,192	20.4	22,224	122,565

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 81,694	22.4%	\$18,299	\$ 123,586	23.0%	\$18,790	\$ 127,471	25.5%	\$20,832	\$ 141,248
2020	84,349	22.4	18,894	125,279	23.0	19,400	129,217	25.5	21,509	143,183
2021	87,090	22.4	19,508	126,859	23.0	20,031	130,846	25.5	22,208	144,988
2022	89,920	22.4	20,142	128,309	23.0	20,682	132,342	25.5	22,930	146,646
2023	92,842	22.4	20,797	129,613	23.0	21,354	133,687	25.5	23,675	148,136
2024	95,859	22.4	21,472	130,751	23.0	22,048	134,861	25.5	24,444	149,437
2025	98,974	22.4	22,170	131,703	23.0	22,764	135,843	25.5	25,238	150,526
2026	102,191	22.4	22,891	132,447	23.0	23,504	136,611	25.5	26,059	151,377
2027	105,512	22.4	23,635	132,959	23.0	24,268	137,139	25.5	26,906	151,962
2028	108,941	22.4	24,403	133,213	23.0	25,056	137,401	25.5	27,780	152,252

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 28<sup>th</sup> 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 Velda Village Hills - 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-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 81,694	13.6%	\$11,110	\$ 73,129	16.8%	\$13,725	\$ 91,421	15.9%	\$12,989	\$ 89,234
2020	84,349	13.6	11,471	74,131	16.8	14,171	92,673	15.9	13,411	90,456
2021	87,090	13.6	11,844	75,066	16.8	14,631	93,842	15.9	13,847	91,597
2022	89,920	13.6	12,229	75,924	16.8	15,107	94,915	15.9	14,297	92,644
2023	92,842	13.6	12,627	76,695	16.8	15,597	95,879	15.9	14,762	93,585
2024	95,859	13.6	13,037	77,369	16.8	16,104	96,721	15.9	15,242	94,407
2025	98,974	13.6	13,460	77,933	16.8	16,628	97,426	15.9	15,737	95,095
2026	102,191	13.6	13,898	78,373	16.8	17,168	97,977	15.9	16,248	95,632
2027	105,512	13.6	14,350	78,676	16.8	17,726	98,356	15.9	16,776	96,002
2028	108,941	13.6	14,816	78,826	16.8	18,302	98,544	15.9	17,322	96,185

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2019	\$ 81,694	18.6%	\$15,195	\$ 103,490	19.9%	\$16,257	\$ 109,705	21.1%	\$17,237	\$ 117,750
2020	84,349	18.6	15,689	104,908	19.9	16,785	111,208	21.1	17,798	119,363
2021	87,090	18.6	16,199	106,231	19.9	17,331	112,610	21.1	18,376	120,868
2022	89,920	18.6	16,725	107,446	19.9	17,894	113,897	21.1	18,973	122,250
2023	92,842	18.6	17,269	108,538	19.9	18,476	115,054	21.1	19,590	123,492
2024	95,859	18.6	17,830	109,491	19.9	19,076	116,064	21.1	20,226	124,577
2025	98,974	18.6	18,409	110,289	19.9	19,696	116,909	21.1	20,884	125,484
2026	102,191	18.6	19,008	110,912	19.9	20,336	117,570	21.1	21,562	126,193
2027	105,512	18.6	19,625	111,341	19.9	20,997	118,025	21.1	22,263	126,681
2028	108,941	18.6	20,263	111,554	19.9	21,679	118,250	21.1	22,987	126,923

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2019	\$ 81,694	23.1%	\$18,871	\$ 127,995	23.7%	\$19,361	\$ 132,014	26.4%	\$21,567	\$ 146,261
2020	84,349	23.1	19,485	129,749	23.7	19,991	133,823	26.4	22,268	148,265
2021	87,090	23.1	20,118	131,385	23.7	20,640	135,510	26.4	22,992	150,135
2022	89,920	23.1	20,772	132,887	23.7	21,311	137,059	26.4	23,739	151,851
2023	92,842	23.1	21,447	134,237	23.7	22,004	138,452	26.4	24,510	153,394
2024	95,859	23.1	22,143	135,416	23.7	22,719	139,668	26.4	25,307	154,741
2025	98,974	23.1	22,863	136,402	23.7	23,457	140,685	26.4	26,129	155,868
2026	102,191	23.1	23,606	137,173	23.7	24,219	141,480	26.4	26,978	156,749
2027	105,512	23.1	24,373	137,703	23.7	25,006	142,027	26.4	27,855	157,355
2028	108,941	23.1	25,165	137,966	23.7	25,819	142,298	26.4	28,760	157,655

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 28<sup>th</sup> 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.