

CITY OF PEORIA
FIREFIGHTERS' PENSION FUND
ACTUARIAL VALUATION
AS OF JANUARY 1, 2018
CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING DECEMBER 31, 2018

June 22, 2018

Board of Trustees
City of Peoria
Firefighters' Pension Fund
419 Fulton Street
City Hall Building, Room 100
Peoria, IL 61602

Re: Actuarial Valuation Report – City of Peoria Firefighters' Pension Fund

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Peoria Firefighters' Pension Fund. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. Please note that this valuation may not be applicable for any other purposes.

The valuation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflects laws and regulations issued to date pursuant to the provisions of Article 4, Illinois Pension Code, as well as applicable federal laws and regulations. In our opinion, the assumptions used in this valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations.

In conducting the valuation, we have relied on personnel, plan design, and asset information supplied by the Board, financial reports prepared by the custodian bank and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.


The undersigned is familiar with the immediate and long-term aspects of pension valuations and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the City of Peoria, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the City of Peoria Firefighters' Pension Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 630-620-0200.

Respectfully submitted,

Foster & Foster, Inc.

By: 

Jason L. Franken
Enrolled Actuary #17-6888

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Enclosures

TABLE OF CONTENTS

Section	Title	Page
I	Introduction	
	a. Summary of Report	5
	b. Changes Since Prior Valuation	7
	c. Comparative Summary of Principal Valuation Results	8
II	Valuation Information	
	a. Development of Amortization Payment	14
	b. Detailed Actuarial (Gain)/Loss Analysis	15
	c. Reconciliation of Changes in Contribution Requirement	16
	d. Statutory Minimum Required Contribution	17
	e. Projection of Benefit Payments	18
	f. Actuarial Assumptions and Methods	19
	g. Glossary	21
III	Trust Fund	22
IV	Member Statistics	
	a. Statistical Data	26
	b. Age and Service Distribution	27
	c. Valuation Participant Reconciliation	28
V	Summary of Current Plan	29

SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Peoria Firefighters' Pension Fund, performed as of January 1, 2018, has been completed and the results are presented in this Report. The contribution amounts set forth herein are applicable to the plan/fiscal year ended December 31, 2018.

The contribution requirements, compared with those set forth in the January 1, 2017 actuarial report, are as follows:

Valuation Date	1/1/2018	1/1/2017
Applicable to Fiscal Year Ending	<u>12/31/2018</u>	<u>12/31/2017</u>
Total Recommended Contribution	\$12,840,301	\$13,428,882
% of Projected Annual Payroll	76.9%	76.1%
Member Contributions (Est.)	1,578,421	1,667,580
% of Projected Annual Payroll	9.5%	9.5%
City Recommended Contribution	11,261,880	11,761,302
% of Projected Annual Payroll	67.4%	66.6%


As you can see, the Total Recommended Contribution, shows a decrease when compared to the results determined in the January 1, 2017 actuarial valuation report. The decrease is attributable to the change in actuarial assumptions. Overall the plan experienced a net loss during the year.

Unfavorable plan experience resulted from active decrement experience that differed from expectations, assets that earned a 5.38% investment return (Actuarial basis) which fell short of the 6.75% assumption, and fewer inactive deaths than expected. This was partially offset by salary increases that were lower than expected.

The balance of this Report presents additional details of the actuarial valuation and the general operation of the Fund. The undersigned would be pleased to meet with the Board of Trustees to discuss the Report and answer any pending questions concerning its contents.

Respectfully submitted,

FOSTER & FOSTER, INC.

By: 

Jason L. Franken, FSA, EA, MAAA

CHANGES SINCE PRIOR VALUATION

Plan Changes Since Prior Valuation

No plan changes have occurred since the prior valuation.

Actuarial Assumption/Method Changes Since Prior Valuation

Based on the results of the 2017 Department of Insurance experience study, the following assumption changes were made:

- Updated retirement, termination and disability rate tables.
- Updated assumed salary increase rates.
- Reduced assumed payroll growth rate from 4.00% to 3.50%.

There were no method changes since the prior valuation.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Assump <u>1/1/2018</u>	Old Assump <u>1/1/2018</u>	<u>1/1/2017</u>
A. Participant Data			
Number Included			
Actives	190	190	207
Service Retirees	123	123	111
Beneficiaries	52	52	50
Disability Retirees	41	41	43
Terminated Vested	<u>6</u>	<u>6</u>	<u>4</u>
Total	412	412	415
Total Annual Payroll	\$16,694,040	\$16,694,040	\$17,637,015
Payroll Under Assumed Ret. Age	16,694,040	16,694,040	17,637,015
Annual Rate of Payments to:			
Service Retirees	8,864,292	8,864,292	7,632,488
Beneficiaries	2,305,039	2,305,039	2,126,909
Disability Retirees	2,586,810	2,586,810	2,648,064
Terminated Vested	148,725	148,725	37,505
B. Assets			
Actuarial Value	137,475,977	137,475,977	133,476,723
Market Value	139,706,855	139,706,855	124,891,466
C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	118,380,261	131,495,842	141,195,474
Disability Benefits	11,884,072	16,087,492	17,071,809
Death Benefits	2,142,942	2,122,318	2,307,242
Vested Benefits	4,622,508	5,210,502	5,377,140
Service Retirees	118,809,351	118,809,351	98,954,453
Beneficiaries	17,182,739	17,182,739	15,677,094
Disability Retirees	29,869,973	29,869,973	31,024,787
Terminated Vested	<u>1,778,932</u>	<u>1,778,932</u>	<u>383,153</u>
Total	304,670,778	322,557,149	311,991,152

C. Liabilities - (Continued)	New Assump <u>1/1/2018</u>	Old Assump <u>1/1/2018</u>	<u>1/1/2017</u>
Present Value of Future Salaries	173,857,353	187,340,097	194,100,724
Present Value of Future Member Contributions	16,438,213	17,713,006	18,352,223
Normal Cost (Retirement)	3,315,349	4,151,239	4,394,129
Normal Cost (Disability)	638,119	894,029	950,559
Normal Cost (Death)	126,459	129,453	140,213
Normal Cost (Vesting)	<u>242,169</u>	<u>287,419</u>	<u>296,179</u>
Total Normal Cost	4,322,096	5,462,140	5,781,080
Present Value of Future Normal Costs	41,378,625	55,693,785	58,220,375
Accrued Liability (Retirement)	86,096,301	88,678,963	96,467,136
Accrued Liability (Disability)	5,741,088	6,766,104	7,311,742
Accrued Liability (Death)	929,673	816,213	913,769
Accrued Liability (Vesting)	2,884,096	2,961,089	3,038,643
Accrued Liability (Inactives)	<u>167,640,995</u>	<u>167,640,995</u>	<u>146,039,487</u>
Total Actuarial Accrued Liability	263,292,153	266,863,364	253,770,777
Unfunded Actuarial Accrued Liability (UAAL)	125,816,176	129,387,387	120,294,054
Funded Ratio (AVA / AL)	52.2%	51.5%	52.6%

	New Assump <u>1/1/2018</u>	Old Assump <u>1/1/2018</u>	<u>1/1/2017</u>
D. Actuarial Present Value of Accrued Benefits			
Vested Accrued Benefits			
Inactives	167,640,995	167,640,995	146,039,487
Actives	45,180,284	47,911,127	49,380,545
Member Contributions	<u>16,125,366</u>	<u>16,125,366</u>	<u>17,259,183</u>
Total	228,946,645	231,677,488	212,679,215
Non-vested Accrued Benefits	<u>2,030,467</u>	<u>2,639,927</u>	<u>2,514,848</u>
Total Present Value Accrued Benefits	230,977,112	234,317,415	215,194,063
Funded Ratio (MVA / PVAB)	60.5%	59.6%	58.0%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	(3,340,303)	0	
New Accrued Benefits	0	18,017,731	
Benefits Paid	0	(12,981,841)	
Interest	0	14,087,462	
Other	<u>0</u>	<u>0</u>	
Total	(3,340,303)	19,123,352	

	New Assump	Old Assump	
Valuation Date	1/1/2018	1/1/2018	1/1/2017
Applicable to Fiscal Year Ending	<u>12/31/2018</u>	<u>12/31/2018</u>	<u>12/31/2017</u>
E. Pension Cost			
Normal Cost (with interest)	\$4,613,837	\$5,830,834	\$6,171,303
% of Total Annual Payroll ¹	27.7	35.0	35.0
Administrative Expenses (with interest)	191,493	191,493	150,620
% of Total Annual Payroll ¹	1.1	1.1	0.9
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 23 years (as of 1/1/2018, with interest)	8,034,971	7,883,579	7,106,959
% of Total Annual Payroll ¹	48.1	47.2	40.2
Total Recommended Contribution	12,840,301	13,905,906	13,428,882
% of Total Annual Payroll ¹	76.9	83.3	76.1
Expected Member Contributions	1,578,421	1,578,421	1,667,580
% of Total Annual Payroll ¹	9.5	9.5	9.5
Expected City Contribution	11,261,880	12,327,485	11,761,302
% of Total Annual Payroll ¹	67.4	73.8	66.6
F. Past Contributions			
Plan Years Ending:	<u>12/31/2017</u>		
Total Recommended Contribution	13,429,357		
City	11,761,302		
Actual Contributions Made:			
Members (excluding buyback)	1,668,055		
City	<u>8,398,175</u>		
Total	10,066,230		
G. Net Actuarial (Gain)/Loss	5,118,078		

¹ Contributions developed as of 1/1/2018 are expressed as a percentage of total annual payroll at 1/1/2018 of \$16,694,040.

H. Schedule Illustrating the Amortization of the Total Unfunded Actuarial Accrued Liability as of:

<u>Year</u>	<u>Projected Unfunded Accrued Liability</u>
2018	125,816,176
2019	126,273,797
2020	126,481,083
2025	122,747,972
2031	102,831,980
2036	65,776,814
2041	0

I. (i) 3 Year Comparison of Actual and Assumed Salary Increases


		<u>Actual</u>	<u>Assumed</u>
Year Ended	12/31/2017	5.63%	6.44%
Year Ended	12/31/2016	4.74%	6.06%
Year Ended	12/31/2015	4.55%	6.25%

(ii) 3 Year Comparison of Investment Return on Actuarial Value

		<u>Actual</u>	<u>Assumed</u>
Year Ended	12/31/2017	5.38%	6.75%
Year Ended	12/31/2016	4.69%	6.75%
Year Ended	12/31/2015	5.51%	6.75%

STATEMENT BY ENROLLED ACTUARY

This actuarial valuation was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of the Illinois Pension Code and adhere to the Actuarial Standards of Practice. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or recommended contribution rates have been taken into account in the valuation.



Jason L. Franken, FSA, EA, MAAA
Enrolled Actuary #17-6888

DEVELOPMENT OF JANUARY 1, 2018 AMORTIZATION PAYMENT

(1)	Unfunded Actuarial Accrued Liability as of January 1, 2017	\$120,294,054
(2)	Sponsor Normal Cost developed as of January 1, 2017	4,113,500
(3)	Expected administrative expenses for the year ended December 31, 2017	141,096
(4)	Expected interest on (1), (2) and (3)	8,402,272
(5)	Sponsor contributions to the System during the year ended December 31, 2017	8,398,175
(6)	Expected interest on (5)	283,438
(7)	Expected Unfunded Actuarial Accrued Liability as of December 31, 2017, (1)+(2)+(3)+(4)-(5)-(6)	124,269,309
(8)	Change to UAAL due to Assumption Change	(3,571,211)
(9)	Change to UAAL due to Actuarial (Gain)/Loss	5,118,078
(10)	Unfunded Accrued Liability as of January 1, 2018	125,816,176
(11)	UAAL Subject to Amortization (100% AAL less Actuarial Assets)	125,816,176

<u>Date</u> <u>Established</u>	<u>Years</u> <u>Remaining</u>	<u>1/1/2018</u> <u>Amount</u>	<u>Amortization</u> <u>Amount</u>
1/1/2018	23	125,816,176	7,526,905

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of January 1, 2017	\$120,294,054
(2) Expected UAAL as of January 1, 2018	124,269,309
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	1,810,973
Salary Increases	(933,548)
Active Decrements	1,814,157
Inactive Mortality	1,464,772
Other	<u>961,724</u>
Change in UAAL due to (Gain)/Loss	5,118,078
Assumption Changes	<u>(3,571,211)</u>
(4) Actual UAAL as of January 1, 2018	\$125,816,176

RECONCILIATION OF CHANGES IN CONTRIBUTION REQUIREMENT

(1) Contribution Determined as of January 1, 2017	\$11,761,302
(2) Summary of Contribution Impact by component:	
Change in Normal Cost	(340,469)
Change in Assumed Administrative Expense	40,873
Investment Return (Actuarial Asset Basis)	110,343
Salary Increases	(56,881)
New Entrants	0
Active Decrements	110,537
Inactive Mortality	89,249
Data Corrections	0
Contributions (More) or Less than Recommended	198,437
Increase in Amortization Payment Due to Payroll Growth Assumption	284,278
Change in Expected Member Contributions	89,159
Assumption Change	(1,065,605)
Other	<u>40,657</u>
Total Change in Contribution	(499,422)
(3) Contribution Determined as of January 1, 2018	\$11,261,880

STATUTORY MINIMUM REQUIRED CONTRIBUTION

Contribution requirements shown on this page are calculated according to statutory minimum funding requirements of the Illinois Pension Code. We do not believe this method is sufficient to fund future benefits; as such, we recommend funding according to the contributions developed in Section E of this report.

	New Assump	Old Assump	
Valuation Date	1/1/2018	1/1/2018	1/1/2017
Applicable to Fiscal Year Ending	<u>12/31/2018</u>	<u>12/31/2018</u>	<u>12/31/2017</u>
Actuarial Accrued Liability (PUC)	257,194,648	267,700,053	254,692,657
Actuarial Value of Assets	<u>137,475,977</u>	<u>137,475,977</u>	<u>133,476,723</u>
Unfunded Actuarial Accrued Liability (UAAL)	119,718,671	130,224,076	121,215,934
UAAL Subject to Amortization	93,999,206	103,454,071	95,746,668
Normal Cost (with interest)	\$5,103,160	\$5,887,739	\$6,219,979
% of Total Annual Payroll ¹	30.6	35.3	35.3
Administrative Expenses (with interest)	191,493	191,493	150,620
% of Total Annual Payroll ¹	1.1	1.1	0.9
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 23 years (as of 1/1/2018, with interest)	6,003,050	6,303,461	5,656,703
% of Total Annual Payroll ¹	36.0	37.8	32.0
Total Required Contribution	11,297,703	12,382,693	12,027,302
% of Total Annual Payroll ¹	67.7	74.2	68.2
Expected Member Contributions	1,578,421	1,578,421	1,667,580
% of Total Annual Payroll ¹	9.5	9.5	9.5
Expected City Contribution	9,719,282	10,804,272	10,359,722
% of Total Annual Payroll ¹	58.2	64.7	58.7
Assumptions and Methods:			
Actuarial Cost Method	Projected Unit Credit		
Amortization Method	90% Funding by 2040		

All other assumptions and methods are as described in the Actuarial Assumptions and Methods section.

¹ Contributions developed as of 1/1/2018 are expressed as a percentage of total annual payroll at 1/1/2018 of \$16,694,040.

PROJECTION OF BENEFIT PAYMENTS

Year	Payments for Current Actives	Payments for Current Inactives	Total Payments
2018	421,095	13,557,864	13,978,959
2019	829,675	13,623,004	14,452,679
2020	1,310,971	13,775,421	15,086,392
2021	1,865,574	13,826,853	15,692,427
2022	2,460,532	13,861,455	16,321,987
2023	3,125,821	13,856,711	16,982,532
2024	3,854,486	13,809,408	17,663,894
2025	4,598,857	13,769,998	18,368,855
2026	5,391,416	13,653,791	19,045,207
2027	6,176,392	13,514,170	19,690,562
2028	6,963,536	13,325,736	20,289,272
2029	7,763,817	13,100,071	20,863,888
2030	8,563,525	12,838,601	21,402,126
2031	9,371,765	12,565,669	21,937,434
2032	10,174,780	12,238,778	22,413,558
2033	11,003,354	11,882,419	22,885,773
2034	11,908,287	11,499,844	23,408,131
2035	12,827,499	11,138,460	23,965,959
2036	13,778,327	10,715,060	24,493,387
2037	14,704,460	10,276,123	24,980,583
2038	15,683,301	9,825,075	25,508,376
2039	16,623,636	9,364,353	25,987,989
2040	17,534,562	8,895,610	26,430,172
2041	18,386,385	8,423,459	26,809,844
2042	19,202,305	7,943,992	27,146,297
2043	19,954,881	7,461,310	27,416,191
2044	20,767,896	6,976,631	27,744,527
2045	21,524,798	6,492,374	28,017,172
2046	22,126,441	6,011,314	28,137,755
2047	22,678,308	5,535,185	28,213,493
2048	23,252,934	5,067,381	28,320,315
2049	23,650,737	4,611,382	28,262,119
2050	23,964,893	4,170,017	28,134,910
2051	24,191,614	3,745,926	27,937,540
2052	24,337,350	3,341,974	27,679,324
2053	24,405,105	2,960,383	27,365,488
2054	24,392,267	2,603,104	26,995,371
2055	24,295,527	2,270,702	26,566,229
2056	24,113,646	1,964,588	26,078,234
2057	23,843,922	1,685,739	25,529,661

ACTUARIAL ASSUMPTIONS AND METHODS

Mortality Rate ***Healthy Lives:***
 RP-2000 Combined Healthy Mortality with a Blue-Collar Adjustment, projected to valuation date using Scale AA. 5% of active deaths are assumed to be in the line of duty.

Disabled Lives:
 RP-2000 Disabled Retiree, projected to valuation date using Scale AA.

The mortality assumptions sufficiently accommodate future mortality improvements.

Interest Rate 6.75% per year compounded annually, net of investment related expenses.

Retirement Age See table on following page. This is based on an experience study performed in 2017.

Disability Rate See table on following page. This is based on an experience study performed in 2017. 90% of the disabilities are assumed to be in the line of duty.

Termination Rate See table on following page. This is based on an experience study performed in 2017.

Salary Increases See table below. This is based on an experience study performed in 2017.

Salary Scale	
Service	Rate
0	12.50%
1	12.00%
2	10.00%
3	8.50%
4	7.50%
5	6.00%
6	4.50%
7-26	4.00%
27-30	3.75%
31+	3.50%

Inflation 2.50%.

Payroll Growth 3.50% per year.

Cost-of-Living Adjustment	<p><u>Tier 1</u>: 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.</p> <p><u>Tier 2</u>: 1.25% per year after the later of attainment of age 60 or first anniversary of retirement.</p>
Administrative Expenses	Expenses paid out of the fund other than investment-related expenses are assumed to be equal to those paid in the previous year.
Marital Status	80% of Members are assumed to be married.
Spouse's Age	Males are assumed to be three years older than females.
Funding Method	Entry Age Normal Cost Method.
Actuarial Asset Method	Investment gains and losses are smoothed over a 5-year period.
Funding Policy Amortization Method	The UAAL is amortized according to a Level Percentage of Payroll method over a period ending in 2040. The initial amortization amount is 100% of the Accrued Liability less the Actuarial Value of Assets.

Decrement Tables

<u>% Terminating During the Year</u>		<u>% Becoming Disabled During the Year</u>		<u>% Retiring During the Year (Tier 1)</u>		<u>% Retiring During the Year (Tier 2)</u>	
<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	7.00%	20	0.010%	50-51	10%	50-54	3%
25	5.80%	25	0.016%	52-23	12%	55	30%
30	3.50%	30	0.068%	54-55	15%	56-59	20%
35	1.75%	35	0.220%	56-59	20%	60-62	25%
40	1.10%	40	0.420%	60-62	25%	63-64	33%
45	1.00%	45	0.650%	63-64	33%	65-69	50%
50	1.00%	50	0.900%	65-69	50%	70+	100%
55+	0.00%	55	1.240%	70+	100%		
		60	1.580%				

GLOSSARY

Total Annual Payroll is the projected annual rate of pay for the fiscal year following the valuation date of all covered members.

Present Value of Benefits is the single sum value on the valuation date of all future benefits to be paid to current Members, Retirees, Beneficiaries, Disability Retirees and Vested Terminations.

Normal (Current Year's) Cost is the current year's cost for benefits yet to be funded.

Unfunded Accrued Liability is a liability which arises when a pension plan is initially established or improved and such establishment or improvement is applicable to all years of past service.

Total Recommended Contribution is equal to the Normal Cost plus an amount sufficient to amortize the Unfunded Accrued Liability over a period ending in 2040. The recommended amount is adjusted for interest according to the timing of contributions during the year.

Entry Age Normal Cost Method - Under this method, the normal cost is the sum of the individual normal costs for all active participants. For an active participant, the normal cost is the participant's normal cost accrual rate, multiplied by the participant's current compensation.

- (a) The normal cost accrual rate equals:
 - (i) the present value of future benefits for the participant, determined as of the participant's entry age, divided by
 - (ii) the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.
- (b) In calculating the present value of future compensation, the salary scale is applied both retrospectively and prospectively to estimate compensation in years prior to and subsequent to the valuation year based on the compensation used for the valuation.
- (c) The accrued liability is the sum of the individual accrued liabilities for all participants and beneficiaries. A participant's accrued liability equals the present value, at the participant's attained age, of future benefits less the present value at the participant's attained age of the individual normal costs payable in the future. A beneficiary's accrued liability equals the present value, at the beneficiary's attained age, of future benefits. The unfunded accrued liability equals the total accrued liability less the actuarial value of assets.
- (d) Under this method, the entry age used for each active participant is the participant's age at the time he or she would have commenced participation if the plan had always been in existence under current terms, or the age as of which he or she first earns service credits for purposes of benefit accrual under the current terms of the plan.

STATEMENT OF FIDUCIARY NET POSITION
December 31, 2017

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Money Market	1,352,053
Cash	4,570,605
Total Cash and Equivalents	5,922,658
Receivables:	
From Participants	45,898
Accrued Past Due Interest	292,118
Total Receivable	338,016
Investments:	
State and Local Obligations	913,403
Corporate Bonds	24,100,288
U.S. Gov't and Agency Obligations	17,153,384
Stocks	24,446,981
Mutual Funds	66,878,043
Total Investments	133,492,099
Other Assets	6,461
Total Assets	139,759,234
<u>LIABILITIES</u>	
Liabilities:	
Payable:	
Accounts Payable	52,379
Total Liabilities	52,379
Net Assets:	
Active and Retired Members' Equity	139,706,855
NET POSITION RESTRICTED FOR PENSIONS	139,706,855
TOTAL LIABILITIES AND NET ASSETS	139,759,234

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED December 31, 2017
Market Value Basis

ADDITIONS

Contributions:

Member	1,668,055
City	8,398,175

Total Contributions	10,066,230
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Investment Income:

Net Increase in Fair Value of Investments	14,889,903
Interest & Dividends	3,334,972
Less Investment Expense ¹	(314,490)

Net Investment Income	17,910,385
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Total Additions	27,976,615
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DEDUCTIONS

Distributions to Members:

Benefit Payments	12,981,841
Refund of Contributions/Transfers	0

Total Distributions	12,981,841
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Administrative Expenses	179,385
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Total Deductions	13,161,226
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Net Increase in Net Position	14,815,389
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NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	124,891,466
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End of the Year	139,706,855
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¹ Investment Related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION

December 31, 2017

Actuarial Assets for funding purposes are developed by recognizing the total actuarial investment gain or loss for each Plan Year over a four year period. In each of the four years following a gain/loss, 25% of the gain/loss is used to adjust the prior year actuarial value of assets. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. Actuarial Assets shall not be less than 80% nor greater than 120% of the Market Value of Assets.

Plan Year Ending	Gain/(Loss)	Gains/(Losses) To Be Recognized by Year			
		Amounts Recognized in Valuation Year			
		2018	2019	2020	2021
12/31/2014	(3,645,250)	(911,313)	0	0	0
12/31/2015	(9,931,703)	(2,482,926)	(2,482,926)	0	0
12/31/2016	(2,677,213)	(669,303)	(669,303)	(669,303)	0
12/31/2017	9,003,457	2,250,864	2,250,864	2,250,864	2,250,864
Total		(1,812,678)	(901,365)	1,581,561	2,250,864

Development of Investment Gain/Loss

Expected Investment Earnings ¹	8,906,928
Actual Net Investment Earnings	17,910,385
2018 Actuarial Investment Gain/(Loss)	<u>9,003,457</u>

¹ Expected Investment Earnings = 6.75% x 133,476,723 + ((1 + 6.75%) ^ 0.5 - 1) x (10,066,230 + -13,161,226)

Development of Actuarial Value of Assets

Actuarial Value of Assets, 12/31/2016	133,476,723
Total Contributions for 2017	10,066,230
Total Benefit Payments and Expenses for 2017	(13,161,226)
Expected Investment Return for 2017	<u>8,906,928</u>
Expected Value of Assets as of 12/31/2017	139,288,655
Gains/(Losses) Recognized	<u>(1,812,678)</u>
Actuarial Value of Assets, 12/31/2017	137,475,977
Market Value of Assets, 12/31/2017	139,706,855
1/1/2018 Limited Actuarial Value of Assets	137,475,977

Development of Return on Assets

(A) 12/31/2016 Actuarial Assets:	133,476,723
(I) Net Investment Income:	
1. Interest and Dividends	3,337,668
2. Realized Gains (Losses)	0
3. Change in Actuarial Value	4,071,072
4. Investment Expenses	<u>(314,490)</u>
Total	7,094,250
(B) 12/31/2017 Actuarial Assets:	137,475,977
Actuarial Asset Rate of Return = (2 x I) / (A + B - I):	5.38%
Market Value of Assets Rate of Return:	14.52%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	(1,810,973)

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
December 31, 2017
Actuarial Asset Basis

INCOME		
Contributions:		
Member	1,668,055	
City	8,398,175	
Total Contributions		10,066,230
Earnings from Investments		
Interest & Dividends	3,334,972	
Miscellaneous Income	2,696	
Net Realized Gain (Loss)	0	
Change in Actuarial Value	4,071,072	
Total Earnings and Investment Gains		7,408,740
EXPENSES		
Administrative Expenses:		
Investment Related ¹	314,490	
Other	179,385	
Total Administrative Expenses		493,875
Distributions to Members:		
Benefit Payments	12,981,841	
Refund of Contributions/Transfers	0	
Total Distributions		12,981,841
Change in Net Assets for the Year		3,999,254
Net Assets Beginning of the Year		133,476,723
Net Assets End of the Year ²		137,475,977

¹ Investment Related expenses include investment advisory, custodial and performance monitoring fees.

² Net Assets may be limited for actuarial consideration.

STATISTICAL DATA

	<u>1/1/2015</u>	<u>1/1/2016</u>	<u>1/1/2017</u>	<u>1/1/2018</u>
<u>Actives - Tier 1</u>				
Number	181	174	166	150
Average Current Age	43.5	43.9	44.4	44.2
Average Age at Employment	26.7	26.5	26.4	26.5
Average Past Service	16.8	17.4	18.0	17.7
Average Annual Salary	\$85,009	\$87,856	\$91,359	\$93,838
<u>Actives - Tier 2</u>				
Number	21	21	41	40
Average Current Age	30.7	31.7	30.2	31.0
Average Age at Employment	28.7	28.7	28.2	28.2
Average Past Service	2.0	3.0	2.0	2.8
Average Annual Salary	\$56,568	\$62,198	\$60,279	\$65,459
<u>Service Retirees</u>				
Number	111	111	111	123
Average Current Age	73.6	70.7	70.4	69.3
Average Annual Benefit	\$62,724	\$65,927	\$68,761	\$72,067
<u>Beneficiaries</u>				
Number	57	56	50	52
Average Current Age	70.0	77.0	77.2	77.4
Average Annual Benefit	\$37,430	\$40,342	\$42,538	\$44,328
<u>Disability Retirees</u>				
Number	41	40	43	41
Average Current Age	67.7	68.2	67.9	68.7
Average Annual Benefit	\$59,119	\$60,715	\$61,583	\$63,093
<u>Terminated Vested</u>				
Number	4	4	4	6
Average Current Age	36.4	37.4	38.4	41.4
Average Annual Benefit ¹	\$18,753	\$18,753	\$18,753	\$37,181

¹ Average Annual Benefit for Terminated Vested members reflects the benefit for members entitled to a future annual benefit from the plan.

AGE AND SERVICE DISTRIBUTION

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	0	0	0	0	0	0	0	0	0	0	0	0
25 - 29	1	15	0	3	0	1	0	0	0	0	0	20
30 - 34	0	3	0	2	0	22	3	0	0	0	0	30
35 - 39	0	2	0	0	0	14	17	1	0	0	0	34
40 - 44	0	0	0	0	0	6	5	14	4	0	0	29
45 - 49	0	0	0	0	0	0	1	9	25	4	0	39
50 - 54	0	0	0	0	0	0	0	6	10	12	0	28
55 - 59	0	0	0	0	1	0	0	1	2	3	1	8
60 - 64	0	0	0	0	0	0	0	0	0	1	0	1
65+	0	0	0	0	0	0	0	0	0	0	1	1
Total	1	20	0	5	1	43	26	31	41	20	2	190

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 1/1/2017	207
b. Terminations	
i. Vested (partial or full) with deferred benefits	(2)
ii. Non-vested or full lump sum distribution received	0
iii. Transferred service to other fund	0
c. Deaths	
i. Beneficiary receiving benefits	(1)
ii. No future benefits payable	0
d. Disabled	0
e. Retired	<u>(15)</u>
f. Continuing participants	189
g. New entrants	<u>1</u>
h. Total active life participants in valuation	190

2. Non-Active lives (including beneficiaries receiving benefits)

	Service Retirees, Vested Receiving <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested <u>Deferred</u>	<u>Total</u>
a. Number prior valuation	111	50	43	4	208
Retired	15	0	0	0	15
Vested Deferred	0	0	0	2	2
Death, With Survivor	(2)	4	(1)	0	1
Death, No Survivor	(1)	(2)	(1)	0	(4)
Disabled	0	0	0	0	0
Refund of Contributions	0	0	0	0	0
Rehires	0	0	0	0	0
Expired Annuities	0	0	0	0	0
Data Corrections	0	0	0	0	0
Hired/Termed in Same Year	0	0	0	0	0
b. Number current valuation	123	52	41	6	222

SUMMARY OF CURRENT PLAN

Article 4 Pension Fund

The Plan is established and administered as prescribed by “Article 4. Firefighters’ Pension Fund – Municipalities 500,000 and Under” of the Illinois Pension Code.

Plan Administration

The Plan is administered by a Board of Trustees comprised of:

- a) Two members appointed by the Municipality,
- b) Two active Members of the Fire Department elected by the Membership, and
- c) One retired Member of the Fire Department elected by the Membership.

Credited Service

Years and fractional parts of years of service (except as noted below) as a sworn Firefighter employed by the Municipality.

Salary

Annual salary, including longevity, attached to firefighter’s rank, as established by the municipality appropriation ordinance, excluding overtime pay, bonus pay and holiday pay except for the base 8 hours of the 10 pensionable holidays which is included.

Normal Retirement

Date

Tier 1: Age 50 and 20 years of Credited Service.

Tier 2: Age 55 and 10 years of Credited Service.

Benefit

Tier 1: 50% of annual salary attached to rank on last day of service plus 2.50% of annual salary for each year of service over 20 years, up to a maximum of 75% of salary. The minimum monthly benefit is \$1,159.27 per month.

Tier 2: 2.50% per year of service times the average salary for the eight consecutive years prior to retirement times the number of years of service, up to a maximum of 75% of average salary. The minimum monthly benefit is \$1,159.27 per month.

Form of Benefit

Tier 1: For married retirees, an annuity payable for the life of the Member; upon the death of the member, 100% of the Member’s benefit payable to the spouse until death. For unmarried retirees, the normal form is a Single Life Annuity.

Tier 2: Same as above, but with 66 2/3% of benefit continued to spouse.

Early Retirement

Date	Tier 1: Age 60 and 10 years of Credited Service. Tier 2: Age 50 and 10 years of Credited Service.
Benefit	Tier 1: 1.5% plus 0.1% for each year of service in excess of 10 years, times salary x service (complete years). Tier 2: Normal Retirement Benefit, reduced 6% for each year before age 55, with no minimum benefit.
Form of Benefit	Same as Normal Retirement

Disability Benefit

Eligibility Total and permanent as determined by the Board of Trustees. Seven years of service required for non-service connected disability.

Benefit Amount A maximum of:

- a.) 65% of salary attached to the rank held by Member on last day of service, and;
- b.) The monthly retirement pension that the Member is entitled to receive if he or she retired immediately.

For non-service connected disabilities, a benefit of 50% of salary attached to rank held by Member on last day of service.

Cost-of-Living Adjustment

Tier 1:

Retirees: An annual increase equal to 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.

Disabled Retirees: An annual increase equal to 3.00% per year of the original benefit amount beginning at age 60. Those that become disabled prior to age 60 receive an increase of 3.00% of the original benefit amount for each year since benefit commencement upon reaching age 60.

Tier 2: An annual increase each January 1 equal to 3.00% per year or one-half of the annual unadjusted percentage increase in the consumer price index-u for the 12 months ending with the September preceding each November 1, whichever is less, of the original pension after the attainment of age 60 or first anniversary of pension start date whichever is later.

Pre-Retirement Death Benefit

Service Incurred	100% of salary attached to rank held by Member on last day of service.
Non-Service Incurred	A maximum of: a.) 54% of salary attached to the rank held by Member on last day of service, and; b.) The monthly retirement pension earned by the deceased Member at the time of death, regardless of whether death occurs before or after age 50.

Vesting (Termination)

Vesting Service Requirement	10 years.
Non-Vested Benefit	Refund of Member Contributions.
Vested Benefit	Either the termination benefit, payable upon reaching age 60 (55 for Tier 2, provided contributions are not withdrawn, or a refund of member contributions.
Termination Benefit	Based on the monthly salary attached to the Member's rank at separation from service and equals: Tier 1: 1.5% plus 0.1% for each year of service in excess of 10 years, times salary x service (based on complete years). Tier 2: 2.50% of 8-year final average salary times creditable service.

Contributions

Employee	9.455% of Salary.
Municipality	Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability.