

CITY OF NAPERVILLE  
POLICE PENSION FUND

ACTUARIAL VALUATION  
AS OF JANUARY 1, 2018

CONTRIBUTIONS APPLICABLE TO THE  
PLAN/FISCAL YEAR ENDING DECEMBER 31, 2019

GASB 67/68 DISCLOSURE INFORMATION  
AS OF DECEMBER 31, 2017

June 28, 2018

Rachel Mayer  
Finance Director  
City of Naperville  
Naperville, IL 60540

Re: Actuarial Valuation Report (including GASB Statements No. 67 and No. 68) – City of Naperville Police Pension Fund

Dear Ms. Mayer:

We are pleased to present to the City this report of the annual actuarial valuation of the City of Naperville Police Pension Fund. Included are the related results for GASB Statements No. 67 and No. 68. The funding 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. The calculation of the liability for GASB results was performed for the purpose of satisfying the requirements of GASB Statements No. 67 and No. 68. Use of the results for other purposes may not be applicable and produce significantly different results.

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 3, 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 City, 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 total pension liability, net pension liability, and certain sensitivity information shown in this report are based on an actuarial valuation performed as of January 1, 2017. The total pension liability was rolled-forward from the valuation date to the plan's year ending December 31, 2017 using generally accepted actuarial principles. It is our opinion that the assumptions used for this purpose are internally consistent, reasonable, and comply with the requirements under GASB No. 67 and No. 68.

Certain schedules should include a 10-year history of information. As provided for in GASB Statements No. 67 and No. 68, this historical information is only presented for the years in which the information was measured. This conforms to the requirements of GASB Statements No. 67 and No. 68.

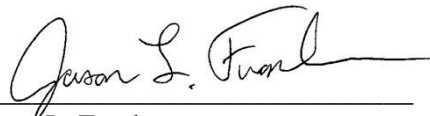
The undersigned is familiar with the immediate and long-term aspects of pension valuations and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the 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 Naperville, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the City of Naperville Police 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

JLF/lke  
Enclosures

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## SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Naperville Police 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, 2019.

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>12/31/2019</u>	<u>12/31/2018</u>
Total Recommended Contribution	\$8,817,195	\$8,842,771
% of Projected Annual Payroll	49.3%	51.1%
Member Contributions (Est.)	1,773,225	1,713,577
% of Projected Annual Payroll	9.9%	9.9%
City Recommended Contribution	7,043,970	7,129,194
% of Projected Annual Payroll	39.4%	41.2%


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 net favorable experience realized by the plan during the year, and is offset in part by the natural increase in the amortization payment due to the plan's payroll growth assumption of 4.50%.

Sources of favorable experience included an 8.55% investment rate of return (Actuarial Asset basis) which exceeded the 7.00% assumption, an average salary increase that was lower than expected, and more inactive mortality than expected. These gains were offset by a loss associated with less turnover than assumed.

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

### Plan Changes Since Prior Valuation

No plan changes have occurred since the prior valuation.

### Actuarial Assumption/Method Changes Since Prior Valuation

There were no assumption or method changes since the prior valuation.

## COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	<u>1/1/2018</u>	<u>1/1/2017</u>
<b>A. Participant Data</b>		
Number Included		
Actives	167	165
Service Retirees	77	74
Beneficiaries	9	10
Disability Retirees	5	5
Terminated Vested	<u>7</u>	<u>6</u>
Total	265	260
Total Annual Payroll	\$17,893,292	\$17,291,395
Payroll Under Assumed Ret. Age	17,893,292	17,291,395
Annual Rate of Payments to:		
Service Retirees	6,237,252	5,808,443
Beneficiaries	355,830	455,419
Disability Retirees	285,295	266,049
Terminated Vested	133,950	74,723
<b>B. Assets</b>		
Actuarial Value	165,275,307	150,731,021
Market Value	173,941,454	152,154,660
<b>C. Liabilities</b>		
Present Value of Benefits		
Actives		
Retirement Benefits	121,777,032	117,449,021
Disability Benefits	9,269,095	9,225,505
Death Benefits	1,843,485	1,842,330
Vested Benefits	8,761,741	8,938,334
Service Retirees	97,118,412	91,585,204
Beneficiaries	3,252,562	4,323,306
Disability Retirees	4,199,305	3,950,356
Terminated Vested	<u>1,613,766</u>	<u>601,564</u>
Total	247,835,398	237,915,620



C. Liabilities - (Continued)	<u>1/1/2018</u>	<u>1/1/2017</u>
Present Value of Future Salaries	154,294,823	151,494,271
Present Value of Future Member Contributions	15,290,617	15,013,082
Normal Cost (Retirement)	3,042,044	3,010,348
Normal Cost (Disability)	595,799	581,944
Normal Cost (Death)	75,427	76,217
Normal Cost (Vesting)	<u>434,386</u>	<u>429,169</u>
Total Normal Cost	4,147,656	4,097,678
Present Value of Future Normal Costs	31,110,111	31,745,653
Accrued Liability (Retirement)	98,672,937	93,767,428
Accrued Liability (Disability)	4,473,617	4,425,338
Accrued Liability (Death)	1,302,094	1,285,275
Accrued Liability (Vesting)	6,092,594	6,231,496
Accrued Liability (Inactives)	<u>106,184,045</u>	<u>100,460,430</u>
Total Actuarial Accrued Liability	216,725,287	206,169,967
Unfunded Actuarial Accrued Liability (UAAL)	51,449,980	55,438,946
Funded Ratio (AVA / AL)	76.3%	73.1%

	<u>1/1/2018</u>	<u>1/1/2017</u>
D. Actuarial Present Value of Accrued Benefits		
Vested Accrued Benefits		
Inactives	106,184,045	100,460,430
Actives	44,708,413	39,974,657
Member Contributions	<u>20,289,462</u>	<u>19,258,300</u>
Total	171,181,920	159,693,387
Non-vested Accrued Benefits	<u>5,051,908</u>	<u>5,371,092</u>
Total Present Value Accrued Benefits	176,233,828	165,064,479
Funded Ratio (MVA / PVAB)	98.7%	92.2%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:		
Plan Amendments	0	
Assumption Changes	0	
New Accrued Benefits	6,671,099	
Benefits Paid	(6,817,646)	
Interest	11,315,896	
Other	<u>0</u>	
Total	11,169,349	

Valuation Date	1/1/2018	1/1/2017
Applicable to Fiscal Year Ending	<u>12/31/2019</u>	<u>12/31/2018</u>

#### E. Pension Cost

Normal Cost <sup>1</sup>	\$4,437,992	\$4,384,515
% of Total Annual Payroll <sup>1</sup>	24.8	25.4
Administrative Expenses <sup>1</sup>	71,092	57,686
% of Total Annual Payroll <sup>1</sup>	0.4	0.3
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 15 years (as of 1/1/2018) <sup>1</sup>	4,308,111	4,400,570
% of Total Annual Payroll <sup>1</sup>	24.1	25.4
Total Recommended Contribution	8,817,195	8,842,771
% of Total Annual Payroll <sup>1</sup>	49.3	51.1
Expected Member Contributions <sup>1</sup>	1,773,225	1,713,577
% of Total Annual Payroll <sup>1</sup>	9.9	9.9
Expected City Contribution	7,043,970	7,129,194
% of Total Annual Payroll <sup>1</sup>	39.4	41.2

#### F. Past Contributions

Plan Years Ending:	<u>12/31/2017</u>
Total Recommended Contribution	8,327,309
City	6,538,474
Actual Contributions Made:	
Members (excluding buyback)	1,788,835
City	<u>6,677,807</u>
Total	8,466,642

G. Net Actuarial (Gain)/Loss	(3,564,949)
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<sup>1</sup> Contributions developed as of 1/1/2018 displayed above have been adjusted to account for assumed interest.

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

<u>Year</u>	<u>Projected Unfunded Accrued Liability</u>
2018	51,449,980
2019	50,743,368
2020	49,793,428
2023	45,214,924
2027	33,867,754
2030	20,009,387
2033	0

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

		<u>Actual</u>	<u>Assumed</u>
Year Ended	12/31/2017	3.69%	5.37%
Year Ended	12/31/2016	4.63%	5.00%
Year Ended	12/31/2015	3.50%	5.00%

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

		<u>Actual</u>	<u>Assumed</u>
Year Ended	12/31/2017	8.55%	7.00%
Year Ended	12/31/2016	7.27%	7.00%
Year Ended	12/31/2015	N/A	N/A

## 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.

A handwritten signature in black ink, reading "Jason L. Franken". The signature is fluid and cursive, with a long horizontal line extending from the end.

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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	\$55,438,946
(2)	Sponsor Normal Cost developed as of January 1, 2017	2,384,101
(3)	Expected administrative expenses for the year ended December 31, 2017	53,912
(4)	Expected interest on (1), (2) and (3)	4,049,500
(5)	Sponsor contributions to the System during the year ended December 31, 2017	6,677,807
(6)	Expected interest on (5)	233,723
(7)	Expected Unfunded Actuarial Accrued Liability as of December 31, 2017, (1)+(2)+(3)+(4)-(5)-(6)	55,014,929
(8)	Change to UAAL due to Assumption Change	0
(9)	Change to UAAL due to Actuarial (Gain)/Loss	(3,564,949)
(10)	Unfunded Accrued Liability as of January 1, 2018	51,449,980
(11)	UAAL Subject to Amortization (100% AAL less Actuarial Assets)	51,449,980

<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	15	51,449,980	4,026,272

## DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of January 1, 2017	\$55,438,946
(2) Expected UAAL as of January 1, 2018	55,014,929
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	(2,355,170)
Salary Increases	(1,819,282)
Active Decrements	308,337
Inactive Mortality	(212,041)
Other	<u>513,207</u>
Change in UAAL due to (Gain)/Loss	(3,564,949)
Assumption Changes	<u>0</u>
(4) Actual UAAL as of January 1, 2018	\$51,449,980

## RECONCILIATION OF CHANGES IN CONTRIBUTION REQUIREMENT

(1) Contribution Determined as of January 1, 2017	\$ 7,129,194
(2) Summary of Contribution Impact by component:	
Change in Normal Cost	53,477
Change in Assumed Administrative Expense	13,406
Investment Return (Actuarial Asset Basis)	(197,208)
Salary Increases	(152,336)
Active Decrements	25,818
Inactive Mortality	(17,755)
Contributions (More) or Less than Recommended	(11,285)
Increase in Amortization Payment Due to Payroll Growth Assumption	198,026
Change in Expected Member Contributions	(59,648)
Assumption Change	-
Other	<u>62,281</u>
Total Change in Contribution	(85,224)
(3) Contribution Determined as of January 1, 2018	\$7,043,970



## 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.

Valuation Date	1/1/2018	1/1/2017
Applicable to Fiscal Year Ending	<u>12/31/2019</u>	<u>12/31/2018</u>
Actuarial Accrued Liability (PUC)	210,129,725	199,200,826
Actuarial Value of Assets	<u>169,751,954</u>	<u>156,905,883</u>
Unfunded Actuarial Accrued Liability (UAAL)	40,377,771	42,294,943
UAAL Subject to Amortization	19,364,799	22,374,860
Normal Cost <sup>1</sup>	\$5,433,566	\$5,312,697
% of Total Annual Payroll <sup>1</sup>	30.3	30.7
Administrative Expenses <sup>1</sup>	71,092	57,686
% of Total Annual Payroll <sup>1</sup>	0.4	0.3
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 23 years (as of 1/1/2018) <sup>1</sup>	1,154,208	1,291,840
% of Total Annual Payroll <sup>1</sup>	6.5	7.5
Total Required Contribution	6,658,866	6,662,223
% of Total Annual Payroll <sup>1</sup>	37.2	38.5
Expected Member Contributions <sup>1</sup>	1,773,225	1,713,577
% of Total Annual Payroll <sup>1</sup>	9.9	9.9
Expected City Contribution	4,885,641	4,948,646
% of Total Annual Payroll <sup>1</sup>	27.3	28.6
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 sect

<sup>1</sup> Contributions developed as of 1/1/2018 displayed above have been adjusted to account for assumed interest.

# PROJECTION OF BENEFIT PAYMENTS

Year	Payments for Current Actives	Payments for Current Inactives	Total Payments
2018	592,774	6,847,096	7,439,870
2019	1,213,101	6,987,827	8,200,928
2020	1,961,718	7,239,092	9,200,810
2021	2,783,231	7,395,975	10,179,206
2022	3,621,113	7,549,208	11,170,321
2023	4,488,211	7,673,317	12,161,528
2024	5,424,688	7,815,978	13,240,666
2025	6,397,584	7,959,953	14,357,537
2026	7,385,907	8,088,503	15,474,410
2027	8,345,737	8,246,829	16,592,566
2028	9,271,066	8,375,041	17,646,107
2029	10,278,100	8,471,408	18,749,508
2030	11,243,811	8,585,045	19,828,856
2031	12,106,003	8,651,672	20,757,675
2032	12,934,137	8,701,035	21,635,172
2033	13,756,591	8,756,396	22,512,987
2034	14,557,015	8,768,569	23,325,584
2035	15,279,504	8,759,514	24,039,018
2036	15,940,721	8,727,766	24,668,487
2037	16,587,698	8,671,346	25,259,044
2038	17,212,771	8,588,634	25,801,405
2039	17,844,309	8,477,944	26,322,253
2040	18,446,955	8,337,711	26,784,666
2041	19,017,205	8,166,501	27,183,706
2042	19,581,292	7,962,974	27,544,266
2043	20,113,302	7,725,982	27,839,284
2044	20,606,843	7,455,231	28,062,074
2045	21,070,021	7,151,069	28,221,090
2046	21,412,606	6,815,137	28,227,743
2047	21,716,434	6,450,389	28,166,823
2048	21,907,141	6,060,258	27,967,399
2049	22,056,520	5,649,227	27,705,747
2050	22,127,504	5,222,496	27,350,000
2051	22,114,635	4,785,574	26,900,209
2052	22,024,471	4,344,356	26,368,827
2053	21,852,102	3,905,990	25,758,092
2054	21,591,541	3,477,365	25,068,906
2055	21,241,705	3,064,064	24,305,769
2056	20,799,430	2,671,538	23,470,968
2057	20,265,100	2,304,481	22,569,581

## ACTUARIAL ASSUMPTIONS AND METHODS

Mortality Rate	RP-2000 Combined Healthy Mortality with a blue collar adjustment, projected to the valuation date with Scale BB. We believe this reflects a sufficient cushion for mortality improvements. 5% of active deaths are assumed to be in the line of duty.																								
Disabled Mortality Rate	RP-2000 Disabled Retiree Mortality, projected to the valuation date with Scale BB. We believe this reflects a sufficient cushion for mortality improvements.																								
Interest Rate	7.00% per year compounded annually, net of investment related expenses. This is approximately supported by the Fund's long-term expected rate of returns by asset class. We will continue to monitor this assumption to ensure it is in line with actual plan experience.																								
Retirement Age	See table on following page. This is based on an experience study performed in 2012.																								
Disability Rate	See table on following page. 70% of the disabilities are assumed to be in the line of duty. This is based on an experience study performed in 2012.																								
Termination Rate	See table on following page. This is based on an experience study performed in 2012.																								
Salary Increases	Graded schedule based on service. This is based on an experience study performed in 2012.																								
	<table> <tr> <th>Service</th><th>Increase</th></tr> <tr><td>0</td><td>11.00%</td></tr> <tr><td>1</td><td>10.00%</td></tr> <tr><td>2</td><td>9.00%</td></tr> <tr><td>3</td><td>8.00%</td></tr> <tr><td>4</td><td>8.00%</td></tr> <tr><td>5</td><td>7.00%</td></tr> <tr><td>6</td><td>6.00%</td></tr> <tr><td>7</td><td>5.50%</td></tr> <tr><td>8 - 14</td><td>5.00%</td></tr> <tr><td>15 - 29</td><td>4.50%</td></tr> <tr><td>30</td><td>4.00%</td></tr> </table>	Service	Increase	0	11.00%	1	10.00%	2	9.00%	3	8.00%	4	8.00%	5	7.00%	6	6.00%	7	5.50%	8 - 14	5.00%	15 - 29	4.50%	30	4.00%
Service	Increase																								
0	11.00%																								
1	10.00%																								
2	9.00%																								
3	8.00%																								
4	8.00%																								
5	7.00%																								
6	6.00%																								
7	5.50%																								
8 - 14	5.00%																								
15 - 29	4.50%																								
30	4.00%																								
Payroll Growth	4.50% per year.																								
Inflation	2.50%.																								

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	Male spouses are assumed to be three years older than female spouses.
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 2032. The initial amortization amount is 100% of the Accrued Liability less the Actuarial Value of Assets.

<u>% Terminating</u>		<u>Decrement Tables</u>		<u>% Retiring</u>	
<u>During the Year</u>		<u>% Becoming Disabled</u>		<u>During the Year</u>	
<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
15 - 24	10.00%	20	0.05%	<=49	0%
25	7.50%	25	0.05%	50 - 54	20%
26 - 27	6.25%	30	0.22%	55 - 59	25%
28 - 31	5.00%	35	0.26%	60 - 62	33%
32 - 34	4.00%	40	0.40%	63 - 69	50%
35 - 37	3.00%	45	0.65%	>=70	100%
38 - 49	2.00%	50	0.95%		
>=50	3.50%	55	1.30%		
		60	1.65%		
		65	2.00%		

## 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 2032. 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:	
Checking Account	2,194,003
Certificates of Deposit	527,818
Money Market	942,520
Total Cash and Equivalents	3,664,341
Receivables:	
Contributions Due from City	478,673
Prepays	11,920
Accrued Past Due Interest	555,742
Total Receivable	1,046,335
Investments:	
Municipal Obligations	274,808
Corporate Bonds	19,413,021
U.S. Gov't and Agency Obligations	37,350,924
Insurance Company Contracts	14,443,075
Stocks	17,209,391
Mutual Funds	80,605,833
Total Investments	169,297,052
Total Assets	174,007,728
<u>LIABILITIES</u>	
Liabilities:	
Payable:	
Expenses	66,274
Total Liabilities	66,274
Net Assets:	
Active and Retired Members' Equity	173,941,454
NET POSITION RESTRICTED FOR PENSIONS	173,941,454
TOTAL LIABILITIES AND NET ASSETS	174,007,728

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

ADDITIONS

Contributions:

Member	1,788,835
Buybacks	0
City	6,677,807

Total Contributions		8,466,642
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Investment Income:

Miscellaneous Income	94,832	
Net Realized Gain (Loss)	(210,090)	
Unrealized Gain (Loss)	15,503,288	
Net Increase in Fair Value of Investments		15,388,030
Interest & Dividends		5,088,684
Less Investment Expense <sup>1</sup>		(272,475)

Net Investment Income		20,204,239
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Total Additions		28,670,881
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DEDUCTIONS

Distributions to Members:

Benefit Payments	6,807,711
Refund of Contributions/Transfers	9,935

Total Distributions		6,817,646
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Administrative Expenses		66,441
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Total Deductions		6,884,087
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Net Increase in Net Position		21,786,794
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NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year		152,154,660
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End of the Year		173,941,454
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<sup>1</sup> 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 five year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. 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.

		Gains/(Losses) Not Yet Recognized				
Plan Year Ending	Gain/(Loss)	Amounts Not Yet Recognized by Valuation Year				
		2018	2019	2020	2021	2022
12/31/2016	1,779,549	1,067,729	711,820	355,910	0	0
12/31/2017	9,498,023	7,598,418	5,698,814	3,799,209	1,899,605	0
Total		8,666,147	6,410,634	4,155,119	1,899,605	0

## Development of Investment Gain/Loss

Market Value of Assets, 12/31/2016	152,154,660
Contributions Less Benefit Payments & Administrative Expenses	1,582,555
Expected Investment Earnings <sup>1</sup>	10,706,216
Actual Net Investment Earnings	20,204,239
2018 Actuarial Investment Gain/(Loss)	9,498,023

<sup>1</sup> Expected Investment Earnings = 7.00% x (152,154,660 + 0.5 x 1,582,555)

## Development of Actuarial Value of Assets

Market Value of Assets, 12/31/2017	173,941,454
(Gains)/Losses Not Yet Recognized	(8,666,147)
Actuarial Value of Assets, 12/31/2017	165,275,307
(A) 12/31/2016 Actuarial Assets:	150,731,021
(I) Net Investment Income:	
1. Interest and Dividends	5,183,516
2. Realized Gains (Losses)	(210,090)
3. Change in Actuarial Value	8,260,780
4. Investment Expenses	(272,475)
Total	12,961,731
(B) 12/31/2017 Actuarial Assets:	165,275,307
Actuarial Asset Rate of Return = (2 x I) / (A + B - I):	8.55%
Market Value of Assets Rate of Return:	13.14%
12/31/2017 Limited Actuarial Assets:	165,275,307
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	2,355,170



# CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

December 31, 2017  
Actuarial Asset Basis

INCOME		
Contributions:		
Member	1,788,835	
Buybacks	0	
City	6,677,807	
Total Contributions		8,466,642
Earnings from Investments		
Interest & Dividends	5,088,684	
Miscellaneous Income	94,832	
Net Realized Gain (Loss)	(210,090)	
Change in Actuarial Value	8,260,780	
Total Earnings and Investment Gains		13,234,206
EXPENSES		
Administrative Expenses:		
Investment Related <sup>1</sup>	272,475	
Other	66,441	
Total Administrative Expenses		338,916
Distributions to Members:		
Benefit Payments	6,807,711	
Refund of Contributions/Transfers	9,935	
Total Distributions		6,817,646
Change in Net Assets for the Year		14,544,286
Net Assets Beginning of the Year		150,731,021
Net Assets End of the Year <sup>2</sup>		165,275,307

<sup>1</sup> Investment Related expenses include investment advisory, custodial and performance monitoring fees.

<sup>2</sup> Net Assets may be limited for actuarial consideration.

# ACTUARIAL ASSET VALUATION - STATUTORY CALCULATION

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 five year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. 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) Not Yet Recognized				
		Amounts Not Yet Recognized by Valuation Year				
		2018	2019	2020	2021	2022
12/31/2014	(462,395)	(92,479)	0	0	0	0
12/31/2015	(10,960,421)	(4,384,168)	(2,192,084)	0	0	0
12/31/2016	1,779,549	1,067,729	711,820	355,910	0	0
12/31/2017	9,498,023	7,598,418	5,698,814	3,799,209	1,899,605	0
Total		4,189,500	4,218,550	4,155,119	1,899,605	0

## Development of Investment Gain/Loss

Market Value of Assets, 12/31/2016	152,154,660
Contributions Less Benefit Payments & Administrative Expenses	1,582,555
Expected Investment Earnings <sup>1</sup>	10,706,216
Actual Net Investment Earnings	20,204,239
2018 Actuarial Investment Gain/(Loss)	9,498,023

<sup>1</sup> Expected Investment Earnings = 7.00% x (152,154,660 + 0.5 x 1,582,555)

## Development of Actuarial Value of Assets

Market Value of Assets, 12/31/2017	173,941,454
(Gains)/Losses Not Yet Recognized	(4,189,500)
Actuarial Value of Assets, 12/31/2017	169,751,954

(A) 12/31/2016 Actuarial Assets: 156,905,883

(I) Net Investment Income:

1. Interest and Dividends	5,183,516
2. Realized Gains (Losses)	(210,090)
3. Change in Actuarial Value	6,562,565
4. Investment Expenses	(272,475)
Total	11,263,516

(B) 12/31/2017 Actuarial Assets: 169,751,954

Actuarial Asset Rate of Return = (2 x I) / (A + B - I): 7.14%

Market Value of Assets Rate of Return: 13.14%

12/31/2017 Limited Actuarial Assets: 169,751,954

# STATISTICAL DATA <sup>1</sup>

	<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	N/A	134	129	125
Average Current Age	N/A	N/A	45.9	46.7
Average Age at Employment	N/A	N/A	27.0	27.0
Average Past Service	N/A	N/A	18.9	19.7
Average Annual Salary	N/A	N/A	\$110,589	\$113,504
<u>Actives - Tier 2</u>				
Number	N/A	30	36	42
Average Current Age	N/A	N/A	29.3	29.7
Average Age at Employment	N/A	N/A	27.3	27.1
Average Past Service	N/A	N/A	2.0	2.6
Average Annual Salary	N/A	N/A	\$84,040	\$88,220
<u>Service Retirees</u>				
Number	68	69	74	77
Average Current Age	N/A	N/A	62.1	62.8
Average Annual Benefit	\$75,637	\$76,154	\$78,492	\$81,003
<u>Beneficiaries</u>				
Number	9	10	10	9
Average Current Age	N/A	N/A	55.5	54.9
Average Annual Benefit	\$41,834	\$43,901	\$45,542	\$39,537
<u>Disability Retirees</u>				
Number	5	5	5	5
Average Current Age	N/A	N/A	55.4	56.4
Average Annual Benefit	\$49,706	\$53,083	\$53,210	\$57,059
<u>Terminated Vested</u>				
Number	1	1	6	7
Average Current Age	N/A	N/A	35.9	38.6
Average Annual Benefit <sup>2</sup>	\$41,373	\$41,373	\$37,362	\$44,650

<sup>1</sup> Foster & Foster does not have enough historical data to include complete data prior to 1/1/2016.  
We will add historical data moving forward.

<sup>2</sup> 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	3	0	0	0	0	0	0	0	0	0	0	3
25 - 29	1	5	3	5	5	1	0	0	0	0	0	20
30 - 34	3	1	1	2	4	4	0	0	0	0	0	15
35 - 39	0	0	2	0	2	2	10	3	0	0	0	19
40 - 44	0	0	0	0	0	0	8	16	4	0	0	28
45 - 49	0	0	0	0	0	0	4	7	31	2	0	44
50 - 54	0	0	0	0	0	0	0	8	7	15	0	30
55 - 59	0	0	0	0	0	0	0	0	2	4	1	7
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	0	0
Total	7	6	6	7	11	7	22	34	44	22	1	167

## VALUATION PARTICIPANT RECONCILIATION

### 1. Active lives

a. Number in prior valuation 1/1/2017	165
b. Terminations	
i. Vested (partial or full) with deferred benefits	(1)
ii. Non-vested or full lump sum distribution received	(1)
iii. Transferred service to other fund	0
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	(3)
f. Continuing participants	160
g. New entrants	7
h. Total active life participants in valuation	167

### 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	74	10	5	6	95
Retired	3	0	0	0	3
Vested Deferred	0	0	0	1	1
Death, With Survivor	0	0	0	0	0
Death, No Survivor	0	(1)	0	0	(1)
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	77	9	5	7	98

## SUMMARY OF CURRENT PLAN

### Article 3 Pension Fund

The Plan is established and administered as prescribed by “Article 3. Police 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 Police Department elected by the Membership, and
- c) One retired Member of the Police Department elected by the Membership.

### Credited Service

Complete years of service as a sworn police officer employed by the Municipality.

### Normal Retirement

Date

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

**Tier 2:** Age 55 with 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 \$1,000 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 \$1,000 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 8 years of Credited Service.

**Tier 2:** Age 50 with 10 years of Credited Service.

Benefit

**Tier 1:** Normal Retirement benefit with no minimum.

**Tier 2:** Normal Retirement benefit, reduced 6% 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.

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.) 50% 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.

For non-service deaths with less than 10 years of service, a refund of member contributions is provided.

### Vesting (Termination)

Vesting Service Requirement	<b>Tier 1:</b> 8 years.  <b>Tier 2:</b> 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. The termination benefit is 2.50% of annual salary held in the year prior to termination (8-year final average salary for Tier 2) times creditable service.

### Contributions

Employee	9.91% of Salary.
Municipality	Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability.



STATEMENT OF FIDUCIARY NET POSITION  
DECEMBER 31, 2017

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Checking Account	2,194,003
Certificates of Deposit	527,818
Money Market	942,520
Total Cash and Equivalents	3,664,341
Receivables:	
Contributions Due from City	478,673
Prepays	11,920
Accrued Past Due Interest	555,742
Total Receivable	1,046,335
Investments:	
Municipal Obligations	274,808
Corporate Bonds	19,413,021
U.S. Gov't and Agency Obligations	37,350,924
Insurance Company Contracts	14,443,075
Stocks	17,209,391
Mutual Funds	80,605,833
Total Investments	169,297,052
Total Assets	174,007,728
<u>LIABILITIES</u>	
Liabilities:	
Payable:	
Expenses	66,274
Total Liabilities	66,274
NET POSITION RESTRICTED FOR PENSIONS	173,941,454

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

ADDITIONS

## Contributions:

Member	1,788,835
Buybacks	0
City	6,677,807

Total Contributions	8,466,642
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## Investment Income:

Miscellaneous Income	94,832
Net Realized Gain (Loss)	(210,090)
Unrealized Gain (Loss)	15,503,288
Net Increase in Fair Value of Investments	15,388,030
Interest & Dividends	5,088,684
Less Investment Expense <sup>1</sup>	(272,475)

Net Investment Income	20,204,239
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Total Additions	28,670,881
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DEDUCTIONS

## Distributions to Members:

Benefit Payments	6,807,711
Refund of Contributions/Transfers	9,935

Total Distributions	6,817,646
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Administrative Expense	66,441
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Total Deductions	6,884,087
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Net Increase in Net Position	21,786,794
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## NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	152,154,660
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End of the Year	173,941,454
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<sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

## NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended December 31, 2017)

### Plan Description

#### *Plan Administration*

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of:

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

#### *Plan Membership as of January 1, 2017:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	89
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	6
Active Plan Members	165
	<u>260</u>

#### *Benefits Provided*

The Plan provides retirement, termination, disability and death benefits.

##### Normal Retirement:

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

Date Tier 2: Age 55 with 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 \$1,000 per month.

Benefit 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 \$1,000 per month.

##### Early Retirement:

Date Tier 1: Age 60 and 8 years of Credited Service.

Date Tier 2: Age 50 with 10 years of Credited Service.

Benefit Tier 1: Normal Retirement benefit with no minimum.

Benefit Tier 2: Normal Retirement benefit, reduced 6% each year before age 55, with no minimum benefit.

##### Disability:

Eligibility: Total and permanent as determined by the Board of Trustees.

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 Adjustments:

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.

Tier 1: 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

Service Incurred: 100% of salary attached to rank held by Member on last day of service.

Non-Service Incurred: A maximum of:

- a.) 50% 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.

For non-service deaths with less than 10 years of service, a refund of member contributions is provided.

Vesting (Termination):

Vesting Service Requirement: Tier 1: 8 years.

Vesting Service Requirement: Tier 2: 10 years.

Non-Vested Benefit: Refund of Member Contributions.

Vested Benefit: Either the termination benefit, payable upon reaching age 60, provided contributions are not withdrawn, or a refund of member contributions. The termination benefit is 2.50% of annual salary held in the year prior to termination (8-year final average salary for Tier 2) times creditable service.

*Contributions*

Employee: 9.91% of Salary.

City: Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability.

*Investments**Investment Policy:*

The following was the Board's adopted asset allocation policy as of December 31, 2017:

<u>Asset Class</u>	<u>Target Allocation</u>
Fixed Income	35.0%
U.S. Equity	35.0%
International Equity	15.0%
Real Estate-Core	10.0%
Global Tactical	5.0%
Total	100.0%

*Concentrations:*

The Plan did not hold investments in any one organization that represent 5 percent or more of the Pension Plan's Fiduciary Net Position.

*Rate of Return:*

For the year ended December 31, 2017, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was 13.29 percent.

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

## NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the Sponsor on December 31, 2017 were as follows:

Total Pension Liability	\$ 215,474,918
Plan Fiduciary Net Position	\$ (173,941,454)
Sponsor's Net Pension Liability	<u>\$ 41,533,464</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	80.72%

*Actuarial Assumptions:*

The Total Pension Liability was determined by an actuarial valuation as of January 1, 2017 updated to December 31, 2017 using the following actuarial assumptions:

Inflation	2.50%
Salary Increases	Service based
Discount Rate	7.00%
Investment Rate of Return	7.00%

Mortality Rate: RP-2000 Combined Healthy Mortality with a blue collar adjustment, projected to the valuation date using Scale BB. We believe this reflects a sufficient cushion for mortality improvements.

Disabled Mortality Rate: RP-2000 Disabled Retiree, projected to the valuation date using Scale BB. We believe this reflects a sufficient cushion for mortality improvements.

The other significant demographic assumptions used to review the other actuarial assumptions in the December 31, 2017 valuation were based on the results of an actuarial experience study performed by the State of Illinois Department of Insurance dated September 26, 2012.

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

For 2017, the inflation rate assumption of the investment advisor was 2.30%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation as of December 31, 2017 are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return
Fixed Income	2.1%
U.S. Equity	5.6%
International Equity	5.8%
Real Estate-Core	5.2%
Global Tactical	3.9%

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.00 percent.

The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

For purpose of this valuation, the expected rate of return on pension plan investments is 7.00 percent; the municipal bond rate is 3.44 percent (based on the weekly rate closest to but not later than the measurement date of the Bond Buyer 20-Bond Index as published by the Bond Buyer); and the resulting single discount rate is 7.00 percent.

	1% Decrease	Current Discount Rate	1% Increase
	6.00%	7.00%	8.00%
Sponsor's Net Pension Liability	\$ 73,442,127	\$ 41,533,464	\$ 15,445,661

# SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

## Last 10 Years

	12/31/2017	12/31/2016	12/31/2015 <sup>1</sup>
Total Pension Liability			
Service Cost	4,277,831	4,113,967	2,635,406
Interest	14,216,220	13,993,038	8,904,818
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	1,578,661	(11,518,319)	(1,398,497)
Changes of assumptions	-	3,016,340	-
Contributions - Buy Back	-	21,704	-
Benefit Payments, including Refunds of Employee Contributions	(6,817,646)	(6,386,913)	(3,958,442)
Net Change in Total Pension Liability	13,255,066	3,239,817	6,183,285
Total Pension Liability - Beginning	202,219,852	198,980,035	192,796,750
Total Pension Liability - Ending (a)	<u>\$ 215,474,918</u>	<u>\$ 202,219,852</u>	<u>\$ 198,980,035</u>
Plan Fiduciary Net Position			
Contributions - Employer	6,677,807	6,329,588	5,345,433
Contributions - Employee	1,788,835	1,773,258	1,117,257
Contributions - Buy Back	-	21,704	2,237
Net Investment Income	20,204,239	11,562,097	(4,333,440)
Benefit Payments, including Refunds of Employee Contributions	(6,817,646)	(6,386,913)	(3,950,028)
Administrative Expense	(66,441)	(53,912)	(67,226)
Net Change in Plan Fiduciary Net Position	21,786,794	13,245,822	(1,885,767)
Plan Fiduciary Net Position - Beginning	152,154,660	138,908,838	140,794,605
Plan Fiduciary Net Position - Ending (b)	<u>\$ 173,941,454</u>	<u>\$ 152,154,660</u>	<u>\$ 138,908,838</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 41,533,464</u>	<u>\$ 50,065,192</u>	<u>\$ 60,071,197</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	80.72%	75.24%	69.81%
Covered Employee Payroll	\$ 18,050,807	\$ 17,893,623	\$ 16,683,031
Net Pension Liability as a percentage of Covered Employee Payroll	230.09%	279.79%	360.07%

**Notes to Schedule:**

<sup>1</sup> The 2015 results were provided by the prior actuary, Timothy W. Sharpe, Actuary, Geneva, IL.

***Changes of Assumptions:***

For measurement date 12/31/2016, amounts reported as changes of assumptions resulted from the following assumption changes:

- The mortality assumptions were updated to include mortality improvements through the valuation date using Scale BB.
- The salary scale was updated from a flat 5.00% to a service-based table.

## SCHEDULE OF CONTRIBUTIONS

Last 10 Years

	12/31/2017	12/31/2016	12/31/2015 <sup>1</sup>
Actuarially Determined Contribution	6,538,474	5,829,394	4,809,036
Contributions in relation to the Actuarially Determined Contributions	6,677,807	6,329,588	5,345,433
Contribution Deficiency (Excess)	<u>\$ (139,333)</u>	<u>\$ (500,194)</u>	<u>\$ (536,397)</u>
Covered Employee Payroll	\$ 18,050,807	\$ 17,893,623	\$ 16,683,031
Contributions as a percentage of Covered Employee Payroll	36.99%	35.37%	32.04%

<sup>1</sup> The 2015 results were provided by the prior actuary, Timothy W. Sharpe, Actuary, Geneva, IL.

Notes to Schedule

Valuation Date: 01/01/2016

Actuarially determined contribution rates are calculated as of January 1, two years prior to the end of the year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Funding Method:	Entry Age Normal Cost Method.
Amortization Method:	Level percentage of pay, closed.
Remaining Amortization Period:	17 years (as of 01/01/2016 Valuation).
Asset Valuation Method:	Market Value. 5-year Average Market Value (PA 096-1495).
Investment Return:	7.00% net of investment expenses.
Salary Scale:	5.00%.
Mortality:	RP 2000 Mortality Table (CHBCA). There is no margin for future mortality improvement beyond the valuation date.
Withdrawal:	Based on studies of the Fund and the Department of Insurance, see Sample Rates below.
Disability Rates:	Based on studies of the Fund and the Department of Insurance, see Sample Rates below.
Retirement:	Based on studies of the Fund and the Department of Insurance, see Sample Rates below (100% by age 70).
Marital Status:	80% Married, Female spouses 3 years younger.
Sample Annual Rates Per 100 Participants:	

Age	Withdrawal	Disability	Retirement
20	10.00	0.05	
25	7.50	0.05	
30	5.00	0.22	
35	3.00	0.26	
40	2.00	0.40	
45	2.00	0.65	
50	3.50	0.95	20.00
55	3.50	1.30	25.00
60	3.50	1.65	33.00
65	3.50	2.00	50.00
70			100.00



SCHEDULE OF INVESTMENT RETURNS  
Last 10 Fiscal Years

	<u>12/31/2017</u>	<u>12/31/2016</u>	<u>12/31/2015 <sup>1</sup></u>
Annual Money-Weighted Rate of Return			
Net of Investment Expense	13.29%	8.41%	-3.10%

<sup>1</sup> The 2015 results were provided by the prior actuary, Timothy W. Sharpe, Actuary, Geneva, IL.

## NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended December 31, 2017)

### General Information about the Pension Plan

#### *Plan Description*

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of:

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

The Plan is established and administered as prescribed by "Article 3. Police Pension Fund – Municipalities 500,000 and Under" of the Illinois Pension Code.

#### *Plan Membership as of January 1, 2017:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	89
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	6
Active Plan Members	165
	260

#### *Benefits Provided*

The Plan provides retirement, termination, disability and death benefits.

##### Normal Retirement:

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

Date Tier 2: Age 55 with 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 \$1,000 per month.

Benefit 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 \$1,000 per month.

##### Early Retirement:

Date Tier 1: Age 60 and 8 years of Credited Service.

Date Tier 2: Age 50 with 10 years of Credited Service.

Benefit Tier 1: Normal Retirement benefit with no minimum.

Benefit Tier 2: Normal Retirement benefit, reduced 6% each year before age 55, with no minimum benefit.

##### Disability:

Eligibility: Total and permanent as determined by the Board of Trustees.

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 Adjustments:

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.

Tier 1: 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.) 50% 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.

For non-service deaths with less than 10 years of service, a refund of member contributions is provided.

Vesting (Termination):

Vesting Service Requirement: Tier 1: 8 years.

Vesting Service Requirement: Tier 2: 10 years.

Non-Vested Benefit: Refund of Member Contributions.

Vested Benefit: Either the termination benefit, payable upon reaching age 60, provided contributions are not withdrawn, or a refund of member contributions. The termination benefit is 2.50% of annual salary held in the year prior to termination (8-year final average salary for Tier 2) times creditable service.

*Contributions*

Employee: 9.91% of Salary.

City: Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability.

## Net Pension Liability

The measurement date is December 31, 2017.

The measurement period for the pension expense was January 1, 2017 to December 31, 2017.

The reporting period is January 1, 2017 through December 31, 2017.

The Sponsor's Net Pension Liability was measured as of December 31, 2017.

The Total Pension Liability used to calculate the Net Pension Liability was determined as of that date.

*Actuarial Assumptions:*

The Total Pension Liability was determined by an actuarial valuation as of January 1, 2017 updated to December 31, 2017 using the following actuarial assumptions:

Inflation	2.50%
Salary Increases	Service based
Discount Rate	7.00%
Investment Rate of Return	7.00%

Mortality Rate: RP-2000 Combined Healthy Mortality with a blue collar adjustment, projected to the valuation date using Scale BB. We believe this reflects a sufficient cushion for mortality improvements.

Disabled Mortality Rate: RP-2000 Disabled Retiree, projected to the valuation date using Scale BB. We believe this reflects a sufficient cushion for mortality improvements.

The other significant demographic assumptions used to review the other actuarial assumptions in the December 31, 2017 valuation were based on the results of an actuarial experience study performed by the State of Illinois Department of Insurance dated September 26, 2012.

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

For 2017, the inflation rate assumption of the investment advisor was 2.30%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation as of December 31, 2017 are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
Fixed Income	35.0%	2.1%
U.S. Equity	35.0%	5.6%
International Equity	15.0%	5.8%
Real Estate-Core	10.0%	5.2%
Global Tactical	5.0%	3.9%
Total	100.0%	

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.00 percent.

The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

For purpose of this valuation, the expected rate of return on pension plan investments is 7.00 percent; the municipal bond rate is 3.44 percent (based on the weekly rate closest to but not later than the measurement date of the Bond Buyer 20-Bond Index as published by the Bond Buyer); and the resulting single discount rate is 7.00 percent.

## CHANGES IN NET PENSION LIABILITY

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a)-(b)
Balances at December 31, 2016	\$ 202,219,852	\$ 152,154,660	\$ 50,065,192
Changes for a Year:			
Service Cost	4,277,831	-	4,277,831
Interest	14,216,220	-	14,216,220
Differences between Expected and Actual Experience	1,578,661	-	1,578,661
Changes of assumptions	-	-	-
Changes of benefit terms	-	-	-
Contributions - Employer	-	6,677,807	(6,677,807)
Contributions - Employee	-	1,788,835	(1,788,835)
Net Investment Income	-	20,204,239	(20,204,239)
Benefit Payments, including Refunds of Employee Contributions	(6,817,646)	(6,817,646)	-
Administrative Expense	-	(66,441)	66,441
Net Changes	13,255,066	21,786,794	(8,531,728)
Balances at December 31, 2017	\$ 215,474,918	\$ 173,941,454	\$ 41,533,464

*Sensitivity of the Net Pension Liability to changes in the Discount Rate.*

	1% Decrease	Current Discount Rate	1% Increase
	6.00%	7.00%	8.00%
Sponsor's Net Pension Liability	\$ 73,442,127	\$ 41,533,464	\$ 15,445,661

*Pension Plan Fiduciary Net Position.*

Detailed information about the pension Plan's Fiduciary Net Position is available in a separately issued Plan financial report.

## PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS

For the year ended December 31, 2017, the Sponsor will recognize a Pension Expense of \$4,535,438.

On December 31, 2017, the Sponsor reported Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected and Actual Experience	1,315,550	8,147,917
Changes of assumptions	2,010,892	-
Net difference between Projected and Actual Earnings on Pension Plan investments	-	4,281,982
Total	<u>\$ 3,326,442</u>	<u>\$ 12,429,899</u>

Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions will be recognized in Pension Expense as follows:

Year ended December 31:	
2018	\$ (1,530,008)
2019	\$ (1,373,665)
2020	\$ (3,409,402)
2021	\$ (3,053,492)
2022	\$ 263,110
Thereafter	\$ -

**SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS**  
Last 10 Years

	12/31/2017	12/31/2016	12/31/2015 <sup>1</sup>
Total Pension Liability			
Service Cost	4,277,831	4,113,967	2,635,406
Interest	14,216,220	13,993,038	8,904,818
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	1,578,661	(11,518,319)	(1,398,497)
Changes of assumptions	-	3,016,340	-
Contributions - Buy Back	-	21,704	-
Benefit Payments, including Refunds of Employee Contributions	(6,817,646)	(6,386,913)	(3,958,442)
Net Change in Total Pension Liability	13,255,066	3,239,817	6,183,285
Total Pension Liability - Beginning	202,219,852	198,980,035	192,796,750
Total Pension Liability - Ending (a)	<u>\$ 215,474,918</u>	<u>\$ 202,219,852</u>	<u>\$ 198,980,035</u>
Plan Fiduciary Net Position			
Contributions - Employer	6,677,807	6,329,588	5,345,433
Contributions - Employee	1,788,835	1,773,258	1,117,257
Contributions - Buy Back	-	21,704	2,237
Net Investment Income	20,204,239	11,562,097	(4,333,440)
Benefit Payments, including Refunds of Employee Contributions	(6,817,646)	(6,386,913)	(3,950,028)
Administrative Expense	(66,441)	(53,912)	(67,226)
Net Change in Plan Fiduciary Net Position	21,786,794	13,245,822	(1,885,767)
Plan Fiduciary Net Position - Beginning	152,154,660	138,908,838	140,794,605
Plan Fiduciary Net Position - Ending (b)	<u>\$ 173,941,454</u>	<u>\$ 152,154,660</u>	<u>\$ 138,908,838</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 41,533,464</u>	<u>\$ 50,065,192</u>	<u>\$ 60,071,197</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	80.72%	75.24%	69.81%
Covered Employee Payroll	\$ 18,050,807	\$ 17,893,623	\$ 16,683,031
Net Pension Liability as a percentage of Covered Employee Payroll	230.09%	279.79%	360.07%

**Notes to Schedule:**

<sup>1</sup> The 2015 results were provided by the prior actuary, Timothy W. Sharpe, Actuary, Geneva, IL.

*Changes of Assumptions:*

For measurement date 12/31/2016, amounts reported as changes of assumptions resulted from the following assumption changes:

- The mortality assumptions were updated to include mortality improvements through the valuation date using Scale BB.
- The salary scale was updated from a flat 5.00% to a service-based table.

## SCHEDULE OF CONTRIBUTIONS

Last 10 Years

	12/31/2017	12/31/2016	12/31/2015 <sup>1</sup>
Actuarially Determined Contribution	6,538,474	5,829,394	4,809,036
Contributions in relation to the			
Actuarially Determined Contributions	6,677,807	6,329,588	5,345,433
Contribution Deficiency (Excess)	\$ (139,333)	\$ (500,194)	\$ (536,397)
Covered Employee Payroll	\$ 18,050,807	\$ 17,893,623	\$ 16,683,031
Contributions as a percentage of			
Covered Employee Payroll	36.99%	35.37%	32.04%

<sup>1</sup> The 2015 results were provided by the prior actuary, Timothy W. Sharpe, Actuary, Geneva, IL.

Notes to Schedule

Valuation Date: 01/01/2016

Actuarially determined contribution rates are calculated as of January 1, two years prior to the end of the year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Funding Method:	Entry Age Normal Cost Method.
Amortization Method:	Level percentage of pay, closed.
Remaining Amortization Period:	17 years (as of 01/01/2016 Valuation).
Asset Valuation Method:	Market Value. 5-year Average Market Value (PA 096-1495).
Investment Return:	7.00% net of investment expenses.
Salary Scale:	5.00%.
Mortality:	RP 2000 Mortality Table (CHBCA). There is no margin for future mortality improvement beyond the valuation date.
Withdrawal:	Based on studies of the Fund and the Department of Insurance, see Sample Rates below.
Disability Rates:	Based on studies of the Fund and the Department of Insurance, see Sample Rates below.
Retirement:	Based on studies of the Fund and the Department of Insurance, see Sample Rates below (100% by age 70).
Marital Status:	80% Married, Female spouses 3 years younger.

Sample Annual Rates Per 100

Participants:	Age	Withdrawal	Disability	Retirement
	20	10.00	0.05	
	25	7.50	0.05	
	30	5.00	0.22	
	35	3.00	0.26	
	40	2.00	0.40	
	45	2.00	0.65	
	50	3.50	0.95	20.00
	55	3.50	1.30	25.00
	60	3.50	1.65	33.00
	65	3.50	2.00	50.00
	70			100.00



COMPONENTS OF PENSION EXPENSE  
YEAR ENDED DECEMBER 31, 2017

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 50,065,192	\$ 11,803,966	\$ 9,089,868	\$ -
Total Pension Liability Factors:				
Service Cost	4,277,831	-	-	4,277,831
Interest	14,216,220	-	-	14,216,220
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	1,578,661	-	1,578,661	-
Current year amortization of experience difference	-	(2,232,410)	(263,111)	(1,969,299)
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(502,724)	502,724
Benefit Payments, including Refunds of Employee Contributions	(6,817,646)	-	-	-
Net change	13,255,066	(2,232,410)	812,826	17,027,476
Plan Fiduciary Net Position:				
Contributions - Employer	6,677,807	-	-	-
Contributions - Employee	1,788,835	-	-	(1,788,835)
Projected Net Investment Income	10,706,216	-	-	(10,706,216)
Difference between projected and actual earnings on Pension Plan investments	9,498,023	9,498,023	-	-
Current year amortization	-	(2,255,512)	(2,192,084)	(63,428)
Benefit Payments, including Refunds of Employee Contributions	(6,817,646)	-	-	-
Administrative Expenses	(66,441)	-	-	66,441
Net change	21,786,794	7,242,511	(2,192,084)	(12,492,038)
Ending Balance	\$ 41,533,464	\$ 16,814,067	\$ 7,710,610	\$ 4,535,438

## AMORTIZATION SCHEDULE - INVESTMENTS

Increase (Decrease) in Pension Expense Arising from the Recognition of the of Differences Between Projected and Actual Earnings on  
Pension Plan Investments

Plan Year Ending	Differences Between Projected and Actual Earnings	Recognition Period (Years)	2017	2018	2019	2020	2021	2022	2023	2024	2025
2017	\$ (9,498,023)	5	\$ (1,899,603)	\$ (1,899,605)	\$ (1,899,605)	\$ (1,899,605)	\$ (1,899,605)	\$ -	\$ -	\$ -	\$ -
2016	\$ (1,779,548)	5	\$ (355,909)	\$ (355,910)	\$ (355,910)	\$ (355,910)	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 10,960,420	5	\$ 2,192,084	\$ 2,192,084	\$ 2,192,084	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (63,428)	\$ (63,431)	\$ (63,431)	\$ (2,255,515)	\$ (1,899,605)	\$ -	\$ -	\$ -	\$ -

AMORTIZATION SCHEDULE - CHANGES OF ASSUMPTIONS

			Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Changes of Assumptions									
Plan Year Ending	Changes of Assumptions	Recognition Period (Years)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
2016	\$ 3,016,340	6	\$ 502,724	\$ 502,723	\$ 502,723	\$ 502,723	\$ 502,723	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 502,724	\$ 502,723	\$ 502,723	\$ 502,723	\$ 502,723	\$ -	\$ -	\$ -	\$ -	\$ -

## AMORTIZATION SCHEDULE - EXPERIENCE

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience

Plan Year Ending	Differences Between Expected and Actual Experience	Recognition Period (Years)	2017	2018	2019	2020	2021	2022	2023	2024	2025
2017	\$ 1,578,661	6	\$ 263,111	\$ 263,110	\$ 263,110	\$ 263,110	\$ 263,110	\$ 263,110	\$ -	\$ -	\$ -
2016	\$ (11,518,319)	6	\$ (1,919,720)	\$ (1,919,720)	\$ (1,919,720)	\$ (1,919,720)	\$ (1,919,720)	\$ -	\$ -	\$ -	\$ -
2015	\$ (1,398,497)	4.5	\$ (312,690)	\$ (312,690)	\$ (156,347)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			<u>\$ (1,969,299)</u>	<u>\$ (1,969,300)</u>	<u>\$ (1,812,957)</u>	<u>\$ (1,656,610)</u>	<u>\$ (1,656,610)</u>	<u>\$ 263,110</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>