

CITY OF EVANSTON
POLICE PENSION FUND
ACTUARIAL VALUATION
AS OF JANUARY 1, 2019
CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING DECEMBER 31, 2020



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

August 2, 2019

Board of Trustees
City of Evanston
Police Pension Fund
2100 Ridge Avenue
Evanston, IL 60201

Re: Actuarial Valuation Report – City of Evanston Police Pension Fund

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Evanston Police 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 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. Due to the limited scope of the valuation, we did not perform an analysis of the potential range of such future measurements.

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 Evanston, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the City of Evanston Police Pension Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

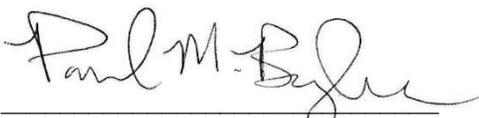
If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 630-620-0200.

Respectfully submitted,

Foster & Foster, Inc.

By: 
Jason L. Franken, FSA, EA, MAAA

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Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Evanston Police Pension Fund, performed as of January 1, 2019, 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, 2020.

The contribution requirements, compared with those set forth in the January 1, 2018 actuarial report, are as follows:

| Valuation Date | 1/1/2019 | 1/1/2018 |
|----------------------------------|-------------------|-------------------|
| Applicable to Fiscal Year Ending | <u>12/31/2020</u> | <u>12/31/2019</u> |
| Total Recommended Contribution | \$13,488,464 | \$12,701,183 |
| % of Projected Annual Payroll | 85.7% | 81.3% |
| Member Contributions (Est.) | 1,560,593 | 1,547,438 |
| % of Projected Annual Payroll | 9.9% | 9.9% |
| City Recommended Contribution | 11,927,871 | 11,153,745 |
| % of Projected Annual Payroll | 75.8% | 71.4% |

As you can see, the Total Recommended Contribution shows an increase when compared to the results determined in the January 1, 2018 actuarial valuation report. The increase is primarily attributable to assumption changes reflected in this valuation and unfavorable plan experience during the year

Sources of unfavorable experience included an investment return of 5.53% (Actuarial Asset Basis) which fell short of the 6.25% assumption, less inactive mortality than expected, and more retirements than expected. There were no significant sources of favorable experience.

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

The valuation reflects the following assumption change:

- The mortality rates were updated to reflect the PubS.H-2010 tables.

There were no method changes since the prior valuation.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

| | New Assump <u>1/1/2019</u> | Old Assump <u>1/1/2019</u> | <u>1/1/2018</u> |
|--------------------------------|-------------------------------|-------------------------------|------------------|
| A. Participant Data | | | |
| Number Included | | | |
| Actives | 158 | 158 | 163 |
| Service Retirees | 137 | 137 | 134 |
| Beneficiaries | 28 | 28 | 30 |
| Disability Retirees | 18 | 18 | 17 |
| Terminated Vested | <u>20</u> | <u>20</u> | <u>18</u> |
| Total | 361 | 361 | 362 |
| Total Annual Payroll | \$15,747,659 | \$15,747,659 | \$15,614,913 |
| Payroll Under Assumed Ret. Age | 15,747,659 | 15,747,659 | 15,614,913 |
| Annual Rate of Payments to: | | | |
| Service Retirees | 10,183,809 | 10,183,809 | 9,626,349 |
| Beneficiaries | 1,052,666 | 1,052,666 | 1,098,598 |
| Disability Retirees | 809,975 | 809,975 | 734,813 |
| Terminated Vested | 145,066 | 145,066 | 145,066 |
| B. Assets | | | |
| Actuarial Value | 122,344,568 | 122,344,568 | 115,898,879 |
| Market Value | 116,755,057 | 116,755,057 | 121,629,667 |
| C. Liabilities | | | |
| Present Value of Benefits | | | |
| Actives | | | |
| Retirement Benefits | 105,725,655 | 103,480,684 | 101,106,922 |
| Disability Benefits | 9,161,107 | 8,154,366 | 8,058,364 |
| Death Benefits | 1,079,450 | 2,139,953 | 2,135,207 |
| Vested Benefits | 7,328,825 | 7,257,893 | 7,166,105 |
| Service Retirees | 146,436,163 | 144,696,421 | 137,430,697 |
| Beneficiaries | 8,910,528 | 8,815,478 | 9,320,481 |
| Disability Retirees | 12,292,570 | 11,326,876 | 10,559,438 |
| Terminated Vested | <u>1,849,169</u> | <u>1,831,586</u> | <u>1,717,250</u> |
| Total | 292,783,467 | 287,703,257 | 277,494,464 |

| C. Liabilities - (Continued) | New Assump <u>1/1/2019</u> | Old Assump <u>1/1/2019</u> | <u>1/1/2018</u> |
|---|-------------------------------|-------------------------------|--------------------|
| Present Value of Future Salaries | 164,807,708 | 164,000,080 | 164,003,250 |
| Present Value of Future Member Contributions | 16,332,444 | 16,252,408 | 16,252,722 |
| Normal Cost (Retirement) | 3,217,964 | 3,144,377 | 3,132,011 |
| Normal Cost (Disability) | 571,110 | 511,455 | 507,807 |
| Normal Cost (Death) | 54,722 | 98,598 | 98,828 |
| Normal Cost (Vesting) | <u>415,353</u> | <u>412,091</u> | <u>403,887</u> |
| Total Normal Cost | 4,259,149 | 4,166,521 | 4,142,533 |
| Present Value of Future Normal Costs | 40,305,495 | 39,201,267 | 39,869,402 |
| Accrued Liability (Retirement) | 74,535,732 | 73,144,797 | 70,288,610 |
| Accrued Liability (Disability) | 3,576,630 | 3,171,683 | 3,023,667 |
| Accrued Liability (Death) | 592,740 | 1,267,917 | 1,237,845 |
| Accrued Liability (Vesting) | 4,284,440 | 4,247,232 | 4,047,074 |
| Accrued Liability (Inactives) | <u>169,488,430</u> | <u>166,670,361</u> | <u>159,027,866</u> |
| Total Actuarial Accrued Liability | 252,477,972 | 248,501,990 | 237,625,062 |
| Unfunded Actuarial Accrued Liability (UAAL) | 130,133,404 | 126,157,422 | 121,726,183 |
| Funded Ratio (AVA / AL) | 48.5% | 49.2% | 48.8% |

| | New Assump <u>1/1/2019</u> | Old Assump <u>1/1/2019</u> | <u>1/1/2018</u> |
|--|-------------------------------|-------------------------------|-------------------|
| D. Actuarial Present Value of Accrued Benefits | | | |
| Vested Accrued Benefits | | | |
| Inactives | 169,488,430 | 166,670,361 | 159,027,866 |
| Actives | 23,790,321 | 23,164,117 | 22,843,027 |
| Member Contributions | <u>15,330,841</u> | <u>15,330,841</u> | <u>14,836,983</u> |
| Total | 208,609,592 | 205,165,319 | 196,707,876 |
| Non-vested Accrued Benefits | <u>5,602,163</u> | <u>5,533,105</u> | <u>4,674,373</u> |
| Total Present Value Accrued Benefits | 214,211,755 | 210,698,424 | 201,382,249 |
| Funded Ratio (MVA / PVAB) | 54.5% | 55.4% | 60.4% |
| Increase (Decrease) in Present Value of Accrued Benefits Attributable to: | | | |
| Plan Amendments | 0 | 0 | |
| Assumption Changes | 3,513,331 | 0 | |
| New Accrued Benefits | 0 | 9,040,522 | |
| Benefits Paid | 0 | (11,937,685) | |
| Interest | 0 | 12,213,338 | |
| Other | <u>0</u> | <u>0</u> | |
| Total | 3,513,331 | 9,316,175 | |

| Valuation Date | New Assump | Old Assump | |
|--|-------------------|-------------------|-------------------|
| Applicable to Fiscal Year Ending | <u>1/1/2019</u> | <u>1/1/2019</u> | <u>1/1/2018</u> |
| | <u>12/31/2020</u> | <u>12/31/2020</u> | <u>12/31/2019</u> |
| E. Pension Cost | | | |
| Normal Cost ¹ | \$4,525,346 | \$4,426,929 | \$4,401,441 |
| % of Total Annual Payroll ¹ | 28.7 | 28.1 | 28.2 |
| Administrative Expenses ¹ | 62,565 | 62,565 | 157,920 |
| % of Total Annual Payroll ¹ | 0.4 | 0.4 | 1.0 |
| Payment Required to Amortize Unfunded Actuarial Accrued Liability over 22 years (as of 1/1/2019) ¹ | 8,900,553 | 8,596,893 | 8,141,822 |
| % of Total Annual Payroll ¹ | 56.6 | 54.6 | 52.1 |
| Total Recommended Contribution | 13,488,464 | 13,086,387 | 12,701,183 |
| % of Total Annual Payroll ¹ | 85.7 | 83.1 | 81.3 |
| Expected Member Contributions ¹ | 1,560,593 | 1,560,593 | 1,547,438 |
| % of Total Annual Payroll ¹ | 9.9 | 9.9 | 9.9 |
| Expected City Contribution | 11,927,871 | 11,525,794 | 11,153,745 |
| % of Total Annual Payroll ¹ | 75.8 | 73.2 | 71.4 |
| F. Past Contributions | | | |
| Plan Years Ending: | <u>12/31/2018</u> | | |
| Total Recommended Contribution | 12,653,752 | | |
| City | 11,083,443 | | |
| Actual Contributions Made: | | | |
| Members (excluding buyback) | 1,570,309 | | |
| City | <u>10,462,704</u> | | |
| Total | 12,033,013 | | |
| G. Net Actuarial (Gain)/Loss | 4,702,452 | | |

¹ Contributions developed as of 1/1/2019 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> ¹ |
|-------------|--|
| 2019 | 104,885,607 |
| 2020 | 102,540,405 |
| 2021 | 100,048,627 |
| 2026 | 85,049,672 |
| 2031 | 64,739,869 |
| 2036 | 37,238,748 |
| 2041 | 0 |

¹ Target funded percentage is less than 100% so not all of the Unfunded Actuarial Accrued Liability is amortized.

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

| | | <u>Actual</u> | <u>Assumed</u> |
|------------|------------|---------------|----------------|
| Year Ended | 12/31/2018 | 4.95% | 4.41% |
| Year Ended | 12/31/2017 | 4.49% | 4.41% |
| Year Ended | 12/31/2016 | 4.55% | 4.34% |

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

| | | <u>Actual</u> | <u>Assumed</u> |
|------------|------------|---------------|----------------|
| Year Ended | 12/31/2018 | 5.53% | 6.25% |
| Year Ended | 12/31/2017 | 8.22% | 6.25% |
| Year Ended | 12/31/2016 | 7.22% | 6.50% |

DEVELOPMENT OF JANUARY 1, 2019 AMORTIZATION PAYMENT

| | | |
|------|--|---------------|
| (1) | Unfunded Actuarial Accrued Liability as of January 1, 2018 | \$121,726,183 |
| (2) | Sponsor Normal Cost developed as of January 1, 2018 | 2,595,095 |
| (3) | Expected administrative expenses for the year ended December 31, 2018 | 148,631 |
| (4) | Expected interest on (1), (2) and (3) | 7,774,725 |
| (5) | Sponsor contributions to the System during the year ended December 31, 2018 | 10,462,704 |
| (6) | Expected interest on (5) | 326,960 |
| (7) | Expected Unfunded Actuarial Accrued Liability as of December 31, 2018, (1)+(2)+(3)+(4)-(5)-(6) | 121,454,970 |
| (8) | Change to UAAL due to Assumption Change | 3,975,982 |
| (9) | Change to UAAL due to Actuarial (Gain)/Loss | 4,702,452 |
| (10) | Unfunded Accrued Liability as of January 1, 2019 | 130,133,404 |
| (11) | UAAL Subject to Amortization (90% AAL less Actuarial Assets) | 104,885,607 |

| <u>Date Established</u> | <u>Years Remaining</u> | <u>1/1/2019 Amount</u> | <u>Amortization Amount</u> |
|-----------------------------|----------------------------|----------------------------|--------------------------------|
| 1/1/2019 | 22 | 104,885,607 | 8,376,991 |

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

| | |
|---|------------------|
| (1) Unfunded Actuarial Accrued Liability (UAAL) as of January 1, 2018 | \$121,726,183 |
| (2) Expected UAAL as of January 1, 2019 | 121,454,970 |
| (3) Summary of Actuarial (Gain)/Loss, by component: | |
| Investment Return (Actuarial Asset Basis) | 835,573 |
| Salary Increases | 622,703 |
| Active Decrements | 1,403,913 |
| Inactive Mortality | 1,014,232 |
| Other | <u>826,031</u> |
| Change in UAAL due to (Gain)/Loss | 4,702,452 |
| Assumption Changes | <u>3,975,982</u> |
| (4) Actual UAAL as of January 1, 2019 | \$130,133,404 |

RECONCILIATION OF CHANGES IN CONTRIBUTION REQUIREMENT

| | |
|---|----------------|
| (1) Contribution Determined as of January 1, 2018 | \$ 11,153,745 |
| (2) Summary of Contribution Impact by component: | |
| Change in Normal Cost | 25,488 |
| Change in Assumed Administrative Expense | (95,355) |
| Investment Return (Actuarial Asset Basis) | 57,150 |
| Salary Increases | 42,590 |
| Active Decrements | 96,021 |
| Inactive Mortality | 69,369 |
| Contributions (More) or Less than Recommended | 54,337 |
| Change in Expected Member Contributions | (13,155) |
| Assumption Change | 402,077 |
| Other | <u>135,604</u> |
| Total Change in Contribution | 774,126 |
| (3) Contribution Determined as of January 1, 2019 | \$11,927,871 |

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 Applicable to Fiscal Year Ending | New Assump 1/1/2019 <u>12/31/2020</u> | Old Assump 1/1/2019 <u>12/31/2020</u> | 1/1/2018 <u>12/31/2019</u> |
|--|---|---|-------------------------------|
| Actuarial Accrued Liability (PUC) | 244,576,620 | 240,529,949 | 229,937,112 |
| Actuarial Value of Assets | <u>122,344,568</u> | <u>122,344,568</u> | <u>115,898,879</u> |
| Unfunded Actuarial Accrued Liability (UAAL) | 122,232,052 | 118,185,381 | 114,038,233 |
| UAAL Subject to Amortization | 97,774,390 | 94,132,386 | 91,044,522 |
| Normal Cost ¹ | \$5,018,596 | \$4,924,047 | \$4,851,511 |
| % of Total Annual Payroll ¹ | 31.9 | 31.3 | 31.1 |
| Administrative Expenses ¹ | 62,565 | 62,565 | 157,920 |
| % of Total Annual Payroll ¹ | 0.4 | 0.4 | 1.0 |
| Payment Required to Amortize Unfunded Actuarial Accrued Liability over 22 years (as of 1/1/2019) ¹ | 6,133,635 | 5,905,163 | 5,528,140 |
| % of Total Annual Payroll ¹ | 38.9 | 37.5 | 35.4 |
| Total Required Contribution | 11,214,796 | 10,891,775 | 10,537,571 |
| % of Total Annual Payroll ¹ | 71.2 | 69.2 | 67.5 |
| Expected Member Contributions ¹ | 1,560,593 | 1,560,593 | 1,547,438 |
| % of Total Annual Payroll ¹ | 9.9 | 9.9 | 9.9 |
| Expected City Contribution | 9,654,203 | 9,331,182 | 8,990,133 |
| % of Total Annual Payroll ¹ | 61.3 | 59.3 | 57.6 |
| Assumptions and Methods: | | | |
| Actuarial Cost Method | Projected Unit Credit | | |
| Amortization Method | 90% Funding by 2040 | | |
| Payroll Growth Assumption | 3.50% | | |

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

¹ Contributions developed as of 1/1/2019 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 |
|------|---------------------------------|-----------------------------------|-------------------|
| 2019 | 362,272 | 12,055,440 | 12,417,712 |
| 2020 | 676,868 | 12,127,115 | 12,803,983 |
| 2021 | 1,014,474 | 12,329,007 | 13,343,481 |
| 2022 | 1,357,378 | 12,517,188 | 13,874,566 |
| 2023 | 1,763,208 | 12,703,532 | 14,466,740 |
| 2024 | 2,181,115 | 12,815,316 | 14,996,431 |
| 2025 | 2,605,089 | 12,901,178 | 15,506,267 |
| 2026 | 3,145,467 | 12,976,689 | 16,122,156 |
| 2027 | 3,634,641 | 13,024,316 | 16,658,957 |
| 2028 | 4,225,011 | 13,024,828 | 17,249,839 |
| 2029 | 4,831,258 | 13,005,426 | 17,836,684 |
| 2030 | 5,539,615 | 12,939,388 | 18,479,003 |
| 2031 | 6,320,190 | 12,836,445 | 19,156,635 |
| 2032 | 7,128,362 | 12,694,563 | 19,822,925 |
| 2033 | 7,988,740 | 12,530,044 | 20,518,784 |
| 2034 | 8,843,178 | 12,306,277 | 21,149,455 |
| 2035 | 9,721,136 | 12,039,381 | 21,760,517 |
| 2036 | 10,607,148 | 11,758,396 | 22,365,544 |
| 2037 | 11,442,278 | 11,406,169 | 22,848,447 |
| 2038 | 12,266,183 | 11,012,623 | 23,278,806 |
| 2039 | 13,110,648 | 10,580,192 | 23,690,840 |
| 2040 | 13,878,559 | 10,112,340 | 23,990,899 |
| 2041 | 14,669,178 | 9,633,093 | 24,302,271 |
| 2042 | 15,483,576 | 9,109,185 | 24,592,761 |
| 2043 | 16,187,354 | 8,590,296 | 24,777,650 |
| 2044 | 16,949,950 | 8,035,245 | 24,985,195 |
| 2045 | 17,572,173 | 7,473,780 | 25,045,953 |
| 2046 | 18,235,785 | 6,912,517 | 25,148,302 |
| 2047 | 18,702,320 | 6,357,725 | 25,060,045 |
| 2048 | 19,108,157 | 5,814,969 | 24,923,126 |
| 2049 | 19,440,356 | 5,289,026 | 24,729,382 |
| 2050 | 19,719,702 | 4,783,843 | 24,503,545 |
| 2051 | 19,945,919 | 4,302,739 | 24,248,658 |
| 2052 | 20,121,811 | 3,848,325 | 23,970,136 |
| 2053 | 20,241,969 | 3,422,279 | 23,664,248 |
| 2054 | 20,307,711 | 3,025,506 | 23,333,217 |
| 2055 | 20,312,160 | 2,658,500 | 22,970,660 |
| 2056 | 20,256,576 | 2,321,410 | 22,577,986 |
| 2057 | 20,135,371 | 2,013,956 | 22,149,327 |
| 2058 | 19,946,824 | 1,735,539 | 21,682,363 |

ACTUARIAL ASSUMPTIONS AND METHODS

| | |
|---------------------------|--|
| Interest Rate | 6.25% per year compounded annually, net of investment related expenses. We will continue to monitor this assumption to ensure that the rate continues to be supported. |
| Mortality Rate | <p><i>Active Lives:</i> PubS.H-2010 Employee mortality, projected 5 years past the valuation date with Scale MP-2018. 10% of active deaths are assumed to be in the line of duty.</p> <p><i>Inactive Lives:</i> PubS.H-2010 Healthy Retiree mortality, projected 5 years past the valuation date with Scale MP-2018.</p> <p><i>Beneficiaries:</i> PubS.H-2010 Survivor mortality, projected 5 years past the valuation date with Scale MP-2018.</p> <p><i>Disabled Lives:</i> PubS.H-2010 Disabled mortality, projected 5 years past the valuation date with Scale MP-2018.</p> <p>The mortality assumptions sufficiently accommodate anticipated future mortality improvements.</p> |
| Retirement Age | See table later in this section. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance. |
| Disability Rate | See table later in this section. 60% of the disabilities are assumed to be in the line of duty. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance. |
| Termination Rate | See table later in this section. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance. |
| 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> |

Salary Increases

Graded schedule based age.

| Age | Increase |
|-----|----------|
| 25 | 7.36% |
| 30 | 5.48% |
| 35 | 4.53% |
| 40 | 4.02% |
| 45 | 3.81% |
| 50 | 3.68% |
| 55+ | 3.62% |

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 90% of the Accrued Liability less the Actuarial Value of Assets.

Payroll Growth

None.

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.

Decrement Tables

| % Terminating During the Year | | % Becoming Disabled During the Year | | % Retiring During the Year (Tier 1) | | % Retiring During the Year (Tier 2) | |
|----------------------------------|--------|--|--------|--|------|--|------|
| Age | Rate | Age | Rate | Age | Rate | Age | Rate |
| 20 | 14.00% | 20 | 0.000% | 50 - 51 | 15% | 50 - 54 | 5% |
| 25 | 10.40% | 25 | 0.030% | 52 - 54 | 20% | 55 | 40% |
| 30 | 5.60% | 30 | 0.140% | 55 - 64 | 25% | 56 - 64 | 25% |
| 35 | 3.10% | 35 | 0.260% | 65 - 69 | 40% | 65 - 69 | 40% |
| 40 | 1.90% | 40 | 0.420% | 70+ | 100% | 70+ | 100% |
| 45 | 1.50% | 45 | 0.590% | | | | |
| 50 | 1.50% | 50 | 0.710% | | | | |
| 56+ | 0.00% | 55 | 0.900% | | | | |
| | | 60 | 1.150% | | | | |

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.

DISCUSSION OF RISK

ASOP No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions, states that the actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition.

Throughout this report, actuarial results are determined under various assumption scenarios. These results are based on the premise that all future plan experience will align with the plan's actuarial assumptions; however, there is no guarantee that actual plan experience will align with the plan's assumptions. Whenever possible, the recommended assumptions in this report reflect conservatism to allow for some margin of unfavorable future plan experience. However, it is still possible that actual plan experience will differ from anticipated experience in an unfavorable manner that will negatively impact the plan's funded position.

Below are examples of ways in which plan experience can deviate from assumptions and the potential impact of that deviation. Typically, this results in an actuarial gain or loss representing the current-year financial impact on the plan's unfunded liability of the experience differing from assumptions; this gain or loss is amortized over a period of time determined by the plan's amortization method. When assumptions are selected that adequately reflect plan experience, gains and losses typically offset one another in the long term, resulting in a relatively low impact on the plan's contribution requirements associated with plan experience. When assumptions are too optimistic, losses can accumulate over time and the plan's amortization payment could potentially grow to an unmanageable level.

- Investment Return: When the rate of return on the Actuarial Value of Assets falls short of the assumption, this produces a loss representing assumed investment earnings that were not realized. Further, it is unlikely that the plan will experience a scenario that matches the assumed return in each year as capital markets can be volatile from year to year. Therefore, contribution amounts can vary in the future.
- Salary Increases: When a plan participant experiences a salary increase that was greater than assumed, this produces a loss representing the cost of an increase in anticipated plan benefits for the participant as compared to the previous year. The total gain or loss associated with salary increases for the plan is the sum of salary gains and losses for all active participants.
- Payroll Growth: The plan's payroll growth assumption, if one is used, causes a predictable annual increase in the plan's amortization payment in order to produce an amortization payment that remains constant as a percentage of payroll if all assumptions are realized. If payroll does not increase according to the plan's payroll growth assumption, the plan's amortization payment can increase significantly as a percentage of payroll even if all assumptions other than the payroll growth assumption are realized.
- Demographic Assumptions: Actuarial results take into account various potential events that could happen to a plan participant, such as retirement, termination, disability, and death. Each of these potential events is assigned a liability based on the likelihood of the event and the financial consequence of the event for the plan. Accordingly, actuarial liabilities reflect a blend of financial consequences associated with various possible outcomes (such as retirement at one of various possible ages). Once the outcome is known (e.g. the participant retires) the liability is adjusted to reflect the known outcome. This adjustment produces a gain or loss depending on whether the outcome was more or less favorable than other outcomes that could have occurred.

- Contribution risk: Risks associated with the items outlined above will inherently create varying liabilities and assets resulting in volatility in contributions. Actuarial losses on assets and liabilities will lead to higher contribution amounts, while actuarial gains on assets and liabilities will lead to lower contribution amounts.

Impact of Plan Maturity on Risk

For newer pension plans, most of the participants and associated liabilities are related to active members who have not yet reached retirement age. As pension plans continue in operation and active members reach retirement ages, liabilities begin to shift from being primarily related to active members to being shared amongst active and retired members. Plan maturity is a measure of the extent to which this shift has occurred. It is important to understand that plan maturity can have an impact on risk tolerance and the overall risk characteristics of the plan. For example, plans with a large amount of retired liability do not have as long of a time horizon to recover from losses (such as losses on investments due to lower than expected investment returns) as plans where the majority of the liability is attributable to active members. For this reason, less tolerance for investment risk may be warranted for highly mature plans with a substantial inactive liability. Similarly, mature plans paying substantial retirement benefits resulting in a small positive or net negative cash flow can be more sensitive to near term investment volatility, particularly if the size of the fund is shrinking, which can result in less assets being available for investment in the market.

To assist with determining the maturity of the plan, we have provided some relevant metrics in table following titled “Plan Maturity Measures and Other Risk Metrics”. Highlights of this information are discussed below:

- The Support Ratio, determined as the ratio of active to inactive members has decreased from 81.0% to 77.8% over the last four years, meaning the plan’s maturity has remained consistent.
- The Accrued Liability Ratio, determined as the ratio of the Inactive Accrued Liability, which is the accrued liability associated with those receiving payments to the Total Accrued Liability, is 67.1%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors will need to be made up for over a shorter time horizon than would be needed for a less mature plan.
- The Funded Ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability has decreased from 46.6% on January 1, 2016 to 48.5% on January 1, 2019 due mainly to favorable plan experience.

It is important to note that the actuary has identified the risks above as the most significant risks based on the characteristics of the plan and the nature of the project, however, it is not an exhaustive list of potential risks that could be considered. Additional advanced modelling, as well as the identification of additional risks, can be provided at the request of the reader.

PLAN MATURITY MEASURES AND OTHER RISK METRICS

| | <u>1/1/2016</u> | <u>1/1/2017</u> | <u>1/1/2018</u> | <u>1/1/2019</u> |
|---|-----------------|-----------------|-----------------|-----------------|
| <u>Support Ratio</u> | | | | |
| Total Actives | 158 | 165 | 163 | 158 |
| Total Inactives | 195 | 194 | 199 | 203 |
| Actives / Inactives | 81.0% | 85.1% | 81.9% | 77.8% |
| <u>Asset Volatility Ratio</u> | | | | |
| Market Value of Assets (MVA) | 98,558,838 | 106,191,547 | 121,629,667 | 116,755,057 |
| Total Annual Payroll | 14,364,290 | 15,343,727 | 15,614,913 | 15,747,659 |
| MVA / Total Annual Payroll | 686.1% | 692.1% | 778.9% | 741.4% |
| <u>Accrued Liability (AL) Ratio</u> | | | | |
| Inactive Accrued Liability | 148,274,204 | 151,850,046 | 159,027,866 | 169,488,430 |
| Total Accrued Liability | 213,710,492 | 227,820,272 | 237,625,062 | 252,477,972 |
| Inactive AL / Total AL | 69.4% | 66.7% | 66.9% | 67.1% |
| <u>Funded Ratio</u> | | | | |
| Actuarial Value of Assets (AVA) | 99,623,717 | 106,910,133 | 115,898,879 | 122,344,568 |
| Total Accrued Liability | 213,710,492 | 227,820,272 | 237,625,062 | 252,477,972 |
| AVA / Total Accrued Liability | 46.6% | 46.9% | 48.8% | 48.5% |

STATEMENT OF FIDUCIARY NET POSITION
December 31, 2018

| <u>ASSETS</u> | MARKET VALUE |
|--------------------------------------|--------------|
| Cash and Cash Equivalents: | |
| Money Market | 3,431,065 |
| Total Cash and Equivalents | 3,431,065 |
| Receivables: | |
| From City | 48,185 |
| Accrued Past Due Interest | 251,536 |
| Total Receivable | 299,721 |
| Investments: | |
| Corporate Bonds | 14,285,088 |
| U.S. Gov't and Agency Obligations | 25,184,766 |
| Stocks | 28,666,273 |
| Mutual Funds | 44,888,144 |
| Total Investments | 113,024,271 |
| Total Assets | 116,755,057 |
| <u>LIABILITIES</u> | |
| Total Liabilities | 0 |
| Net Assets: | |
| Active and Retired Members' Equity | 116,755,057 |
| NET POSITION RESTRICTED FOR PENSIONS | 116,755,057 |
| TOTAL LIABILITIES AND NET ASSETS | 116,755,057 |

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED December 31, 2018
Market Value Basis

ADDITIONS

Contributions:

| | |
|--------|------------|
| Member | 1,570,309 |
| City | 10,462,704 |

| | |
|---------------------|------------|
| Total Contributions | 12,033,013 |
|---------------------|------------|

Investment Income:

| | |
|---|-------------|
| Net Realized Gain (Loss) | 1,651,470 |
| Unrealized Gain (Loss) | (9,256,778) |
| Net Increase in Fair Value of Investments | (7,605,308) |
| Interest & Dividends | 2,986,387 |
| Less Investment Expense ¹ | (292,132) |

| | |
|-----------------------|-------------|
| Net Investment Income | (4,911,053) |
|-----------------------|-------------|

| | |
|-----------------|-----------|
| Total Additions | 7,121,960 |
|-----------------|-----------|

DEDUCTIONS

Distributions to Members:

| | |
|------------------|------------|
| Benefit Payments | 11,937,685 |
|------------------|------------|

| | |
|---------------------|------------|
| Total Distributions | 11,937,685 |
|---------------------|------------|

| | |
|-------------------------|--------|
| Administrative Expenses | 58,885 |
|-------------------------|--------|

| | |
|------------------|------------|
| Total Deductions | 11,996,570 |
|------------------|------------|

| | |
|------------------------------|-------------|
| Net Increase in Net Position | (4,874,610) |
|------------------------------|-------------|

NET POSITION RESTRICTED FOR PENSIONS

| | |
|-----------------------|-------------|
| Beginning of the Year | 121,629,667 |
|-----------------------|-------------|

| | |
|-----------------|-------------|
| End of the Year | 116,755,057 |
|-----------------|-------------|

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

ACTUARIAL ASSET VALUATION

December 31, 2018

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 | | | | |
| | | 2019 | 2020 | 2021 | 2022 | 2023 |
| 12/31/2015 | (5,955,336) | (1,191,067) | 0 | 0 | 0 | 0 |
| 12/31/2016 | 1,135,676 | 454,270 | 227,135 | 0 | 0 | 0 |
| 12/31/2017 | 8,597,538 | 5,158,523 | 3,439,015 | 1,719,508 | 0 | 0 |
| 12/31/2018 | (12,514,046) | (10,011,237) | (7,508,428) | (5,005,618) | (2,502,809) | 0 |
| Total | | (5,589,511) | (3,842,278) | (3,286,110) | (2,502,809) | 0 |

Development of Investment Gain/Loss

| | |
|---|--------------------|
| Market Value of Assets, 12/31/2017 | 121,629,667 |
| Contributions Less Benefit Payments & Administrative Expenses | 36,443 |
| Expected Investment Earnings ¹ | 7,602,993 |
| Actual Net Investment Earnings | <u>(4,911,053)</u> |
| 2018 Actuarial Investment Gain/(Loss) | (12,514,046) |

¹ Expected Investment Earnings = 6.25% x (121,629,667 + 0.5 x 36,443)

Development of Actuarial Value of Assets

| | |
|--|------------------|
| Market Value of Assets, 12/31/2018 | 116,755,057 |
| (Gains)/Losses Not Yet Recognized | <u>5,589,511</u> |
| Actuarial Value of Assets, 12/31/2018 | 122,344,568 |
| (A) 12/31/2017 Actuarial Assets: | 115,898,879 |
| (I) Net Investment Income: | |
| 1. Interest and Dividends | 2,986,387 |
| 2. Realized Gains (Losses) | 1,651,470 |
| 3. Change in Actuarial Value | 2,063,521 |
| 4. Investment Expenses | <u>(292,132)</u> |
| Total | 6,409,246 |
| (B) 12/31/2018 Actuarial Assets: | 122,344,568 |
| Actuarial Asset Rate of Return = (2 x I) / (A + B - I): | 5.53% |
| Market Value of Assets Rate of Return: | -4.04% |
| 12/31/2018 Limited Actuarial Assets: | 122,344,568 |
| Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis) | (835,573) |

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
December 31, 2018
Actuarial Asset Basis

| INCOME | | |
|---|------------|-------------|
| Contributions: | | |
| Member | 1,570,309 | |
| City | 10,462,704 | |
| Total Contributions | | 12,033,013 |
| Earnings from Investments | | |
| Interest & Dividends | 2,986,387 | |
| Net Realized Gain (Loss) | 1,651,470 | |
| Change in Actuarial Value | 2,063,521 | |
| Total Earnings and Investment Gains | | 6,701,378 |
| EXPENSES | | |
| Administrative Expenses: | | |
| Investment Related ¹ | 292,132 | |
| Other | 58,885 | |
| Total Administrative Expenses | | 351,017 |
| Distributions to Members: | | |
| Benefit Payments | 11,937,685 | |
| Total Distributions | | 11,937,685 |
| Change in Net Assets for the Year | | 6,445,689 |
| Net Assets Beginning of the Year | | 115,898,879 |
| Net Assets End of the Year ² | | 122,344,568 |

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

² Net Assets may be limited for actuarial consideration.

STATISTICAL DATA

| | <u>1/1/2016</u> | <u>1/1/2017</u> | <u>1/1/2018</u> | <u>1/1/2019</u> |
|-------------------------------------|-----------------|-----------------|-----------------|-----------------|
| <u>Actives - Tier 1</u> | | | | |
| Number | 124 | 123 | 117 | 111 |
| Average Current Age | 41.9 | 42.8 | 43.3 | 43.7 |
| Average Age at Employment | 28.3 | 28.2 | 28.3 | 28.1 |
| Average Past Service | 13.6 | 14.6 | 15.0 | 15.6 |
| Average Annual Salary | \$96,458 | \$99,810 | \$102,843 | \$107,090 |
| <u>Actives - Tier 2</u> | | | | |
| Number | 34 | 42 | 46 | 47 |
| Average Current Age | 29.4 | 30.2 | 31.0 | 32.1 |
| Average Age at Employment | 27.2 | 27.8 | 28.0 | 28.3 |
| Average Past Service | 2.2 | 2.4 | 3.0 | 3.8 |
| Average Annual Salary | \$70,692 | \$73,027 | \$77,875 | \$82,142 |
| <u>Service Retirees</u> | | | | |
| Number | 135 | 131 | 134 | 137 |
| Average Current Age | 68.7 | 69.2 | 69.8 | 70.0 |
| Average Annual Benefit | \$66,878 | \$69,479 | \$71,838 | \$74,334 |
| <u>Beneficiaries</u> | | | | |
| Number | 28 | 30 | 30 | 28 |
| Average Current Age | 76.5 | 77.1 | 77.7 | 78.4 |
| Average Annual Benefit | \$36,388 | \$36,343 | \$36,620 | \$37,595 |
| <u>Disability Retirees</u> | | | | |
| Number | 16 | 16 | 17 | 18 |
| Average Current Age | 60.8 | 61.8 | 61.1 | 62.4 |
| Average Annual Benefit | \$40,691 | \$41,103 | \$43,224 | \$44,999 |
| <u>Terminated Vested</u> | | | | |
| Number | 16 | 17 | 18 | 20 |
| Average Current Age | 40.9 | 41.0 | 41.5 | 41.3 |
| Average Annual Benefit ¹ | \$24,178 | \$24,178 | \$24,178 | \$24,178 |

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 | 2 | 1 | 2 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 30 - 34 | 0 | 2 | 5 | 2 | 4 | 11 | 5 | 0 | 0 | 0 | 0 | 29 |
| 35 - 39 | 1 | 0 | 3 | 0 | 0 | 12 | 19 | 7 | 0 | 0 | 0 | 42 |
| 40 - 44 | 0 | 0 | 0 | 0 | 0 | 3 | 12 | 13 | 0 | 0 | 0 | 28 |
| 45 - 49 | 1 | 0 | 0 | 0 | 0 | 1 | 5 | 9 | 7 | 0 | 0 | 23 |
| 50 - 54 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 4 | 5 | 0 | 16 |
| 55 - 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 |
| 60 - 64 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 3 |
| 65+ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 3 | 10 | 2 | 11 | 27 | 43 | 36 | 11 | 11 | 0 | 158 |

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

| | |
|---|-----|
| a. Number in prior valuation 1/1/2018 | 163 |
| b. Terminations | |
| i. Vested (partial or full) with deferred benefits | (2) |
| 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 | (1) |
| e. Retired | (5) |
| f. Continuing participants | 154 |
| g. New entrants | 4 |
| h. Total active life participants in valuation | 158 |

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 | 134 | 30 | 17 | 18 | 199 |
| Retired | 5 | 0 | 0 | 0 | 5 |
| Vested Deferred | 0 | 0 | 0 | 2 | 2 |
| Death, With Survivor | (1) | 1 | 0 | 0 | 0 |
| Death, No Survivor | (1) | (2) | 0 | 0 | (3) |
| Disabled | 0 | 0 | 1 | 0 | 1 |
| Refund of Contributions | 0 | (1) | 0 | 0 | (1) |
| 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 | 137 | 28 | 18 | 20 | 203 |

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 a single employer defined benefit pension plan 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.

