Gabriel Roeder Smith & Company
Consultants & Actuaries

# CITY OF JOLIET FIREFIGHTERS' PENSION FUND ANNUAL ACTUARIAL VALUATION

## FOR THE YEAR BEGINNING JANUARY 1, 2014

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October 3, 2014

The Pension Board
City of Joliet Firefighters' Pension Fund
Joliet, Illinois

Dear Board Members:

We are pleased to provide our formal annual Actuarial Valuation Report as of January 1, 2014, covering the City of Joliet Firefighters' Pension Fund. This report provides, among other things, the minimum annual contribution requirements of the Plan for the Plan Year commencing January 1, 2014, and ending on December 31, 2014 (which directly affects the City's tax levy in the 2015 fiscal year that is collected and deposited into the Pension Trust in fiscal year 2015). This valuation was based on the plan provisions as outlined in Section C of this report, the Plan participant data as provided by the City of Joliet (i.e., Plan Sponsor) and on the actuarial cost method and the set of actuarial assumptions as described in Section D of the report. The report reflects the following changes in assumptions effective as of January 1, 2014:

- The investment rate of return assumption was changed from 7.00 percent to 6.75 percent.

The other assumptions used in this valuation are the same as those used in the previous valuation.

This valuation also incorporates the Board approved modified funding policy equal to the sum of: (a) annual normal cost plus (b) amortization of unfunded liability as a level percent of pay between January 1, 2011, and January 1, 2046, plus (c) interest on (a) and (b) to date of payment, that is projected to produce a funded ratio of 100 percent by January 1, 2046. The contribution under this modified funding policy satisfies the statutory minimum funding requirements found in Public Act 96-1495.

Chapter 40, Act 5, Article 4 of the Illinois Compiled Statutes requires an actuarial balance sheet (i.e., actuarial valuation) be prepared by a qualified actuary in order to determine the annual tax levy to meet the annual actuarial requirements of the Pension Fund. Alex Rivera and Paul Wood of Gabriel, Roeder, Smith & Company have the following qualifications:

**Alex Rivera** is a Fellow of the Society of Actuaries, a Member of the American Academy of Actuaries, and an Enrolled Actuary with over 25 years of responsible experience in the actuarial and pension consulting field.

**Paul Wood** is an Associate of the Society of Actuaries and a Member of the American Academy of Actuaries with over 10 years of responsible experience in the actuarial and pension consulting field.

It is our understanding, in accordance with the Illinois Compiled Statutes, that the undersigned more than satisfy the minimum requirements as set forth in the referenced Pension Code as recently amended.

In addition, it is also our understanding that the Pension Code requires that a member of the American Academy of Actuaries perform the required annual actuarial valuation and does not mandate that the Illinois Department of Insurance's annual actuarial valuation of the Pension Fund be controlling or that the Department of Insurance accept or approve another actuarial valuation of the Pension Fund.

Alex Rivera and Paul Wood are members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

We will be pleased to review this report with you at your convenience.

Sincerely,

Alex Rivera

Alex Rivera, F.S.A., E.A., M.A.A.A., F.C.A.
Senior Consultant

Paul T Wood

Paul T. Wood, A.S.A., M.A.A.A., F.C.A.
Consultant

## Additional Disclosures Required by Actuarial Standards of Practice

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

This report should not be relied on for any purpose other than the purpose stated.

The signing actuaries are independent of the plan sponsor.

# SECTION A

## VALUATION RESULTS

# SUMMARY OF ACTUARIAL VALUATION RESULTS

| | Valuation Date as of | January 1, 2013 | January 1, 2014 |
|---|---|---|---|
| ***Employee Data*** | Number of Active Firefighters | 207 | 201 |
| | Number of Service Retirees | 70 | 71 |
| | Number of Disabled Lives | 28 | 29 |
| | Number of Widow Beneficiaries | 37 | 40 |
| | Number of Children Beneficiaries | 0 | 5 |
| | Number of Separated Deferred Firefighters | 1 | 1 |
| | Number of Handicapped Beneficiaries | 0 | 0 |
| | TOTAL | 343 | 347 |
| | Total Annual Salaries of Firefighters | $ 22,050,623 | $ 21,727,130 |
| ***Plan Liabilities*** | Gross Actuarial Accrued Liability: | | |
| | Active Firefighters | $ 107,556,498 | $ 115,220,367 |
| | Retirees, Beneficiaries & Disabled | 110,172,106 | 119,896,978 |
| | TOTAL | $ 217,728,604 | $ 235,117,345 |
| | Actuarial Value of Assets at Valuation Date | $ 100,541,801 | $ 112,968,415 |
| | Unfunded (Overfunded) Actuarial Accrued Liability | $ 117,186,803 | $ 122,148,930 |
| | **Funded Position of Plan's Gross Actuarial Accrued Liability** [2] | 46.2 % | 48.0 % |
| | | **For the 2013 Fiscal Year** | **For the 2014 Fiscal Year** |
| ***Normal Cost*** | Gross Annual Normal Cost | $ 7,019,769 | $ 7,331,123 |
| | Less Expected Member Contributions (for Applicable Plan Year) | 2,084,886 | 2,054,300 |
| | Net Annual Normal Cost (Municipality Paid) | $ 4,934,883 | $ 5,276,823 |
| | Net Annual Normal Cost (As a percentage of pay) [1] | 22.4 % | 24.3 % |

*[1] Percents above represent net annual normal cost expressed as percentages of covered Firefighters' salaries.*

*[2] Equals the ratio of the actuarial value of assets to the total gross actuarial accrued liability.*

## SUMMARY OF ACTUARIAL VALUATION RESULTS (CONTINUED)

| Annual Contribution Requirements<br>Plan Year End | December 31, 2013 [a] | December 31, 2014 [b] |
|---|---|---|
| Net Annual Normal Cost (Municipality Paid) | $4,934,883 | $5,276,823 |
| Annual Amortization Payments for Funding Unfunded Actuarial Accrued Liability as a level percentage of payroll | 5,397,147 | 5,557,593 |
| Interest Adjustment to Expected Date of Payment into the Fund (Optional) | 1,103,632 | 1,115,293 |
| Total Minimum Annual Contribution Requirement for the Current Plan Year | $11,435,662 | $11,949,709 |
| Minimum Annual Contribution (As a percentage of pay) | 51.9% | 55.0% |

[a] Unfunded Actuarial Accrued Liability is amortized over a 33 year closed period.
[b] Unfunded Actuarial Accrued Liability is amortized over a 32 year closed period.

The contributions shown above satisfy the statutory minimum funding requirements found in Public Act 96-1495 that employer contribution produces 90 percent funding by the end of fiscal year 2040. The statutory minimum funding requirement produces a contribution of $10,227,000 or 42.59 percent of projected pay for the plan year ending December 31, 2014.

# DERIVATION OF EXPERIENCE GAIN (LOSS) YEAR ENDED JANUARY 1, 2014

Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is expected that gains and losses will cancel each other over time, but year-to-year fluctuations are not uncommon. Detail on the derivation of the experience gain (loss) is shown below, along with a year-by-year comparative schedule.

| | | |
|---|---|---|
| 1. | Unfunded Actuarial Accrued Liability at 01/01/2013 | $ 117,186,803 |
| 2. | Normal Cost Due at 01/01/2013 | 7,019,769 |
| 3. | Interest on (1) and (2) to 12/31/2013 (at 7.00% per annum) | 8,694,460 |
| 4. | Contributions (Employer and Employee) applicable to the 2013 Plan Year, with interest to 12/31/2013 | 14,276,208 |
| 5. | Expected Unfunded Actuarial Accrued Liability at 01/01/2014 [(1) + (2) + (3) - (4)] | $ 118,624,824 |
| 6. | Effect of Assumption Changes on Unfunded Actuarial Accrued Liability at 01/01/2014 [1] | $ 7,586,957 |
| 7. | Expected Unfunded Actuarial Accrued Liability at 01/01/2014 [(5) + (6)] | $ 126,211,781 |
| 8. | Actual Unfunded Actuarial Accrued Liability at 01/01/2014 | $ 122,148,930 |
| 9. | Gain (Loss) for the 2013 Plan Year [(7) - (8)] | $ 4,062,851 |

| **Valuation Date January 01** | **Experience Gain (Loss) As % of Accrued Liability at the Prior Valuation Date [2]** |
|---|---|
| 2002 | (0.13)% |
| 2003 | (6.65)% |
| 2004 | (2.42)% |
| 2005 | (0.88)% |
| 2006 | (0.89)% |
| 2007 | (9.08)% |
| 2008 | (2.66)% |
| 2009 | (4.45)% |
| 2010 | (9.18)% |
| 2011 | (1.58)% |
| 2012 | (2.73)% |
| 2013 | 0.23 % |
| 2014 | 1.87 % |

[1] *Effective as of January 1, 2014, the investment rate of return assumption was changed from 7.00% to 6.75%.*
[2] *Excluding Plan and assumption changes.*

The valuation results pertaining to the current Plan Year are analyzed and discussed in the following paragraphs.

***Plan History*** The following table provides a summary of the Plan's rate of return on assets and salary increase experience over the last 20 actuarial valuations performed by Gabriel, Roeder, Smith & Company:

| Plan Year Ending | Rate of Return On Plan Assets | Salary Scale Increase |
|---|---|---|
| 12/31/1994 | 4.5 % | 7.7 % |
| 12/31/1995 | 12.0 | 9.1 |
| 12/31/1996 | 5.9 | 8.2 |
| 12/31/1997 | 11.3 | 5.5 |
| 12/31/1998 | 9.7 | 11.1 |
| 12/31/1999 | 7.9 | 15.5 |
| 12/31/2000 | (1.2) | 4.5 |
| 12/31/2001 | (1.0) | 7.3 |
| 12/31/2002 | (1.4) | 6.4 |
| 12/31/2003 | 9.4 | 7.2 |
| 12/31/2004 | 6.8 | 10.9 |
| 12/31/2005 | 4.4 | 7.8 |
| 12/31/2006 | 7.8 | 6.9 |
| 12/31/2007 | 5.7 | 10.0 |
| 12/31/2008 | (13.3) | 5.8 |
| 12/31/2009 | 8.2 | 14.2 |
| 12/31/2010 | 10.3 | 4.0 |
| 12/31/2011 | 1.3 | 7.4 |
| 12/31/2012 | 8.0 | 1.6 |
| 12/31/2013 | 13.3 | 1.6 |

The Salary Scale increase has averaged 7.6% over the last 20 years. We believe the 5.25% salary increase assumption continues to be a reasonable long-term assumption. The salary scale was recently adjusted to recognize that members with less than three years of service receive higher pay increases. As part of each annual valuation, we will review salary scale increases and determine whether the current assumption continues to be appropriate.

Over the same 20-year period, the Plan's assets have averaged an annual rate of investment return of 5.3%. Beginning with this year's valuation, the investment return assumption was reduced from 7.00% to 6.75%. We believe the 6.75% annual rate of return on Plan assets is within the range of reasonable assumptions. However, we recommend that the City monitor this assumption for continuing reasonableness at each future valuation.

## COMMENTS AND ANALYSIS (CONTINUED)

***Analysis of the Experience Gain (Loss)***

The experience gain(loss) reported on page A-3, is the net result of the following:

| | | |
|---|---|---|
| (a) From plan asset performance | $ | 347,803 |
| (b) Other sources ("net effect" of salary increases, terminations, new entrants, retirements, etc.) | | 3,715,048 |
| Total Gain/(Loss): [(a) + (b)] | $ | 4,062,851 |

***Changes in the Annual Contribution***

The dollar amount of the plan's annual minimum required contribution of $11,949,709 is approximately 4.5% higher than the level for the prior plan year of $11,435,662. As a percentage of payroll, the contribution requirement is higher than last year (i.e., increasing from 51.9% to 55.0%). The important factors producing this change are summarized as follows:

| | | |
|---|---|---|
| 1. | Minimum Annual Contribution Requirement for prior plan year without amendatory Act of the 93rd General Assembly[1] | $ 10,898,620 |
| 2. | Actual Asset Performance (based on actuarial value of assets) | (18,064) |
| 3. | Increase in Normal Cost and Amortization Amount due to anticipated pay increases | 457,426 |
| 4. | Changes in Assumptions | 656,074 |
| 5. | Changes in Plan Provisions due to the [1] amendatory Act of the 93rd General Assembly | 546,840 |
| 6. | Other Sources (demographic and salary (gains)/losses) | (591,187) |
| 7. | Minimum Annual Contribution Requirement for current plan year (sum of items 1 through 6) | $ 11,949,709 |

[1]*(P.A. 93-0689, effective 7-1-04.)*
[2]*Effective as of January 1, 2014, the investment rate of return assumption was changed from 7.00% to 6.75%.*

***Comments on Actuarial Value of Assets***

Government accounting standards mandate the use of market value of assets or market-related value of assets for accounting purposes. The Pension Fund used market-related value of assets for both government accounting and funding purposes. This market-related value of assets will recognize gains and losses due to return on plan assets over a four-year period. Hence, only a portion of this year's investment gain (see Section C for details) is included in the current year actuarial value of assets. The remainder of the gain or loss will be incorporated into Pension Fund assets over the next three years. The purpose of this technique is to minimize contribution volatility due to fluctuations in the market value of assets. Finally, receivables for plan years prior to the current plan year which are not in Plan assets by December 31, 2013, are not included in assets for Government accounting standards purposes but are included in assets for funding purposes.

***GASB Statements No. 25 and 27***

GASB Statement No. 25 is applicable to fiscal years beginning after June 15, 1996. It was adopted by the City of Joliet Firefighters Pension Fund in the January 1997 report. GASB Statement 27 is applicable to fiscal years beginning after June 15, 1997. It was adopted by the City of Joliet in the January 1998 report. A transition pension liability (asset) has been developed under Statement No. 27 equal to the cumulative difference between the actuarially determined funding requirement and the actual amount contributed for fiscal years 1987 to the date GASB 27 is adopted. As of the adoption date, all outstanding pension liabilities (assets) are adjusted to equal the transition NPO.

***GASB Statements No. 67 and 68***

Effective with Fiscal Year Ending December 31, 2014, GASB No. 67 is replacing GASB No. 25 for pension plan financial reporting requirements. GASB No. 68 is replacing GASB No. 27 for employer financial reporting effective with fiscal year ending December 31, 2015. The discount rate used for GASB No. 67 and No. 68 reporting purposes will produce a single equivalent discount rate based on 6.75 percent for the projected benefits for all current members that can be paid from current assets and projected investment return, future employee contributions from current members, and future employer contributions attributable to current members, and a municipal bond rate for the portion of the projected benefits after assets are depleted. The municipal bond rate is based on a yield or index rate for 20-year, tax exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale). We believe the liability based on the GASB single equivalent rate will become the predominant liability that users will focus on.

Due to the single equivalent discount rate and shorter amortization periods required under GASB No. 67 and No. 68, the unfunded liabilities and pension expense will be much higher and more volatile than under the current standards. A measurement of the single equivalent discount rate, unfunded liability and pension expense has not yet been performed

# SECTION B

## PROJECTIONS

**City of Joliet Firefighters Pension Fund**
**Actuarial Valuation Projection Results Based on P.A. 96-1495 as of January 1, 2014 (Based on Projected Unit Credit Cost Method)**
**($ in Thousands)**

| Year | Actuarial Accrued Liability | Market Value of Assets | Actuarial Value of Assets | Unfunded Liability | Actuarial Value Funded Ratio | Uncapped Payroll | Capped Payroll | Employer Normal Cost | Statutory Minimum Contribution | Statutory Contribution % of Projected Pay | Employee Contributions | Benefit Payments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2014 | $230,291 | $105,573 | $101,900 | $128,391 | 44.2% | $21,727 | $21,727 | $5,271 | $10,227 | 42.59% | $2,054 | $9,394 |
| 2015 | 243,950 | 116,933 | 113,839 | 130,110 | 46.7% | 22,985 | 22,586 | 5,450 | 10,703 | 42.59% | 2,136 | 9,916 |
| 2016 | 258,269 | 127,356 | 125,911 | 132,358 | 48.8% | 24,014 | 23,401 | 5,631 | 11,164 | 42.59% | 2,213 | 10,449 |
| 2017 | 273,280 | 138,502 | 138,502 | 134,778 | 50.7% | 25,131 | 24,255 | 5,794 | 11,627 | 42.59% | 2,293 | 11,045 |
| 2018 | 288,948 | 150,345 | 150,345 | 138,603 | 52.0% | 26,214 | 25,133 | 5,930 | 12,085 | 42.59% | 2,376 | 11,675 |
| 2019 | 305,257 | 162,900 | 162,900 | 142,356 | 53.4% | 27,301 | 26,040 | 6,036 | 12,561 | 42.59% | 2,462 | 12,443 |
| 2020 | 322,076 | 176,070 | 176,070 | 146,006 | 54.7% | 28,375 | 26,918 | 6,121 | 13,061 | 42.59% | 2,545 | 13,296 |
| 2021 | 339,330 | 189,825 | 189,825 | 149,504 | 55.9% | 29,494 | 27,790 | 6,193 | 13,572 | 42.59% | 2,628 | 14,201 |
| 2022 | 356,979 | 204,177 | 204,177 | 152,802 | 57.2% | 30,669 | 28,663 | 6,240 | 14,107 | 42.59% | 2,710 | 15,150 |
| 2023 | 374,975 | 219,130 | 219,130 | 155,846 | 58.4% | 31,869 | 29,486 | 6,268 | 14,664 | 42.59% | 2,788 | 16,192 |
| 2024 | 393,223 | 234,647 | 234,647 | 158,576 | 59.7% | 33,123 | 30,285 | 6,281 | 15,239 | 42.59% | 2,863 | 17,311 |
| 2025 | 411,641 | 250,709 | 250,709 | 160,932 | 60.9% | 34,432 | 31,051 | 6,274 | 15,767 | 42.59% | 2,936 | 18,472 |
| 2026 | 430,174 | 267,325 | 267,325 | 162,849 | 62.1% | 35,781 | 31,760 | 6,180 | 16,335 | 42.59% | 3,003 | 19,803 |
| 2027 | 448,553 | 284,302 | 284,302 | 164,251 | 63.4% | 37,023 | 32,202 | 6,040 | 16,933 | 42.59% | 3,045 | 21,229 |
| 2028 | 466,595 | 301,581 | 301,581 | 165,014 | 64.6% | 38,357 | 32,609 | 5,868 | 17,575 | 42.59% | 3,083 | 22,724 |
| 2029 | 484,166 | 319,138 | 319,138 | 165,028 | 65.9% | 39,760 | 32,950 | 5,677 | 18,242 | 42.59% | 3,115 | 24,305 |
| 2030 | 501,121 | 336,944 | 336,944 | 164,178 | 67.2% | 41,267 | 33,271 | 5,458 | 18,931 | 42.59% | 3,146 | 25,946 |
| 2031 | 517,323 | 354,975 | 354,975 | 162,349 | 68.6% | 42,833 | 33,511 | 5,205 | 19,663 | 42.59% | 3,168 | 27,635 |
| 2032 | 532,629 | 373,213 | 373,213 | 159,416 | 70.1% | 44,452 | 33,646 | 4,943 | 20,420 | 42.59% | 3,181 | 29,383 |
| 2033 | 546,895 | 391,646 | 391,646 | 155,250 | 71.6% | 46,170 | 33,742 | 4,667 | 21,199 | 42.59% | 3,190 | 31,166 |
| 2034 | 559,998 | 410,271 | 410,271 | 149,727 | 73.3% | 47,947 | 33,743 | 4,379 | 22,038 | 42.59% | 3,190 | 32,979 |
| 2035 | 571,804 | 429,085 | 429,085 | 142,719 | 75.0% | 49,778 | 33,676 | 4,102 | 22,949 | 42.59% | 3,184 | 34,788 |
| 2036 | 582,235 | 448,159 | 448,159 | 134,076 | 77.0% | 51,746 | 33,620 | 3,857 | 23,902 | 42.59% | 3,179 | 36,532 |
| 2037 | 591,302 | 467,655 | 467,655 | 123,647 | 79.1% | 53,886 | 33,613 | 3,647 | 24,897 | 42.59% | 3,178 | 38,180 |
| 2038 | 599,053 | 487,748 | 487,748 | 111,306 | 81.4% | 56,124 | 33,624 | 3,483 | 25,938 | 42.59% | 3,179 | 39,723 |
| 2039 | 605,559 | 508,630 | 508,630 | 96,929 | 84.0% | 58,459 | 33,681 | 3,373 | 27,049 | 42.59% | 3,185 | 41,133 |
| 2040 | 610,936 | 530,547 | 530,547 | 80,389 | 86.8% | 60,903 | 33,810 | 3,326 | 7,241 | 10.92% | 3,197 | 42,385 |
| 2041 | 615,345 | 553,810 | 553,810 | 61,534 | 90.0% | 63,514 | 34,049 | 3,337 | 7,385 | 10.67% | 3,219 | 43,465 |
| 2042 | 618,971 | 557,074 | 557,074 | 61,897 | 90.0% | 66,298 | 34,377 | 3,395 | 7,547 | 10.44% | 3,250 | 44,374 |
| 2043 | 621,998 | 559,798 | 559,798 | 62,200 | 90.0% | 69,239 | 34,777 | 3,488 | 7,716 | 10.24% | 3,288 | 45,158 |
| 2044 | 624,559 | 562,103 | 562,103 | 62,456 | 90.0% | 72,281 | 35,222 | 3,597 | 7,888 | 10.04% | 3,330 | 45,863 |
| 2045 | 626,726 | 564,054 | 564,054 | 62,673 | 90.0% | 75,389 | 35,659 | 3,715 | 8,057 | 9.84% | 3,372 | 46,511 |
| 2046 | 628,540 | 565,686 | 565,686 | 62,854 | 90.0% | 78,579 | 36,099 | 3,836 | 8,220 | 9.65% | 3,413 | 47,110 |
| 2047 | 630,030 | 567,027 | 567,027 | 63,003 | 90.0% | 81,845 | 36,543 | 3,953 | 8,372 | 9.44% | 3,455 | 47,669 |
| 2048 | 631,215 | 568,093 | 568,093 | 63,121 | 90.0% | 85,205 | 36,997 | 4,063 | 8,513 | 9.23% | 3,498 | 48,200 |

**City of Joliet Firefighters Pension Fund**
**Actuarial Valuation Projection Results Based on 32 Years Closed Amortization as of January 1, 2014 (Based on Entry Age Normal Cost Method)**
**($ in Thousands)**

| Fiscal Year | Actuarial Accrued Liability | Market Value of Assets | Actuarial Value of Assets | Unfunded Liability | Actuarial Value Funded Ratio | Uncapped Payroll | Capped Payroll | Employer Normal Cost | Annual Required Contribution[1] | ARC as % of Pay | City Contribution | City Contribution % of Pay | Employee Contributions | Benefit Payments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2014 | $235,117 | $105,573 | $112,968 | $122,149 | 48.0% | $21,727 | $21,727 | $5,277 | $11,597 | 53.38% | $11,950 | 55.00% | $2,054 | $9,394 |
| 2015 | 249,108 | 116,933 | 125,405 | 123,703 | 50.3% | 22,985 | 22,586 | 5,396 | 11,814 | 51.40% | 12,288 | 53.46% | 2,136 | 9,916 |
| 2016 | 263,718 | 129,136 | 139,585 | 124,133 | 52.9% | 24,014 | 23,401 | 5,516 | 11,970 | 49.85% | 12,580 | 52.39% | 2,213 | 10,449 |
| 2017 | 278,974 | 142,041 | 154,218 | 124,757 | 55.3% | 25,131 | 24,255 | 5,631 | 12,276 | 48.85% | 12,888 | 51.28% | 2,293 | 11,045 |
| 2018 | 294,852 | 155,587 | 168,061 | 126,792 | 57.0% | 26,214 | 25,133 | 5,732 | 12,651 | 48.26% | 13,270 | 50.62% | 2,376 | 11,675 |
| 2019 | 311,348 | 169,799 | 182,643 | 128,705 | 58.7% | 27,301 | 26,040 | 5,811 | 13,021 | 47.70% | 13,640 | 49.96% | 2,462 | 12,443 |
| 2020 | 328,339 | 184,661 | 197,863 | 130,476 | 60.3% | 28,375 | 26,918 | 5,876 | 13,389 | 47.19% | 14,006 | 49.36% | 2,545 | 13,296 |
| 2021 | 345,754 | 200,112 | 213,668 | 132,086 | 61.8% | 29,494 | 27,790 | 5,930 | 13,759 | 46.65% | 14,372 | 48.73% | 2,628 | 14,201 |
| 2022 | 363,556 | 216,134 | 230,044 | 133,511 | 63.3% | 30,669 | 28,663 | 5,962 | 14,121 | 46.04% | 14,725 | 48.01% | 2,710 | 15,150 |
| 2023 | 381,700 | 232,720 | 246,972 | 134,727 | 64.7% | 31,869 | 29,486 | 5,976 | 14,479 | 45.43% | 15,072 | 47.29% | 2,788 | 16,192 |
| 2024 | 400,090 | 249,795 | 264,383 | 135,707 | 66.1% | 33,123 | 30,285 | 5,976 | 14,839 | 44.80% | 15,418 | 46.55% | 2,863 | 17,311 |
| 2025 | 418,646 | 267,301 | 282,223 | 136,422 | 67.4% | 34,432 | 31,051 | 5,955 | 15,195 | 44.13% | 15,754 | 45.76% | 2,936 | 18,472 |
| 2026 | 437,310 | 285,222 | 300,470 | 136,840 | 68.7% | 35,781 | 31,760 | 5,859 | 15,494 | 43.30% | 16,024 | 44.78% | 3,003 | 19,803 |
| 2027 | 455,829 | 303,394 | 318,902 | 136,927 | 70.0% | 37,023 | 32,202 | 5,731 | 15,775 | 42.61% | 16,272 | 43.95% | 3,045 | 21,229 |
| 2028 | 474,031 | 321,639 | 337,388 | 136,644 | 71.2% | 38,357 | 32,609 | 5,578 | 16,051 | 41.85% | 16,510 | 43.04% | 3,083 | 22,724 |
| 2029 | 491,796 | 339,866 | 355,845 | 135,950 | 72.4% | 39,760 | 32,950 | 5,412 | 16,335 | 41.08% | 16,749 | 42.13% | 3,115 | 24,305 |
| 2030 | 508,984 | 357,970 | 374,181 | 134,803 | 73.5% | 41,267 | 33,271 | 5,225 | 16,622 | 40.28% | 16,984 | 41.15% | 3,146 | 25,946 |
| 2031 | 525,469 | 375,877 | 392,315 | 133,154 | 74.7% | 42,833 | 33,511 | 5,011 | 16,907 | 39.47% | 17,206 | 40.17% | 3,168 | 27,635 |
| 2032 | 541,117 | 393,513 | 410,167 | 130,951 | 75.8% | 44,452 | 33,646 | 4,787 | 17,210 | 38.72% | 17,436 | 39.22% | 3,181 | 29,383 |
| 2033 | 555,790 | 410,776 | 427,652 | 128,138 | 76.9% | 46,170 | 33,742 | 4,547 | 17,530 | 37.97% | 17,669 | 38.27% | 3,190 | 31,166 |
| 2034 | 569,364 | 427,608 | 444,709 | 124,655 | 78.1% | 47,947 | 33,743 | 4,294 | 17,875 | 37.28% | 17,909 | 37.35% | 3,190 | 32,979 |
| 2035 | 581,712 | 443,942 | 461,275 | 120,437 | 79.3% | 49,778 | 33,676 | 4,051 | 18,273 | 36.71% | 18,180 | 36.52% | 3,184 | 34,788 |
| 2036 | 592,758 | 459,751 | 477,347 | 115,411 | 80.5% | 51,746 | 33,620 | 3,827 | 18,744 | 36.22% | 18,496 | 35.74% | 3,179 | 36,532 |
| 2037 | 602,503 | 475,099 | 493,001 | 109,502 | 81.8% | 53,886 | 33,613 | 3,620 | 19,298 | 35.81% | 18,855 | 34.99% | 3,178 | 38,180 |
| 2038 | 610,982 | 490,106 | 508,355 | 102,627 | 83.2% | 56,124 | 33,624 | 3,439 | 19,964 | 35.57% | 19,267 | 34.33% | 3,179 | 39,723 |
| 2039 | 618,246 | 504,902 | 523,550 | 94,696 | 84.7% | 58,459 | 33,681 | 3,289 | 20,776 | 35.54% | 19,742 | 33.77% | 3,185 | 41,133 |
| 2040 | 624,390 | 519,671 | 538,778 | 85,612 | 86.3% | 60,903 | 33,810 | 3,181 | 21,792 | 35.78% | 20,290 | 33.32% | 3,197 | 42,385 |
| 2041 | 629,552 | 534,646 | 554,284 | 75,268 | 88.0% | 63,514 | 34,049 | 3,108 | 23,092 | 36.36% | 20,908 | 32.92% | 3,219 | 43,465 |
| 2042 | 633,893 | 550,106 | 570,342 | 63,551 | 90.0% | 66,298 | 34,377 | 3,063 | 24,837 | 37.46% | 21,594 | 32.57% | 3,250 | 44,374 |
| 2043 | 637,573 | 566,340 | 587,240 | 50,333 | 92.1% | 69,239 | 34,777 | 3,043 | 27,410 | 39.59% | 22,346 | 32.27% | 3,288 | 45,158 |
| 2044 | 640,711 | 583,608 | 605,236 | 35,475 | 94.5% | 72,281 | 35,222 | 3,035 | 31,959 | 44.22% | 23,166 | 32.05% | 3,330 | 45,863 |
| 2045 | 643,369 | 602,133 | 624,555 | 18,813 | 97.1% | 75,389 | 35,659 | 3,039 | 44,274 | 58.73% | 24,101 | 31.97% | 3,372 | 46,511 |
| 2046 | 645,584 | 622,130 | 645,457 | 127 | 100.0% | 78,579 | 36,099 | 3,052 | 26,505 | 33.73% | 3,505 | 4.46% | 3,413 | 47,110 |
| 2047 | 647,387 | 643,866 | 647,259 | 128 | 100.0% | 81,845 | 36,543 | 3,073 | 6,594 | 8.06% | 3,531 | 4.31% | 3,455 | 47,669 |
| 2048 | 648,804 | 645,246 | 648,663 | 141 | 100.0% | 85,205 | 36,997 | 3,099 | 6,658 | 7.81% | 3,574 | 4.19% | 3,498 | 48,200 |
| 2049 | 649,841 | 646,239 | 649,698 | 143 | 100.0% | 88,653 | 37,451 | 3,130 | 6,731 | 7.59% | 3,609 | 4.07% | 3,541 | 48,709 |

[1] *Based on an amortization period equal to the lesser 30 years and the amortization period used to determine the City's Contribution*

# SECTION C

## BENEFIT PROVISIONS AND VALUATION DATA

# BRIEF SUMMARY OF PLAN PROVISIONS
# (JANUARY 1, 2014 )

| | | |
|---|---|---|
| ***Plan*** | Firefighters Pension Fund as Incorporated in Chapter 40, Act 5, Article 4 of the Illinois Complied Statutes. | |
| ***Effective Date*** | Enacted: | March 18, 1963 |
| | Last Amended Effective: | August 16, 2013 |

***Eligibility to Participate***

Generally, any person who is in the Firefighters Department of a city, village or incorporated town (whose population is 500,000 or less) which has adopted the provisions of Chapter 40, Act 5, Article 4 of the Illinois Compiled Statutes concerning Firefighters' pensions, is eligible to participate, subject to the following:

(a) The person has attained age 18 but not age 35 at the time of the first appointment; and

(b) Within three months after receiving his/her first appointment (or within three months after any re-appointment), the person makes written application to the Board to be covered under the provisions of the Article.

<u>NOTE:</u>

If the person had been regularly enrolled as a volunteer Firefighter for 5 years immediately preceding the time that the municipality began employing him/her full time, the age limitation in (a) above does not apply.

***Employee Contributions (Mandatory)***

In order to participate in the plan, each Firefighter must contribute 9.455% of his/her regular salary. "Salary" in this instance excludes overtime pay, holiday pay, bonus pay, merit pay or any other cash benefit over and above the salary established by the appropriation ordinance. Prior to July 1, 2004, each Firefighter had to contribute 8.455% of his/her regular salary.

***Creditable Service***

"Creditable Service" is the time period during which a person serves as a Firefighter of a municipality. Furloughs and Leave of Absences without pay <u>exceeding</u> 30 days in any one year are not counted unless such periods are attributable to illness or accident. Time attributable to disability absence for which the Firefighter does not receive disability pension benefits will be counted as "Creditable Service."

Furloughs and Leave of Absence <u>less</u> than 30 days in any one year may be included in "Creditable Service" if the Firefighter makes the regular employee contributions to the Fund he/she would have made if he/she had not been on the furlough or leave of absence. Such contributions must be made not more than 90 days following the end of the furlough or leave of absence.

In addition, all periods of service in the Military, Naval or Air Forces of the United States of America, entered into when the person was an active Firefighter and up to eight Years of Service as an officer in a statewide firefighters' association while on leave of absence from a municipality's payroll, shall be counted as "Credited Service," provided that the Firefighter contributes to the Fund the amount he/she would have paid had he/she been a regular contributor during such military service; in general, not more than five years may be counted under this provision. Credited Service shall not include time spent as a volunteer Firefighter whether or not compensation was received.

***Eligibility For and Amount of Regular Retirement Benefits***

***I. Eligibility — Age 50 (or More) and 20 or More Years of Creditable Service***

Benefit: A Firefighter who is age 50 (or more) and has 20 years or more of Creditable Service and is no longer a Firefighter is entitled to 1/2 of the monthly salary attached to the rank held by him/her at the date of actual retirement.

For Creditable Service over 20 years, the monthly pension is increased as follows:

- 1/12 of 2.5% of the Firefighter's monthly salary for each additional year over 20 to the limitation that the monthly pension does not exceed 75% of his/her monthly salary.

Notwithstanding the above, as of January 1, 1999, no Pension in effect or granted with 20 or more Years of Service after May 1, 1993 is to be less than $600.00 per month. This minimum is increased to $800.00 per month on January 1, 2000, $1,000.00 per month on January 1, 2001, $1,030.00 per month on July 1, 2004, $1,060.90 per month on July 1, 2005, $1,092.73 per month on July 1, 2006, $1,125.51 per month on July 1, 2007, $1,159.27 per month on July 1, 2008.

***II. Eligibility—Age 60 (or More) and 10 (but Less than 20) Years of Creditable Service***

A Firefighter who is age 60 or more and has at least 10 Years (but less than 20) of Creditable Service and who is no longer a Firefighter, is entitled to a monthly pension payable for life based on the monthly salary attached to the rank held by him/her at the date of retirement or separation from service according to the following schedule:

| | |
|---|---|
| For 10 Years of Service — | 15.0% of salary; |
| For 11 Years of Service — | 17.6% of salary; |
| For 12 Years of Service — | 20.4% of salary; |
| For 13 Years of Service — | 23.4% of salary; |
| For 14 Years of Service — | 26.6% of salary; |
| For 15 Years of Service — | 30.0% of salary; |
| For 16 Years of Service — | 33.6% of salary; |
| For 17 Years of Service — | 37.4% of salary; |
| For 18 Years of Service — | 41.4% of salary; |
| For 19 Years of Service — | 45.6% of salary; |

Notwithstanding the foregoing, a Firefighter affected by the above shall not be entitled to a pension benefit if the option for a refund of employee contributions was exercised when the Firefighter last separated from service or if he/she is entitled to a disability pension benefit.

***III. Pension Allowance Increases***

- A Firefighter who retired from service with 20 or more years of Creditable Service on or before May 1, 1971, is entitled to an increase of 2% of his/her original monthly pension for each year the Firefighter was in receipt of pension payments; such increase takes effect in the January of the year following the year in which he/she attains age 65, or January of 1972, if then age 65. Each subsequent January, the monthly pension is increased by 2% of the original monthly pension amount. Beginning January, 1976, the rate of such increases was raised to 3% of the original monthly pension.

- A Firefighter who retired from service after May 1, 1971, and prior to January 1, 1986, is entitled to an increase of 2% of his/her original monthly pension either upon: (a) the first of the month following the first anniversary of his/her date of retirement if he/she was age 60 or more on that date, or (b) the first of the month following the Firefighter's attainment of age 60 (if such occurs after the first anniversary of his/her retirement date). Each subsequent January, the monthly pension is increased by 2% of the original monthly pension amount. Beginning January, 1976, the rate of such increase was raised to 3% of the original monthly pension. In July 2009, a Firefighter who retired before July 1, 1977, had his/her benefit recalculated and increased to reflect the amount that he/she would have received in July 2009 had he/she been receiving a 3% compounded increase for each year he/she received pension payments after January 1, 1986, plus any increases in pension received for each year prior to January 1, 1986. In each January thereafter, he or she shall receive an additional increase of 3% of the amount of the pension then being paid.

- A Firefighter who retired from service on or after January 1, 1986, is entitled to an increase of 3% of his/her original monthly pension for each full year that has elapsed since the pension began. This occurs either upon: (a) the first of the month following the anniversary of his/her date of retirement if he/she was age 55 or older on that date, or (b) the first of the month following the Firefighter's attainment of age 55 (if such occurs after the first anniversary of his/her retirement date). Each subsequent January, the monthly pension is increased by 3% of the immediately preceding year's pension amount.

- Notwithstanding the provisions of the second paragraph listed above, a Firefighter who retired from service after January 1, 1977, and prior to January 1, 1986, and did not receive a pension increase before May 1, 1987, is entitled to a 3% increase of his/her original monthly pension for each full year that has elapsed since the pension began. This occurs on the first day of the month following either: (a) the first anniversary of the date of retirement, or (b) the attainment of age 55, or (c) May 1, 1987. Each subsequent January, the monthly pension is increased by 3% of the immediately preceding year's pension amount.

***Eligibility For and Amount of Disability Benefits***

***I. Disability Incurred in the Line of Duty***

a) If a Firefighter is injured or suffers an accident or sickness as the result of carrying out his/her duties as a Firefighter (even if those duties take him/her to a place away from the municipality in which he/she serves as a Firefighter, and assuming such duties are related to the fire protection service of such municipality), then such a disabled Firefighter is entitled to a disability retirement pension equal to the greater of: (i) the Firefighter's accrued pension benefit at the date of disability or (ii) 65% of the monthly salary attached to the rank held by him/her in the Fire Department at the date he/she is removed from the municipality's Fire Department payroll.

b) A Firefighter who is entitled to disability payments, as discussed in (a) above, also has the right to receive a benefit of $20 per month for every unmarried child less than 18 years of age.

The total amount of the benefits described in both (a) and (b) above shall not exceed 75% of the amount of salary the Firefighter was receiving at the time of the grant of the disability benefit.

***II. Disability on Account of Occupational Hazards***

a) If a Firefighter who has completed 5 or more Years of Service is unable to perform his/her duties in the Fire Department by reason of heart disease, tuberculosis, disabling cancer, or any disease of the lungs or respiratory tract, resulting solely from his/her service as a Firefighter, then he/she is entitled to an occupational disease disability pension equal to the greater of: (i) the Firefighter's accrued pension benefit at the date of disability or (ii) 65% of his/her salary at the time of his/her removal from the Fire Department payroll.

a) A Firefighter who is entitled to a disability payments as described in (a) above also has the right to receive a benefit of $20.00 per month for every unmarried child less than 18 years of age and who is dependent upon the Firefighter for financial support.

The total amount of the benefits described in both (a) and (b) above are not to exceed 75% of the amount of salary the Firefighter was receiving at the time of the grant of the disability benefit.

***III. Disability Due to Occurrences Unrelated to Duties***

If a Firefighter, who has 7 years of Creditable Service, becomes mentally or physically disabled as the result of any cause other than the performance of an act or acts of duty, he/she is entitled to a disability pension equal to 50% of the monthly salary attached to the rank held by him/her in the Fire Department at the date he/she is removed from the municipality's Fire Department payroll.

***IV. Special Disability Pension Option***

A Firefighter who is receiving any form of disability pension and whose Creditable Service plus years of disability equals 20 or more and who is age 50 or older may elect to retire from the Fire Department by submitting a written application to the Board. His/her lifetime retirement pension will be equal to the same amount he/she was entitled to as a disabled Firefighter as of the date he/she was removed from Municipality's payroll for disability. A Firefighter who exercises this option is entitled to the automatic 3% per annum increase in benefits.

If a Firefighter who is on any form of disability pension accumulates enough Creditable Service to be eligible for a pension (at least 10 years at age 60 or at least 20 years at age 50 or more), he/she may elect to permanently retire from the Fire Department by submitting a written application to the Board. The Firefighter would be entitled to a lifetime pension based on the salary attached to the rank he/she held in the Fire Department as of the date of his/her election to retire. A Firefighter who exercises this option is entitled to the automatic 3% per annum increase in benefits.

***V. Disability Pension Allowance Increase***

A Firefighter who is receiving a disability pension is entitled to receive an automatic increase effective January 1, 1974, and upon the attainment of age 60. At this date, the monthly pension is increased by 2% of the original monthly pension <u>for each year the Firefighter was in receipt of monthly pension payments</u>. Each subsequent January, the monthly pension is again increased by 2% of the <u>original</u> monthly pension amount. Effective January 1976, the rate of such increase was raised to 3% of the original monthly pension.

***Death Benefits to Surviving Spouse or Dependents***

***I. Surviving Spouse's Benefit***

If an active Firefighter dies while in the line of duty as a result of any injuries or if a Firefighter sustains injuries from which he/she thereafter dies, then the surviving spouse is entitled to a monthly pension equal to 100% of the monthly salary attached to the rank the Firefighter held on his/her last day of service with the Fire Department. The benefit is payable to the surviving spouse for life.

If an active Firefighter dies as a result of any illness or accident unrelated to duty <u>or</u> if a Firefighter dies from any cause while receiving disability pension benefits, <u>or</u> if a Firefighter dies during his/her retirement (after 20 years of service), then his/her surviving spouse is entitled to a monthly pension equal to 100% of the monthly retirement pension earned by the deceased firefighter at the time of death. This benefit is payable to the surviving spouse for life. Previously, the surviving spouse was entitled to a monthly pension equal to 54% of the monthly salary attached to the rank the Firefighter held on his/her last day of service with the Fire Department.

Beginning January 1, 1999, the minimum amount payable under this provision is $600.00 per month for both current and future surviving spouses. This minimum is increased to $800.00 per month on January 1, 2000, $1,000.00 per month on January 1, 2001, $1,030.00 per month on July 1, 2004, $1,060.90 per month on July 1, 2005, $1,092.73 per month on July 1, 2006, $1,125.51 per month on July 1, 2007, $1,159.27 per month on July 1, 2008.

***II. Dependent's Benefit***

The dependent's benefit is applicable in the event of the death of the Firefighter under the conditions enumerated above for the surviving spouse's benefit. The guardian (spouse or otherwise) of any minor child (or children), including a child who had been conceived but not yet born, is entitled to a monthly benefit equal to 12% of the monthly salary attached to the rank the Firefighter held on his/her last day of service with the Fire Department prior to his/her death. Such benefit is payable for each such child until the child attains age 18 or marries, if earlier.

If the deceased Firefighter leaves no surviving spouse or unmarried minor children under age 18, but leaves a dependent father or mother, each one is entitled to a monthly benefit equal to 18% of the monthly salary attached to the rank the Firefighter held on his/her last day of service with the Fire Department.

Notes: (a) The aggregate above monthly death benefits are not to exceed 75% of the monthly salary of the deceased Firefighter.

(b) Adopted children are entitled to the same benefits as provided for natural children, if adopted before the Firefighter attained age 50.

(c) If the Firefighter leaves no surviving spouse, unmarried children under the age of 18 or dependent father or mother, the Board will refund to his/her estate the amount of his/her accumulated contributions, less any amount of pension payments made to the deceased Firefighter while he/she was living.

***Termination of Employment Benefits.***

***I. Refund of Employee Contributions***

A Firefighter who has less than 20 Years of Service and who resigns or is discharged (and has not received any disability payments), is entitled to a refund of his/her total amount contributed to the fund during his/her period of service. If the Firefighter should be subsequently re-employed, he/she must repay to the fund the amount of refund which he/she received before commencing service. When repayment is made, the Firefighter will receive credit for the previous Years of Service for which he/she received his/her refund.

***II. Re-entry Into Service***

- If a retired Firefighter (who is receiving pension benefits) re-enters active service, his/her pension benefits will cease while in active service. If he/she again retires, his/her monthly payments will resume in the same amount as he/she had received as a pensioner.

- If a "deferred" pensioner reenters service and remains in service for <u>less than three years</u>, and then again retires or is discharged, his/her pension will be based on the salary attached to the rank he/she held in the Fire Department at the date of his/her earlier retirement. Conversely, if the pensioner re-enters service and remains in service for <u>three or more years</u>, and again retires or is discharged, his/her pension will be based on the salary attached to the rank he/she held in the Fire Department at the date of his/her last retirement.

Notwithstanding the foregoing, if a pensioner or deferred pensioner returns to active service and is subsequently injured (and the injury is not relate to an injury for which the member was previously receiving benefits), the 3 year requirement does not apply in order for the member to receive his/her pension based on his/her rate of pay at the time of his/her new injury.

***Financing of Pension Benefits***

Pension benefits are to be funded by "employee" deductions from wages and salaries of Firefighters and by a property tax levied by the Municipality. The amount derived from these two sources should equal the sum sufficient to meet the annual actuarial requirements of the pension fund as stated below:

(1) Provide actuarial reserves for the pensions and benefits earned by the Firefighters during the year (the reserve requirement is to be computed at a rate of not less than 17.5% of the salaries and wages earned by the Firefighters during the year),

And

(1) In a municipality that has a reserve less than the actuarial requirements of the fund, the Board of the Pension Fund shall designate the proportionate amount needed annually to insure the accumulation of such actuarial reserve over a period of 35 years subsequent to January 1, 2011, in the case of pension funds in operation on that date.

The minimum funding requirements under P.A. 96-1495 are disclosed on the following page.

***Administration***

The Firefighters' Pension Fund is administered by a Board of Trustees located in each municipality maintaining a Pension Fund for its Firefighters. Its duties are: to control and manage the pension fund, to enforce the collection of the contributions, to hear and determine applications for pensions, to authorize payment of pension, to establish rules, to pay expenses, to invest funds and to keep records.

### Benefits Under P.A. 96-1495

Under P.A. 96-1495, members of the City of Joliet Firefighters' Pension Fund hired after December 31, 2010, are eligible for the following tier-two benefits:

- Minimum retirement eligibility at age 55 with 10 years of service with annuity based on accrual rate of 2.5 percent, subject to a maximum of 75 percent.
- Minimum retirement eligibility at age 50 with 10 years of service with annuity based on accrual rate of 2.5 percent, reduced by ½ of a percent per month for retirement prior to age 55, subject to a maximum of 75 percent.
- Final average salary based on 96 consecutive months within last 120 months.
- Annual salary capped at $106,800, indexed annually at lesser of 3.0 percent and 50 percent of CPI-U. For the January 1, 2014, valuation, annual salary is capped at $110,631.26.
- COLA equal to lesser of 3.0 percent and 50 percent of CPI-U, commencing at age 60, with no cap, applied to originally granted retirement annuity.
- Widow benefits at 66-2/3 percent of retiree’s benefit.
- Widow COLAs equal to the lesser of 3.0 percent and 50 percent of CPI-U, commencing when the survivor reaches age 60 and applied to originally granted retirement annuity.

### Minimum Funding Requirements under P.A. 96-1495

P.A. 96-1495 includes the following changes to the statutory funding requirements:

- Employer contribution (combined with members contributions and other fund revenue) produces 90 percent funding by the end of fiscal year 2040.
- Contributions based on open group projection and level percent of pay financing.
- Actuarial liabilities based on projected unit credit cost method.
- Assets marked to market at March 30, 2011. For fiscal years after March 30, 2011, actuarial value of assets based on 5-year smoothing.

If the City does not make the statutorily required contributions, then the State, starting in FY 2016, could withhold State grants to the City, and directly deposit the withheld funds into the City of Joliet Police Officers' Pension Fund. The withheld funds are limited to 33 percent of total State grants to the City in FY 2016, 67 percent in FY 2017, and 100 percent on and after FY 2018.

The contribution determined in accordance with P.A. 96-1495 serves as a minimum contribution requirement. The funding policy adopted for this valuation exceeds the minimum contribution established under this Public Act.

# ACTIVE MEMBERS AS OF JANUARY 1, 2014
# BY ATTAINED AGE AND YEARS OF SERVICE

| Attained Age | Years of Service to Valuation Date | | | | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | Over 35 | Totals | Valuation Payroll |
| **Under 20** | | | | | | | | | | **0** | **$ 0** |
| **20-24** | | | | | | | | | | **0** | **0** |
| **25-29** | | 3 | 5 | | | | | | | **8** | **718,758** |
| **30-34** | | 5 | 27 | 6 | | | | | | **38** | **3,657,892** |
| **35-39** | | | 23 | 17 | 4 | | | | | **44** | **4,581,919** |
| **40-44** | | | 10 | 24 | 12 | 2 | | | | **48** | **5,201,043** |
| **45-49** | | | | 7 | 14 | 14 | 2 | | | **37** | **4,362,733** |
| **50-54** | | | | | 4 | 12 | 5 | | | **21** | **2,592,103** |
| **55-59** | | | | | 2 | 1 | 2 | | | **5** | **612,682** |
| **60-64** | | | | | | | | | | **0** | **0** |
| **65-69** | | | | | | | | | | **0** | **0** |
| **Over 70** | | | | | | | | | | **0** | **0** |
| **Total** | **0** | **8** | **65** | **54** | **36** | **29** | **9** | **0** | **0** | **201** | **$21,727,130** |

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

| | | |
|---|---|---|
| Age: | 41.2 | years |
| Service: | 13.4 | years |
| Annual Pay: | $108,095 | |

## DEVELOPMENT OF ACTUARIAL (MARKET-RELATED) VALUE OF ASSETS

| | | |
|---|---|---|
| ***Expected Return on Market Value of Assets for Prior Year*** | 1. Market value of assets at 01/01/2013 | $ 88,647,927 |
| | 2. Actual income and disbursements in prior year weighted for timing: | |

| Item | Amount | Weight for Timing | Weighted Amount |
|---|---|---|---|
| (a) Member Contributions | $ 2,072,791 | 50.00% | $ 1,036,396 |
| (b) City Contributions | 11,728,540 | 50.00% | 5,864,270 |
| (c) Miscellaneous Revenue | - | 50.00% | - |
| (d) Benefit Payments | (8,940,631) | 50.00% | (4,470,316) |
| (e) Administration | (86,456) | 50.00% | (43,228) |
| (f) Total | | | $ 2,387,122 |

| | | |
|---|---|---|
| | 3. Market value of assets adjusted for actual income disbursements [(1) + (2)(f)] | $ 91,035,049 |
| | 4. Assumed rate of return on plan assets for the year | 7.00% |
| | 5. Expected return [(3) * (4)] | $ 6,372,453 |
| ***Actual Retur on Market Value of Assets for Prior Year*** | 6. Market value of assets at 01/01/2013 | $ 88,647,927 |
| | 7. Income (less investment income) for prior plan year | 13,801,331 |
| | 8. Disbursements paid in prior year | 9,027,087 |
| | 9. Market value of assets at 01/01/2014 | 105,572,502 |
| | 10. Actual Return [(9) + (8) - (7) - (6)] | 12,150,331 |
| ***Gain/(Loss)*** | 11. Investment gain/(loss) for prior year based on market value of assets [(10) - (5)] | $ 5,777,878 |

# DEVELOPMENT OF ACTUARIAL (MARKET-RELATED) VALUE OF ASSETS (CONTINUED)

***Actuarial Value of Assets as of 01/01/2014***

12. Market value of assets at 01/01/2014 — $ 105,572,502

13. Deferred investment gains and (losses) for last 3 years:

| | Plan Year Beginning | Gain/(Loss) | Percent Deferred | Deferred Amount |
|---|---|---|---|---|
| a) | 2011 | $ (4,281,995) | 25.00% | $ (1,070,499) |
| b) | 2012 | 818,771 | 50.00% | 409,386 |
| c) | 2013 | 5,777,878 | 75.00% | 4,333,409 |
| d) | Total | $ 2,314,654 | | $ 3,672,296 |

14. Item (12) less item 13(d) — $ 101,900,206

15. 2014 Tax Year Levy (i.e., the 2013 Plan Year Contributions) — 11,435,662

16. Interest Adjustment on item (15) to 01/01/2014 — (367,453)

17. Actuarial Value of Plan Assets at 01/01/2014 [(14) + (15) + (16)] — $ 112,968,415

Notes:

(1) The calculated value is determined by adjusting the market value of assets to reflect the investment gains and losses (the difference between the actual investment return and the expected investment return) during each of the last four years at the rate of 25% per year.

(2) Assumes the 2014 tax year levy is collected and deposited in the Pension Fund on July 1, 2014.

# SECTION D

## VALUATION PROCEDURES

# ACTUARIAL COST METHOD

***Normal cost and the allocation of benefit values*** between service rendered before and after the valuation date was determined using the ***individual entry-age actuarial*** *cost method* having the following characteristics:

- The annual normal costs for each individual active member, payable from the date of employment to the date of retirement, are sufficient to accumulate the value of the member's benefit at the time of retirement; and
- Each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

***Financing of Unfunded Actuarial Accrued Liabilities.*** Unfunded actuarial accrued liabilities were amortized by level (principal and interest combined) percent of payroll contributions over 32 future years.

***Actuarial Value of Pension Plan Assets.*** The current market value of assets (including discounted contributions due for prior Plan Years and not received as of the valuation date) is reduced (increased) for the current year and each of two succeeding years, by a portion of the gain/(loss) in market value during the prior year. Such gain/(loss) is determined as the excess/(deficit) of the current market value of assets over the market value of assets as of the prior year, increased to reflect interest at the actuarial rate and adjusted to reflect contributions and benefit payments during the prior year. The portion of such gain/(loss) by which the current market value of assets is reduced (increased) shall be 75% in the current year; 50% in the first succeeding year and 25% in the second succeeding year.

# Actuarial Assumptions in the Valuation Process

The contribution and benefit values of the System are calculated by applying actuarial assumptions to the benefit provisions and census information furnished, using the actuarial cost method described on the previous page.

The principal areas of financial risk which require assumptions about future experiences are:

- Long-term rates of investment return to be generated by the assets of the System;
- Patterns of pay increases to members;
- Rates of mortality among members, retirees and beneficiaries;
- Rates of withdrawal of active members;
- Rates of disability among members; and
- The age patterns of actual retirement.

In a valuation, the monetary effect of each assumption is calculated for as long as a present covered person survives; a period of time which can be as long as a century.

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Actual experience of the System will not coincide exactly with assumed experience. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate.

From time to time it becomes appropriate to modify one or more of the assumptions, to reflect experience trends (but not random year-to-year fluctuations).

The assumptions used in this valuation, with exception to the assumed rate of investment return, are the same as those used in the previous valuation.

**The assumed rate of investment return** used was 6.75%, net of expenses, annually.

**The mortality table** used to measure retirement mortality is the 1994 Group Annuity Mortality Table. This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement. This is a static table with no provisions for future mortality improvement.

| | Single Life Retirement Values | | | |
|---|---|---|---|---|
| Sample Attained | Present Value of $1 Monthly for Life | | Future Life Expectancy (years) | |
| Ages | Men | Women | Men | Women |
| 50 | $ 151.44 | $ 159.02 | 30.69 | 34.89 |
| 55 | 141.72 | 151.04 | 26.15 | 30.17 |
| 60 | 129.97 | 140.94 | 21.83 | 25.59 |
| 65 | 116.60 | 129.05 | 17.84 | 21.28 |
| 70 | 102.28 | 115.60 | 14.29 | 17.31 |
| 75 | 86.85 | 99.89 | 11.12 | 13.60 |
| 80 | 70.91 | 82.94 | 8.37 | 10.31 |

**The disability retirement mortality table** was based on 110% of the 1994 Group Annuity Mortality Table.

| | Single Life Retirement Values | | | |
|---|---|---|---|---|
| Sample Attained | Present Value of $1 Monthly for Life | | Future Life Expectancy (years) | |
| Ages | Men | Women | Men | Women |
| 50 | $ 149.80 | $ 157.77 | 29.80 | 34.03 |
| 55 | 139.70 | 149.44 | 25.29 | 29.34 |
| 60 | 127.53 | 138.95 | 21.01 | 24.78 |
| 65 | 113.79 | 126.67 | 17.08 | 20.51 |
| 70 | 99.21 | 112.90 | 13.60 | 16.60 |
| 75 | 83.63 | 96.91 | 10.51 | 12.96 |
| 80 | 67.67 | 79.80 | 7.85 | 9.75 |

***Rates of separation from active membership*** are represented by the following table (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members terminating employment.

| Years of Service | Sample Employee Withdrawal Rate Per 1,000 Employees | |
|---|---|---|
| | **Males** | **Females** |
| 0 | 14.0 | 14.0 |
| 5 | 9.0 | 9.0 |
| 10 | 6.0 | 6.0 |
| 15 | 3.0 | 3.0 |
| 20 | 2.0 | 2.0 |
| 25 | 1.0 | 1.0 |
| 30 and Over | 0.0 | 0.0 |

***The rates of salary increase*** used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries at the time upon which benefit amounts will be based.

| Years of Service | Salary Increase Assumptions For an Individual Member<br>Increase |
|---|---|
| 1 | 30.00% |
| 2 | 27.50% |
| 3 | 20.00% |
| 4 | 15.00% |
| >=5 | 5.25% |

***Sample rates of disability*** were as follows:

| Employee Disablement Rate Per 1,000 Employees | | |
|---|---|---|
| Age | Male | Female |
| 25 | 1.0 | 1.0 |
| 30 | 1.0 | 1.0 |
| 35 | 1.2 | 1.2 |
| 40 | 1.5 | 1.5 |
| 45 | 2.1 | 2.1 |
| 50 | 7.8 | 7.8 |
| 55 | 13.6 | 13.6 |
| 60 | 23.0 | 23.0 |
| 65 | 33.5 | 33.5 |

***Probabilities of retirement*** for members eligible to retire during the next year were as follows:

| Rates of Retirement | | | |
|---|---|---|---|
| Age | Rate | Age | Rate |
| 50 | 5.0 % | 60 | 30.0 % |
| 51 | 5.0 | 61 | 50.0 |
| 52 | 5.0 | 62 | 50.0 |
| 53 | 10.0 | 63 | 50.0 |
| 54 | 20.0 | 64 | 50.0 |
| 55 | 25.0 | 65 | 100.0 |
| 56 | 30.0 | 66 | 100.0 |
| 57 | 30.0 | 67 | 100.0 |
| 58 | 30.0 | 68 | 100.0 |
| 59 | 30.0 | 69 | 100.0 |

## SECTION E

### GASB STATEMENT NO 27

**This information is presented in draft form for review by the Fund's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the Fund's financial statements.**

# REQUIRED SUPPLEMENTARY INFORMATION
## SCHEDULE OF FUNDING PROGRESS

| Actuarial Valuation Date | GASB Value of Assets (a) | Actuarial Accrued Liability (b) | Unfunded AAL (UAAL) (b – a) | Funded Ratio (a / b) | Covered Payroll (c) | UAAL as a Percentage of Payroll [(b – a)/c] |
|---|---|---|---|---|---|---|
| 1/1/2009 | $65,005,952 | $163,067,860 | $98,061,908 | 39.9% | $17,828,326 | 550.0% |
| 1/1/2010 | 68,158,236 | 176,212,143 | 108,053,907 | 38.7 | 19,834,928 | 544.8 |
| 1/1/2011 | 73,457,570 | 192,271,318 | 118,813,748 | 38.2 | 20,431,852 | 581.5 |
| 1/1/2012 | 80,031,690 | 205,192,787 | 125,161,097 | 39.0 | 21,949,202 | 570.2 |
| 1/1/2013 | 89,643,330 | 217,728,604 | 128,085,274 | 41.2 | 22,050,623 | 580.9 |
| 1/1/2014 | 101,900,206 | 235,117,345 | 133,217,139 | 43.3 | 21,727,130 | 613.1 |

# SCHEDULE OF EMPLOYER CONTRIBUTIONS

| Fiscal Year Ended | Annual Required Contribution (a) | Total Employer Contribution (b) | Percentage Contributed (b / a) |
|---|---|---|---|
| 12/31/2009 | $ 9,094,439 | $ 8,168,225 | 89.8% |
| 12/31/2010 | 10,224,930 | 9,477,572 | 92.7 |
| 12/31/2011 | 10,487,255 | 10,915,951 | 104.1 |
| 12/31/2012 | 11,097,584 | 10,450,183 | 94.2 |
| 12/31/2013 | 11,191,101 | 11,728,540 | 104.8 |
| 12/31/2014 | 11,597,497 | TBD | TBD |

## *Contribution rates:*

| | | | |
|---|---|---|---|
| ***City*** | Proceeds from a tax levy equal to the sum of: (a) annual normal cost plus (b) amortization of unfunded liability as a level percent of pay between now and 1/1/2046 plus (c) interest on (a) and (b) to date of payment. | | |
| ***Plan members*** | 9.455% of regular salary | | |
| ***Annual Required Contribution for fiscal year ending December 31, 2014:*** | Net Annual Normal Cost (Municipality Paid) | $ | 5,276,823 |
| | Annual Amortization Payments for Funding Unfunded Actuarial Accrued Liability Over 30 Years as a level percentage of payroll | | 6,320,674 |
| | Annual Required Contribution (ARC) | $ | 11,597,497 |
| ***Annual Pension Cost for fiscal year ending December 31, 2014:*** | Annual Required Contribution (ARC) | $ | 11,597,497 |
| | Interest on Net Pension Obligation | | 422,241 |
| | Adjustment to ARC | | (296,798) |
| | Total Annual Pension Cost | $ | 11,722,940 |
| ***Net Pension Obligation (NPO):*** | Net Pension Obligation (NPO) at Beginning of year, January 01, 2013: | $ | 6,652,189 |
| | Total Annual Pension Cost from Previous Year: | | 11,331,781 |
| | Total Employer Contribution for year ended December 31, 2013: | | 11,728,540 |
| | **Net Pension Obligation (NPO) at End of year, December 31, 2013:** | $ | 6,255,430 |

# PENSION COST SUMMARY FOR GASB #27

| Year Ended December 31 | Annual Pension Cost | Total Employer Contribution | % of Annual Pension Cost Contributed | Net Pension Obligation |
|---|---|---|---|---|
| 2011 | $ 10,617,917 | $ 10,915,951 | 102.8% | $ 5,880,429 |
| 2012 | 11,221,943 | 10,450,183 | 93.1 | 6,652,189 |
| 2013 | 11,331,781 | 11,728,540 | 103.5 | 6,255,430 |
| 2014 | 11,722,940 | TBD | TBD | TBD |

# SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

The information requested in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

| | |
|---|---|
| ***Valuation Date*** | January 1, 2014 |
| ***Actuarial Cost Method and Amortization Method*** | Entry-Age-Normal<br><br>35-Year Closed Level-Percentage-of-Pay Amortization (from January 1, 2011) for Funding.<br>32 years remaining<br><br>30-Year Open Level-Percentage-of-Pay Amortization (from January 1, 2011) for GASB 27 Accounting. |
| ***Actuarial Value of Assets*** | 4-year smoothed market |
| ***Actuarial Assumptions:*** | |
| ***Investment Rate of Return*** | 6.75% per year |
| ***Projected Salary Increases*** | 5.25% per year with a three-year service-based select period |
| ***Wage Inflation Increases*** | 4.00% per year |
| ***Cost-of-Living Increases*** | 3.00% per year |