

**CITY OF JOLIET FIREFIGHTERS' PENSION FUND  
ANNUAL ACTUARIAL VALUATION  
FOR THE YEAR BEGINNING  
JANUARY 1, 2013**

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October 15, 2013

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, 2013, 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, 2013, and ending on December 31, 2013 (which directly affects the City's tax levy in the 2014 fiscal year that is collected and deposited into the Pension Trust in fiscal year 2014). 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 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.

Both of the undersigned are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries (MAAA) to render the actuarial opinion contained herein.

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

Sincerely,



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



Paul T. Wood, A.S.A., M.A.A.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.

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**SECTION A**  
VALUATION RESULTS

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## SUMMARY OF ACTUARIAL VALUATION RESULTS

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	Valuation Date as of	<u>January 1, 2012</u>	<u>January 1, 2013</u>
<b>Employee Data</b>	Number of Active Firefighters	205	207
	Number of Service Retirees	68	70
	Number of Disabled Lives	27	28
	Number of Widow Beneficiaries	34	37
	Number of Children Beneficiaries	0	0
	Number of Separated Deferred Firefighters	1	1
	Number of Handicapped Beneficiaries	0	0
	<b>TOTAL</b>	335	343
	Total Annual Salaries of Firefighters	\$ 21,949,202	\$ 22,050,623
<b>Plan Liabilities</b>	Gross Actuarial Accrued Liability:		
	Active Firefighters	\$ 103,541,471	\$ 107,556,498
	Retirees, Beneficiaries & Disabled	101,651,316	110,172,106
	<b>TOTAL</b>	\$ 205,192,787	\$ 217,728,604
	Actuarial Value of Assets at Valuation Date	\$ 90,201,985	\$ 100,541,801
	Unfunded (Overfunded) Actuarial Accrued Liability	\$ 114,990,802	\$ 117,186,803
	<b>Funded Position of Plan's Gross Actuarial Accrued Liability <sup>2</sup></b>	44.0 %	46.2 %
<b>Normal Cost</b>		<b><u>For the 2012 Fiscal Year</u></b>	<b><u>For the 2013 Fiscal Year</u></b>
	Gross Annual Normal Cost	\$ 7,058,514	\$ 7,019,769
	Less Expected Member Contributions (for Applicable Plan Year)	2,075,297	2,084,886
	Net Annual Normal Cost (Municipality Paid)	\$ 4,983,217	\$ 4,934,883
	Net Annual Normal Cost (As a percentage of pay) <sup>1</sup>	22.7 %	22.4 %

<sup>1</sup> Percents above represent net annual normal cost expressed as percentages of covered Firefighters' salaries.

<sup>2</sup> Equals the ratio of the actuarial value of assets to the total gross actuarial accrued liability.

**SUMMARY OF ACTUARIAL VALUATION RESULTS  
(CONTINUED)**

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<b>Annual Contribution Requirements Plan Year End</b>	<b><u>December 31, 2012</u></b> <sup>a</sup>	<b><u>December 31, 2013</u></b> <sup>b</sup>
Net Annual Normal Cost (Municipality Paid)	\$4,983,217	\$4,934,883
Annual Amortization Payments for Funding Unfunded Actuarial Accrued Liability as a level percentage of payroll	5,202,270	5,397,147
Interest Adjustment to Expected Date of Payment into the Fund (Optional)	<u>1,087,979</u>	<u>1,103,632</u>
Total Minimum Annual Contribution Requirement for the Current Plan Year	<u><u>\$11,273,466</u></u>	<u><u>\$11,435,662</u></u>
Minimum Annual Contribution (As a percentage of pay)	51.4%	51.9%

<sup>a</sup> Unfunded Actuarial Accrued Liability is amortized over a 34 year closed period.

<sup>b</sup> Unfunded Actuarial Accrued Liability is amortized over a 33 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 \$10,281,000 or 43.05 percent of projected pay for the plan year ending December 31, 2013.



**DERIVATION OF EXPERIENCE GAIN (LOSS)  
YEAR ENDED JANUARY 1, 2013**

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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 01/01/2012	\$ 114,990,802
2. Normal Cost Due at 01/01/2012	7,058,514
3. Interest on (1) and (2) to 12/31/2012 (at 7.00% per annum)	8,543,452
4. Contributions (Employer and Employee) applicable to the 2012 Plan Year, with interest to 12/31/2012	12,936,858
5. Expected Unfunded Actuarial Accrued Liability at 01/01/2013 [(1) + (2) + (3) - (4)]	\$ 117,655,910
6. Actual Unfunded Actuarial Accrued Liability at 01/01/2013	\$ 117,186,803
7. Gain (Loss) for the 2012 Plan Year [(5) - (6)]	\$ 469,107

Valuation Date January 01	Experience Gain (Loss) As % of Accrued Liability at the Prior Valuation Date <sup>1</sup>
2001	1.15 %
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 %

<sup>1</sup> Excluding Plan and assumption changes.

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## COMMENTS AND ANALYSIS

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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:

<b>Plan Year Ending</b>	<b>Rate of Return On Plan Assets</b>	<b>Salary Scale Increase</b>
12/31/1993	6.4 %	5.7 %
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

The Salary Scale increase has averaged 7.5% over the last 20 years. We believe the 5.25% salary increase assumption continues to be a reasonable long-term assumption. The salary scale recognizes 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%. We believe the 7.00% 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)**

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<b>Analysis of the Experience Gain (Loss)</b>	The experience gain(loss) reported on page A-3, is the net result of the following:	
	(a) From plan asset performance	\$ (384,226)
	(b) Other sources ("net effect" of salary increases, terminations, new entrants, retirements, etc.)	<u>853,333</u>
	Total Gain/(Loss): [(a) + (b)]	\$ 469,107

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**Changes in the  
Annual  
Contribution**

The dollar amount of the plan's annual minimum required contribution of \$11,435,662 is approximately 1.4% higher than the level for the prior plan year of \$11,273,466. As a percentage of payroll, the contribution requirement is higher than last year (i.e., increasing from 51.4% to 51.9%). 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 <sup>1</sup>	\$ 10,640,769
2. Actual Asset Performance (based on actuarial value of assets)	19,586
3. Increase in Normal Cost and Amortization Amount due to anticipated pay increases	450,939
4. Changes in Plan Provisions due to the <sup>1</sup> amendatory Act of the 93rd General Assembly	537,042
5. Other Sources (demographic (gains)/losses)	(212,674)
6. Minimum Annual Contribution Requirement for current plan year (sum of items 1 through 5)	<u>\$ 11,435,662</u>

<sup>1</sup>(P.A. 93-0689, effective 7-1-04.)

## COMMENTS AND ANALYSIS (CONTINUED)

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*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, 2012, are not included in assets for Government accounting standards purposes but are included in assets for funding purposes.

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*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.

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**SECTION B**  
PROJECTIONS

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**City of Joliet Firefighters Pension Fund**  
**Actuarial Valuation Projection Results Based on P.A. 96-1495 as of January 1, 2013 (Based on Projected Unit Credit Cost Method)**  
(\$ in Thousands)

<b>Year</b>	<b>Actuarial Accrued Liability</b>	<b>Market Value of Assets</b>	<b>Actuarial Value of Assets</b>	<b>Unfunded Liability</b>	<b>Actuarial Value Funded Ratio</b>	<b>Uncapped Payroll</b>	<b>Capped Payroll</b>	<b>Employer Normal Cost</b>	<b>Statutory Minimum Contribution</b>	<b>Statutory Contribution % of Projected Pay</b>	<b>Employee Contributions</b>	<b>Benefit Payments</b>
2013	\$212,244	\$88,648	\$90,175	\$122,069	42.49%	\$22,051	\$22,051	\$4,934	\$10,281	43.05%	\$2,085	\$8,727
2014	225,610	99,546	100,207	125,403	44.42%	22,933	22,933	5,130	10,701	43.05%	2,168	9,203
2015	239,720	109,770	109,565	130,155	45.71%	23,882	23,882	5,303	11,156	43.05%	2,258	9,765
2016	254,521	120,653	120,653	133,868	47.40%	24,859	24,839	5,470	11,597	43.05%	2,349	10,338
2017	270,043	132,266	132,266	137,776	48.98%	25,914	25,804	5,620	12,046	43.05%	2,440	10,993
2018	286,236	144,561	144,561	141,675	50.50%	26,938	26,786	5,744	12,503	43.05%	2,533	11,732
2019	303,034	157,510	157,510	145,524	51.98%	27,982	27,775	5,844	12,981	43.05%	2,626	12,566
2020	320,334	171,067	171,067	149,266	53.40%	29,043	28,727	5,927	13,484	43.05%	2,716	13,482
2021	338,060	185,211	185,211	152,849	54.79%	30,153	29,666	5,998	13,997	43.05%	2,805	14,449
2022	356,177	199,951	199,951	156,226	56.14%	31,322	30,598	6,045	14,536	43.05%	2,893	15,462
2023	374,637	215,294	215,294	159,343	57.47%	32,515	31,470	6,075	15,097	43.05%	2,975	16,541
2024	393,366	231,233	231,233	162,132	58.78%	33,765	32,301	6,091	15,676	43.05%	3,054	17,721
2025	412,266	247,725	247,725	164,541	60.09%	35,070	33,095	6,089	16,196	43.05%	3,129	18,942
2026	431,286	264,780	264,780	166,506	61.39%	36,414	33,827	6,000	16,757	43.05%	3,198	20,309
2027	450,196	282,220	282,220	167,976	62.69%	37,624	34,315	5,871	17,347	43.05%	3,244	21,798
2028	468,780	299,963	299,963	168,816	63.99%	38,925	34,780	5,710	17,987	43.05%	3,288	23,357
2029	486,895	317,986	317,986	168,909	65.31%	40,295	35,168	5,529	18,660	43.05%	3,325	24,974
2030	504,402	336,293	336,293	168,109	66.67%	41,783	35,486	5,317	19,356	43.05%	3,355	26,680
2031	521,142	354,838	354,838	166,304	68.09%	43,346	35,698	5,071	20,098	43.05%	3,375	28,433
2032	536,976	373,603	373,603	163,373	69.58%	44,962	35,800	4,815	20,867	43.05%	3,385	30,248
2033	551,753	392,577	392,577	159,176	71.15%	46,686	35,853	4,546	21,663	43.05%	3,390	32,098
2034	565,345	411,759	411,759	153,585	72.83%	48,474	35,809	4,262	22,525	43.05%	3,386	33,980
2035	577,611	431,151	431,151	146,460	74.64%	50,322	35,694	3,988	23,468	43.05%	3,375	35,861
2036	588,456	450,828	450,828	137,629	76.61%	52,323	35,574	3,741	24,463	43.05%	3,364	37,678
2037	597,870	470,961	470,961	126,909	78.77%	54,516	35,461	3,523	25,508	43.05%	3,353	39,397
2038	605,890	491,736	491,736	114,153	81.16%	56,825	35,337	3,347	26,607	43.05%	3,341	41,009
2039	612,591	513,361	513,361	99,231	83.80%	59,254	35,270	3,223	27,781	43.05%	3,335	42,486
2040	618,085	536,095	536,095	81,990	86.73%	61,806	35,286	3,160	7,016	10.40%	3,336	43,803
2041	622,520	560,268	560,268	62,252	90.00%	64,535	35,415	3,151	7,143	10.13%	3,349	44,946
2042	626,071	563,464	563,464	62,607	90.00%	67,452	35,637	3,188	7,291	9.89%	3,369	45,913
2043	628,921	566,029	566,029	62,892	90.00%	70,527	35,953	3,259	7,450	9.68%	3,399	46,750
2044	631,205	568,084	568,084	63,120	90.00%	73,701	36,353	3,351	7,607	9.48%	3,437	47,505
2045	632,999	569,699	569,699	63,300	90.00%	76,928	36,803	3,455	7,755	9.28%	3,480	48,195
2046	634,346	570,911	570,911	63,435	90.00%	80,214	37,298	3,566	7,897	9.08%	3,527	48,827
2047	635,275	571,747	571,747	63,527	90.00%	83,568	37,808	3,675	8,028	8.87%	3,575	49,408

**City of Joliet Firefighters Pension Fund**  
**Actuarial Valuation Projection Results Based on 33 Years Closed Amortization as of January 1, 2013 (Based on Entry Age Normal Cost Method)**  
(\$ in Thousands)

<b>Fiscal Year</b>	<b>Actuarial Accrued Liability</b>	<b>Market Value of Assets</b>	<b>Actuarial Value of Assets</b>	<b>Unfunded Liability</b>	<b>Actuarial Value Funded Ratio</b>	<b>Uncapped Payroll</b>	<b>Capped Payroll</b>	<b>Employer Normal Cost</b>	<b>Annual Required Contribution<sup>1</sup></b>	<b>ARC as % of Pay</b>	<b>City Contribution</b>	<b>City Contribution % of Pay</b>	<b>Employee Contributions</b>	<b>Benefit Payments</b>
2013	\$217,729	\$88,648	\$100,542	\$117,187	46.18%	\$22,051	\$22,051	\$4,935	\$11,192	50.76%	\$11,436	51.86%	\$2,085	\$8,727
2014	231,450	99,546	111,262	120,188	48.07%	22,933	22,933	5,074	11,485	50.08%	11,858	51.71%	2,168	9,203
2015	245,877	110,965	122,224	123,653	49.71%	23,882	23,882	5,196	11,797	49.40%	12,301	51.51%	2,258	9,765
2016	260,960	123,129	135,021	125,939	51.74%	24,859	24,839	5,306	12,039	48.43%	12,683	51.02%	2,349	10,338
2017	276,720	136,101	148,361	128,359	53.61%	25,914	25,804	5,409	12,429	47.96%	13,079	50.47%	2,440	10,993
2018	293,114	149,788	162,432	130,682	55.42%	26,938	26,786	5,493	12,813	47.56%	13,467	49.99%	2,533	11,732
2019	310,080	164,172	177,191	132,889	57.14%	27,982	27,775	5,563	13,195	47.16%	13,851	49.50%	2,626	12,566
2020	327,520	179,194	192,584	134,937	58.80%	29,043	28,727	5,620	13,577	46.75%	14,233	49.00%	2,716	13,482
2021	345,364	194,806	208,566	136,799	60.39%	30,153	29,666	5,666	13,962	46.30%	14,614	48.47%	2,805	14,449
2022	363,578	210,994	225,122	138,456	61.92%	31,322	30,598	5,690	14,339	45.78%	14,984	47.84%	2,893	15,462
2023	382,111	227,748	242,234	139,877	63.39%	32,515	31,470	5,698	14,713	45.25%	15,349	47.20%	2,975	16,541
2024	400,891	245,023	259,861	141,030	64.82%	33,765	32,301	5,692	15,089	44.69%	15,710	46.53%	3,054	17,721
2025	419,821	262,740	277,928	141,893	66.20%	35,070	33,095	5,667	15,461	44.09%	16,065	45.81%	3,129	18,942
2026	438,843	280,882	296,413	142,431	67.54%	36,414	33,827	5,570	15,780	43.33%	16,354	44.91%	3,198	20,309
2027	457,730	299,314	315,124	142,606	68.84%	37,624	34,315	5,446	16,086	42.76%	16,629	44.20%	3,244	21,798
2028	476,294	317,836	333,913	142,381	70.11%	38,925	34,780	5,302	16,391	42.11%	16,897	43.41%	3,288	23,357
2029	494,406	336,368	352,703	141,703	71.34%	40,295	35,168	5,144	16,703	41.45%	17,165	42.60%	3,325	24,974
2030	511,937	354,833	371,427	140,510	72.55%	41,783	35,486	4,962	17,012	40.71%	17,420	41.69%	3,355	26,680
2031	528,734	373,129	389,970	138,764	73.76%	43,346	35,698	4,754	17,317	39.95%	17,662	40.75%	3,375	28,433
2032	544,667	391,171	408,246	136,422	74.95%	44,962	35,800	4,536	17,639	39.23%	17,910	39.83%	3,385	30,248
2033	559,596	408,853	426,168	133,428	76.16%	46,686	35,853	4,303	17,978	38.51%	18,160	38.90%	3,390	32,098
2034	573,392	426,114	443,670	129,721	77.38%	48,474	35,809	4,059	18,341	37.84%	18,416	37.99%	3,386	33,980
2035	585,923	442,885	460,689	125,234	78.63%	50,322	35,694	3,825	18,755	37.27%	18,701	37.16%	3,375	35,861
2036	597,105	459,131	477,210	119,895	79.92%	52,323	35,574	3,608	19,237	36.76%	19,025	36.36%	3,364	37,678
2037	606,927	474,912	493,304	113,623	81.28%	54,516	35,461	3,402	19,793	36.31%	19,380	35.55%	3,353	39,397
2038	615,411	490,336	509,071	106,340	82.72%	56,825	35,337	3,217	20,451	35.99%	19,778	34.81%	3,341	41,009
2039	622,614	505,519	524,640	97,974	84.26%	59,254	35,270	3,064	21,252	35.87%	20,235	34.15%	3,335	42,486
2040	628,629	520,637	540,199	88,430	85.93%	61,806	35,286	2,951	22,254	36.01%	20,761	33.59%	3,336	43,803
2041	633,591	535,917	555,988	77,603	87.75%	64,535	35,415	2,871	23,532	36.46%	21,347	33.08%	3,349	44,946
2042	637,650	551,635	572,272	65,378	89.75%	67,452	35,637	2,818	25,248	37.43%	21,989	32.60%	3,369	45,913
2043	640,966	568,073	589,330	51,636	91.94%	70,527	35,953	2,790	27,782	39.39%	22,682	32.16%	3,399	46,750
2044	643,660	585,483	607,411	36,248	94.37%	73,701	36,353	2,778	32,280	43.80%	23,420	31.78%	3,437	47,505
2045	645,796	604,081	626,723	19,073	97.05%	76,928	36,803	2,783	44,497	57.84%	24,190	31.45%	3,480	48,195
2046	647,416	624,067	647,453	(37)	100.01%	80,214	37,298	2,802	26,150	32.60%	3,060	3.81%	3,527	48,827
2047	648,554	645,635	648,593	(38)	100.01%	83,568	37,808	2,829	5,749	6.88%	3,089	3.70%	3,575	49,408
2048	649,240	646,283	649,269	(29)	100.00%	87,004	38,352	2,863	5,820	6.69%	3,136	3.60%	3,626	49,949

<sup>1</sup> Based on an amortization period equal to the lesser 30 years and the amortization period used to determine the City's Contribution

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**SECTION C**

**BENEFIT PROVISIONS AND VALUATION DATA**

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**BRIEF SUMMARY OF PLAN PROVISIONS**  
**(JANUARY 1, 2013)**

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***Plan*** Firefighters Pension Fund as Incorporated in Chapter 40, Act 5, Article 4 of the Illinois Compiled Statutes.

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***Effective Date*** Enacted: March 18, 1963

Last Amended Effective: July 13, 2013

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***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.

NOTE:

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.

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**BRIEF SUMMARY OF PLAN PROVISIONS**  
**(CONTINUED)**

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***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 exceeding 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 less 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.

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***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.

**BRIEF SUMMARY OF PLAN PROVISIONS**  
**(CONTINUED)**

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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.

## BRIEF SUMMARY OF PLAN PROVISIONS (CONTINUED)

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### *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.

## BRIEF SUMMARY OF PLAN PROVISIONS (CONTINUED)

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- 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.

## BRIEF SUMMARY OF PLAN PROVISIONS (CONTINUED)

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- 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 for each year the Firefighter was in receipt of monthly pension payments. Each subsequent January, the monthly pension is again increased by 2% of the original monthly pension amount. Effective January, 1976, the rate of such increase was raised to 3% of the original monthly pension.

## BRIEF SUMMARY OF PLAN PROVISIONS (CONTINUED)

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### *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 or if a Firefighter dies from any cause while receiving disability pension benefits, or 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.

## BRIEF SUMMARY OF PLAN PROVISIONS (CONTINUED)

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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 less than three years, 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 three or more years, 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.



## BRIEF SUMMARY OF PLAN PROVISIONS (CONTINUED)

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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.

## **BRIEF SUMMARY OF PLAN PROVISIONS (CONTINUED)**

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### **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;
- 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; and,
- 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, 2013  
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
<b>Under 20</b>										<b>0</b>	<b>\$ 0</b>
<b>20-24</b>										<b>0</b>	<b>0</b>
<b>25-29</b>	5	1	10							<b>16</b>	<b>1,330,332</b>
<b>30-34</b>	3	1	29	6						<b>39</b>	<b>3,691,939</b>
<b>35-39</b>		4	16	19	5					<b>44</b>	<b>4,590,503</b>
<b>40-44</b>			11	18	16	2				<b>47</b>	<b>5,091,393</b>
<b>45-49</b>				7	10	18	2			<b>37</b>	<b>4,361,160</b>
<b>50-54</b>					3	12	5			<b>20</b>	<b>2,511,849</b>
<b>55-59</b>					2	2				<b>4</b>	<b>473,447</b>
<b>60-64</b>										<b>0</b>	<b>0</b>
<b>65-69</b>										<b>0</b>	<b>0</b>
<b>Over 70</b>										<b>0</b>	<b>0</b>
<b>Total</b>	<b>8</b>	<b>6</b>	<b>66</b>	<b>50</b>	<b>36</b>	<b>34</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>207</b>	<b>\$22,050,623</b>

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

Age: 40.6 years  
 Service: 12.7 years  
 Annual Pay: \$106,525

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

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<b><i>Expected Return on Market Value of Assets for Prior Year</i></b>	1. Market value of assets at 01/01/2012	\$ 78,051,129
	2. Actual income and disbursements in prior year weighted for timing:	

Item	Amount	Weight for Timing	Weighted Amount
(a) Member Contributions	\$ 2,056,350	50.00%	\$ 1,028,175
(b) City Contributions	10,450,183	50.00%	5,225,092
(c) Miscellaneous Revenue	-	50.00%	-
(d) Benefit Payments	(8,243,319)	50.00%	(4,121,660)
(e) Administration	(94,665)	50.00%	(47,333)
(f) Total			\$ 2,084,274

3. Market value of assets adjusted for actual income disbursements [(1) + (2)(f)]	\$ 80,135,403
4. Assumed rate of return on plan assets for the year	7.00%
5. Expected return [(3) * (4)]	\$ 5,609,478

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<b><i>Actual Return on Market Value of Assets for Prior Year</i></b>	6. Market value of assets at 01/01/2012	\$ 78,051,129
	7. Income (less investment income) for prior plan year	12,506,533
	8. Disbursements paid in prior year	8,337,984
	9. Market value of assets at 01/01/2013	88,647,927
	10. Actual Return [(9) + (8) - (7) - (6)]	6,428,249

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<b><i>Gain/(Loss)</i></b>	11. Investment gain/(loss) for prior year based on market value of assets [(10) - (5)]	\$ 818,771
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**DEVELOPMENT OF ACTUARIAL (MARKET-RELATED) VALUE OF ASSETS  
(CONTINUED)**

<b>Actuarial Value of Assets as of 01/01/2013</b>	12. Market value of assets at 01/01/2013	\$ 88,647,927																									
	13. Deferred investment gains and (losses) for last 3 years:																										
	<table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;"></th> <th style="width: 20%; text-align: center;"><u>Plan Year Beginning</u></th> <th style="width: 20%; text-align: center;"><u>Gain/(Loss)</u></th> <th style="width: 15%; text-align: center;"><u>Percent Deferred</u></th> <th style="width: 40%; text-align: center;"><u>Deferred Amount</u></th> </tr> </thead> <tbody> <tr> <td>a)</td> <td style="text-align: center;">2010</td> <td style="text-align: right;">\$ 2,126,068</td> <td style="text-align: center;">25.00%</td> <td style="text-align: right;">\$ 531,517</td> </tr> <tr> <td>b)</td> <td style="text-align: center;">2011</td> <td style="text-align: right;">(4,281,995)</td> <td style="text-align: center;">50.00%</td> <td style="text-align: right;">(2,140,998)</td> </tr> <tr> <td>c)</td> <td style="text-align: center;">2012</td> <td style="text-align: right;">818,771</td> <td style="text-align: center;">75.00%</td> <td style="text-align: right;">614,078</td> </tr> <tr> <td>d)</td> <td style="text-align: center;">Total</td> <td style="text-align: right;">\$ (1,337,156)</td> <td></td> <td style="text-align: right;">\$ (995,403)</td> </tr> </tbody> </table>		<u>Plan Year Beginning</u>	<u>Gain/(Loss)</u>	<u>Percent Deferred</u>	<u>Deferred Amount</u>	a)	2010	\$ 2,126,068	25.00%	\$ 531,517	b)	2011	(4,281,995)	50.00%	(2,140,998)	c)	2012	818,771	75.00%	614,078	d)	Total	\$ (1,337,156)		\$ (995,403)	
	<u>Plan Year Beginning</u>	<u>Gain/(Loss)</u>	<u>Percent Deferred</u>	<u>Deferred Amount</u>																							
a)	2010	\$ 2,126,068	25.00%	\$ 531,517																							
b)	2011	(4,281,995)	50.00%	(2,140,998)																							
c)	2012	818,771	75.00%	614,078																							
d)	Total	\$ (1,337,156)		\$ (995,403)																							
	14. Item (12) less item 13(d)	\$ 89,643,330																									
	15. 2013 Tax Year Levy (i.e., the 2012 Plan Year Contributions)	11,273,466																									
	16. Interest Adjustment on item (15) to 01/01/2013	(374,995)																									
	17. Actuarial Value of Plan Assets at 01/01/2013 [(14) + (15) + (16)]	\$ 100,541,801																									

- 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 2013 tax year levy is collected and deposited in the Pension Fund on July 1, 2013.

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**SECTION D**

VALUATION PROCEDURES

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## ACTUARIAL COST METHOD

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*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;
- 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 33 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

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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
- 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 are the same as those used in the previous valuation.



## VALUATION ASSUMPTIONS

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The assumed rate of investment return used was 7.00%, 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.

Sample Attained Ages	Single Life Retirement Values			
	Present Value of \$1		Future Life	
	Monthly for Life		Expectancy (years)	
	Men	Women	Men	Women
50	\$ 147.78	\$ 154.93	30.69	34.89
55	138.58	147.42	26.15	30.17
60	127.35	137.85	21.83	25.59
65	114.51	126.50	17.84	21.28
70	100.68	113.58	14.29	17.31
75	85.70	98.39	11.12	13.60
80	70.13	81.90	8.37	10.31

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

Sample Attained Ages	Single Life Retirement Values			
	Present Value of \$1		Future Life	
	Monthly for Life		Expectancy (years)	
	Men	Women	Men	Women
50	\$ 146.24	\$ 153.76	29.80	34.03
55	136.65	145.92	25.29	29.34
60	125.02	135.95	21.01	24.78
65	111.80	124.22	17.08	20.51
70	97.71	110.98	13.60	16.60
75	82.56	95.50	10.51	12.96
80	66.96	78.84	7.85	9.75

**VALUATION ASSUMPTIONS  
(CONTINUED)**

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*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.

<b>Years of Service</b>	<b>Sample Employee Withdrawal Rate Per 1,000 Employees</b>	
	<b>Males</b>	<b>Females</b>
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.

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

**VALUATION ASSUMPTIONS  
(CONTINUED)**

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*Sample rates of disability* were as follows:

<b>Employee Disablement Rate Per 1,000 Employees</b>		
<b>Age</b>	<b>Male</b>	<b>Female</b>
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:

<b>Rates of Retirement</b>			
<b>Age</b>	<b>Rate</b>	<b>Age</b>	<b>Rate</b>
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

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**SECTION E**

GASB STATEMENT NOS. 25 AND 27

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**REQUIRED SUPPLEMENTARY INFORMATION**  
**SCHEDULE OF FUNDING PROGRESS**

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<b>Actuarial Valuation Date</b>	<b>GASB Value of Assets (a)</b>	<b>Actuarial Accrued Liability (b)</b>	<b>Unfunded AAL (UAAL) (b – a)</b>	<b>Funded Ratio (a / b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a Percentage of Payroll [(b – a)/c]</b>
1/1/2008	\$64,196,270	\$151,255,803	\$87,059,533	42.4%	\$17,078,653	509.8%
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

## SCHEDULE OF EMPLOYER CONTRIBUTIONS

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<b>Fiscal Year Ended</b>	<b>Annual Required Contribution (a)</b>	<b>Total Employer Contribution (b)</b>	<b>Percentage Contributed (b / a)</b>
12/31/2008	\$ 8,198,450	\$ 5,434,554	66.3%
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	11,192,101	TBD	TBD

## ANNUAL PENSION COST AND CONTRIBUTIONS

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**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 7/1/2046 plus (c) interest on (a) and (b) to date of payment.

**Plan members** 9.455% of regular salary

<b>Annual Required Contribution for fiscal year ending December 31, 2013:</b>	Net Annual Normal Cost (Municipality Paid)	\$	4,934,883
	Annual Amortization Payments for Funding Unfunded Actuarial Accrued Liability Over 30 Years as a level percentage of payroll		6,257,218
	Annual Required Contribution (ARC)	\$	11,192,101
<b>Annual Pension Cost for fiscal year ending December 31, 2013:</b>	Annual Required Contribution (ARC)	\$	11,192,101
	Interest on Net Pension Obligation		465,653
	Adjustment to ARC		(324,973)
	Total Annual Pension Cost	\$	11,332,781

<b>Net Pension Obligation (NPO):</b>	Net Pension Obligation (NPO) at Beginning of year, January 01, 2012:	\$	5,880,429
	Total Annual Pension Cost from Previous Year:		11,221,943
	Total Employer Contribution for year ended December 31, 2012:		10,450,183
	<b>Net Pension Obligation (NPO) at End of year, December 31, 2012:</b>	\$	6,652,189

## PENSION COST SUMMARY FOR GASB #27

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<b>Year Ended December 31</b>	<b>Annual Pension Cost</b>	<b>Total Employer Contribution</b>	<b>% of Annual Pension Cost Contributed</b>	<b>Net Pension Obligation</b>
2010	\$ 10,291,862	\$ 9,477,572	92.1%	\$ 6,178,463
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	11,332,781	TBD	TBD	TBD



## SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

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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:

<i>Valuation Date</i>	January 1, 2013
<hr/>	
<i>Actuarial Cost Method and Amortization Method</i>	Entry-Age-Normal  35 – Year Closed Level-Percentage-of-Pay Amortization (from January 1, 2011) for Funding. 33 years remaining  30 – Year Open Level-Percentage-of-Pay Amortization (from January 1, 2011) for GASB 25/27 Accounting.
<hr/>	
<i>Actuarial Value of Assets</i>	4-year smoothed market
<hr/>	
<i>Actuarial Assumptions:</i>	
<i>Investment Rate of Return</i>	7.00% per year
<i>Projected Salary Increases</i>	5.25% per year with a three-year service-based select period
<i>Wage Inflation Increases</i>	4.00% per year
<hr/>	
<i>Cost-of-Living Increases</i>	3.00% per year
<hr/>	