CITY OF SPRINGFIELD
POLICE PENSION FUND

ACTUARIAL VALUATION
AS OF FEBRUARY 28, 2009

GOLDSTEIN & ASSOCIATES

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December 10, 2009

Mr. Charles Alsbury
Staff Accountant
Office of Management and Budget
City of Springfield
Room 210 – Municipal Building
Springfield, Illinois 62701

Re: **Actuarial Valuation of the Springfield Police Pension Fund**

Dear Mr. Alsbury:

I am pleased to submit our actuarial report based on an actuarial valuation of the Springfield Police Pension Fund as of February 28, 2009.

The report consists of 9 Sections and 2 Appendices as follows:

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I would be pleased to discuss any aspects of this report with you and other interested persons.

Respectfully submitted,

Sandor Goldstein, F.S.A.
Consulting Actuary

A. PURPOSE AND SUMMARY

We have carried out an actuarial valuation of the Springfield Police Pension Fund as of February 28, 2009. The purpose of the valuation was to determine the financial position and the annual actuarial requirements of the pension fund. This report is intended to present the results of the valuation. The results of the valuation are summarized below:

1. Total actuarial liability	$ 173,781,048
2. Actuarial value of assets	$ 100,639,944
3. Unfunded actuarial liability	$ 73,141,104
4. Funded ratio	57.9%
5. Total normal cost for year beginning March 1, 2010	$ 5,084,781
6. Annual actuarial requirement for year beginning March 1, 2010	$ 9,688,335
7. Amount of tax to be levied by City so that total revenue will be sufficient to meet annual actuarial requirement	$ 7,897,449

B. DATA USED FOR THE VALUATION

Participation Data. The participant data required to carry out the valuation was supplied by the pension fund. The participant data for the pension fund as of February 28, 2009, on which the valuation is based, is summarized in Exhibit 1. It can be seen that there were 278 active members, 3 inactive members and 205 members receiving benefits. The total active payroll as of February 28, 2009 was $17,376,447.

Exhibit 1

Summary of Participant Data

1. Number of Members		
(a) Active Members		
(i) Vested		182
(ii) Non-vested		96
(b) Inactive Members Not Yet Receiving Benefits		3
(c) Members Receiving		
(i) Retirement Pensions		158
(ii) Survivor Pensions		38
(iii) Disability Pensions		9
(d) Total		486
2. Annual Salaries		
(a) Total Salary	$	17,376,447
(b) Average Salary		62,505
3. Total Accumulated Contributions of Active Members	$	14,269,629
4. Annual Benefit Payments Currently Being Made		
(a) Retirement Pensions		6,985,626
(b) Survivor Pensions		754,123
(c) Disability Pensions		242,852

Assets. In November of 1994, the Governmental Accounting Standards Board (GASB) issued GASB Statement No. 25, which establishes standards of financial reporting for governmental pension plans. Under GASB Statement No. 25, the actuarial value of assets to be used for determining a plan's funded status and annual required contribution needs to be market related.

However, GASB has indicated that current market values should not be used if those values would result in unnecessary fluctuation in the funded status and the annual required contribution. Thus, in determining the actuarial value of assets, smoothing changes in the market value of assets over a period of three to five years is considered appropriate.

The asset values for the valuation were based on the asset information contained in the financial statements of the pension fund as of February 28, 2009. The actuarial value of assets was determined by smoothing unexpected gains or losses from investment return over a five-year period. For the February 28, 2009 valuation, the smoothing period for unexpected gains or losses

from investment return was changed from 4 years to 5 years. The resulting actuarial value of assets is $100,639,944. The development of this value is outlined in Exhibit 2.

Exhibit 2

Actuarial Value of Assets

A. Development of Investment Gain/(Loss) for the Year Ended February 28, 2009

1. Actuarial Value of Assets as of February 29, 2008	$ 99,114,641
2. Contributions and Miscellaneous Income	7,706,300
3. Disbursements	7,894,372
4. Expected Investment Income	6,931,554
5. Actual Investment Income(Loss)	(15,002,701)
6. Investment Gain/(Loss) (5 – 4)	(21,934,255)

B. Development of Actuarial Value of Assets

7. Expected Value of Assets (1 + 2 – 3 + 4)	$ 105,858,123
8. Investment Gain/(Loss) for Fiscal Year 2006 Recognized in Current Year	(108,053)
9. Investment Gain/(Loss) for Fiscal Year 2007 Recognized in Current Year	1,660
10. Investment Gain/(Loss) for Fiscal Year 2008 Recognized in Current Year	(724,935)
11. Investment Gain/(Loss) for Fiscal Year 2009 Recognized in Current Year (20% of 6)	(4,386,851)
12. Actuarial Value of Assets (7 + 8 + 9 + 10 + 11)	$ 100,639,944

C. FUND PROVISIONS

Our valuation was based on the provisions of the fund in effect as of February 28, 2009 as provided in Article 3 of the Illinois Pension Code. A summary of the principal provisions of the fund as of February 28, 2009 is provided in Appendix 1.

D. ACTUARIAL ASSUMPTIONS AND COST METHOD

For the February 28, 2009 actuarial valuation, the investment return rate assumption was increased from 7.0% per year to 7.5% per year. The other actuarial assumptions used for the February 28,

2009 valuation are the same as the assumptions used for the February 29, 2008 valuation. The actuarial assumptions used for the February 28, 2009 valuation are summarized below:

Mortality Rates. The UP-1984 Mortality Table was used for the valuation.

Termination Rates. The following is a sample of the termination rates that were used:

Age	Rate of Termination
25	.0476
30	.0237
35	.0157
40	.0140
45 and over	.0105

Disability Rates. The following is a sample of the disability rates that were used:

Age	Rate of Disability
25	.0012
30	.0021
35	.0031
40	.0041
45	.0050
50	.0085
55	.0267
60	.0000

Retirement Rates. Rates of retirement for each age from 50 to 65 were used. The following is a sample of the retirement rates that were used:

Age	Rate of Retirement
50	.2111
55	.1689
60	.3815
65	1.0000

Salary Progression. 5.0% per year, compounded annually. This can be considered to consist of a 4.0% inflation assumption and a 1.0% merit increase assumption.

Investment Return Rate. 7.5% per year, compounded annually.

Marital Status. 80% of participants were assumed to be married.

Spouse's Age. The age of the spouse was assumed to be 4 years younger than the age of the employee.

Actuarial Value of Assets. The actuarial value of assets was determined by smoothing unexpected gains or losses from investment return over a five-year period.

Actuarial Cost Method. The entry age actuarial cost method was used with costs allocated on the basis of earnings.

E. ACTUARIAL LIABILITY

The actuarial liability as determined under the valuation for the various classes of members is summarized in Exhibit 3. The total actuarial liability is then compared with the actuarial value of assets in order to arrive at the unfunded actuarial liability. (The actuarial terms used in this report are defined in Appendix 2.)

As of February 28, 2009 the total actuarial liability is $173,781,048, the actuarial value of assets is $100,639,944, and the unfunded actuarial liability is $73,141,104. The ratio of the actuarial value of assets to the actuarial liability, or funded ratio, is 57.9%.

Exhibit 3

Actuarial Liability as of February 28, 2009

1. Actuarial Liability For Members Receiving Benefits	
(a) Retirement Pensions	$ 99,476,927
(b) Survivor Pensions	5,924,467
(c) Disability Pensions	3,814,858
(d) Total	$ 109,216,252
2. Actuarial Liability For Inactive Members	7,199
3. Actuarial Liability For Active Members	64,557,597
4. Total Actuarial Liability	$ 173,781,048
5. Actuarial Value of Assets	100,639,944
6. Unfunded Actuarial Liability	$ 73,141,104
7. Funded Ratio	57.9%

Impact of Change in Interest Rate Assumption. We have estimated that the change in the interest rate assumption used for the February 28, 2009 actuarial valuation had the impact of decreasing the total actuarial liability by $11,202,050.

F. RECONCILIATION OF CHANGE IN UNFUNDED LIABILITY

The net actuarial experience during the period March 1, 2008 to February 28, 2009 resulted in an increase in the fund's unfunded liability of $188,591. This increase in unfunded liability is a result of several kinds of gains and losses. The financial effect of the most significant gains and losses is illustrated in Exhibit 4.

The net rate of investment return earned by the fund during the year, based on actuarial value of assets, was approximately 1.7%, in comparison to the assumed rate of 7.0%. This resulted in an increase in the unfunded liability of $6,663,760. The change in the smoothing period for unexpected gains or losses from investment return had the impact of decreasing the unfunded liability by $1,445,581. Salaries increased at an average rate of approximately 10.1% during the year, in comparison to the assumed rate of 5.0%. This resulted in an increase in the unfunded liability of $3,431,391.

The contribution required to keep the unfunded liability from increasing was $8,419,530, whereas the actual employer contribution was $5,714,717, resulting in an increase in the unfunded liability of $2,704,813.

The change in the investment return rate assumption had the impact of decreasing the unfunded liability by $11,202,050. The various other aspects of the fund's experience results in a net increase in the unfunded liability of $36,258. The aggregate financial experience of the fund resulted in an increase in the unfunded liability of $188,591.

Exhibit 4

Reconciliation of Change in Unfunded Actuarial Liability
Over the Period March 1, 2008 to February 28, 2009

1.	Unfunded Liability as of March 1, 2008	$ 72,952,513
2.	Increase in Unfunded Liability Due to Investment Return Lower Than Assumed	6,663,760
3.	(Decrease) in Unfunded Liability Due to Change in Asset Smoothing Method	(1,445,581)
4.	Increase in Unfunded Liability Due to Salary Increases Higher Than Assumed	3,431,391
5.	Increase in Unfunded Liability Due to Employer Contribution Less Than Amount Required to Keep Unfunded Liability from Increasing	2,704,813
6.	(Decrease) in Unfunded Liability Due to Change in the Investment Return Rate Assumption	(11,202,050)
7.	Increase in Unfunded Liability Due to Other Sources	36,258
8.	Net Increase in Unfunded Liability for the Year (2 + 3 + 4 + 5 + 6 + 7)	188,591
9.	Unfunded Liability as of February 28, 2009 (1 + 8)	$ 73,141,104

G. NORMAL COST

The normal cost for the year beginning March 1, 2009 is developed in Exhibit 5. For the year beginning March 1, 2009, the total normal cost is estimated to be $4,889,212, which can be expressed as 28.14% of payroll.

Exhibit 5

Normal Cost For Year Beginning March 1, 2009

	Dollar Amount	Percent of Payroll
1. Basic Retirement Pension	$ 2,709,297	15.59%
2. Annual Increases in Pension	337,434	1.95
3. Survivor's Pension	745,611	4.29
4. Disability Pension	893,024	5.14
5. Refunds	55,902	.32
6. Administrative Expenses	147,944	.85
7. Total Normal Cost	$ 4,889,212	28.14%

Note. The figures are based on a total active payroll of $17,376,447 as of March 1, 2009.

H. ANNUAL ACTUARIAL REQUIREMENTS FOR YEAR BEGINNING MARCH 1, 2010

According to Section 5/3-125 of the Illinois Pension Code, the city council shall annually levy a tax which, when added to employee contributions, will produce an amount sufficient to meet the annual actuarial requirements of the pension fund. Section 5/3-125, in conjunction with Section 5/3-127, defines the annual actuarial requirements of the pension fund to be equal to (1) the normal cost of the pension fund, plus (2) the annual amount required to amortize the fund's unfunded actuarial liability over a period of 40 years from July 1, 1993 as a level percent of payroll.

It is our understanding that the results of the current valuation will be used to determine the amount of tax to be levied by the City for contribution to the pension fund in the year beginning March 1, 2010. We have therefore determined the annual actuarial requirements of the pension fund for the year beginning March 1, 2010. The results are summarized in Exhibit 6.

As can be seen from Exhibit 6, for the year beginning March 1, 2010, the annual actuarial requirements of the pension fund amount to $9,688,335, or 53.61% of projected payroll. Employee

contributions for the year are estimated to be $1,790,886, or 9.91% of projected payroll. The amount of tax to be levied by the City so that total revenues will be sufficient to meet the annual actuarial requirement is therefore $7,897,449, or 43.70% of payroll.

Exhibit 6

Annual Actuarial Requirements for Year Beginning March 1, 2010

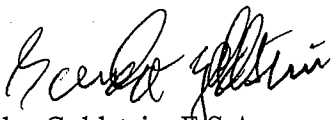
	Dollar Amount	Percent of Payroll
1. Total Normal Cost	$ 5,084,781	28.14%
2. Annual Amount Required to Amortize Unfunded Liability Over 40 Years Subsequent to July 1, 1993 as a Level Percent of Payroll	$ 4,603,554	25.47
3. Annual Actuarial Requirement for Year Beginning March 1, 2010 (1 + 2)	$ 9,688,335	53.61%
4. Employee Contributions for Year	1,790,886	9.91
5. Amount of Tax to be Levied by City so that Total Revenue will be Sufficient to Meet Annual Actuarial Requirements (3 – 4)	$ 7,897,449	43.70%

Note. The above figures have been based on a projected payroll of $18,071,505.

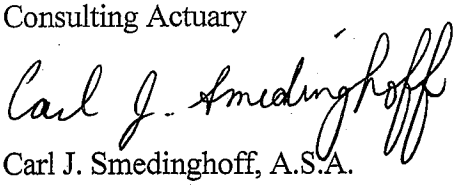
I. CERTIFICATION

This actuarial report has been prepared in accordance with generally accepted actuarial principles and practices and, to the best of our knowledge, fairly represents the financial condition of the Springfield Police Pension Fund as of February 28, 2009.

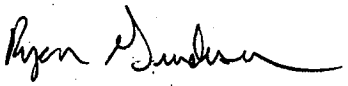
Respectfully submitted,



Sandor Goldstein, F.S.A.
Consulting Actuary



Carl J. Smedinghoff, A.S.A.
Associate Actuary



Ryan Gundersen
Actuarial Assistant

Appendix 1

Summary of Principal Provisions

Pension Benefits

A police officer age 50 or over who has at least 20 years of creditable service and is no longer in service as a police officer is entitled to a pension of 1/2 of the salary attached to the rank held on the last day of service. The pension is increased by 2.5% of such salary for each additional year over 20 years of service through 30 years of service.

Separation Benefits

A police officer who is separated from service having at least 8 years but less than 20 years of creditable service is entitled upon attainment of age 60 to a pension of 2.5% of the salary attached to the rank held on the last day of service by the officer for each year of creditable service.

Annual Increases In Pension

The monthly pension of a police officer who retires after January 1, 1977, shall, upon either the first of the month following the first anniversary of the date of retirement, if 55 years of age or over at retirement date, or upon the first day of the month following attainment of age 55 if it occurs after the first anniversary of retirement, be increased by 1/12 of 3% of the originally granted monthly pension for each full month that has elapsed since the pension began, and by 3% of the current amount of pension in each January thereafter.

The monthly pension of a police officer who is receiving a disability pension shall be increased in January of the year following the year the officer attains age 60 by 3% of the originally granted monthly pension for each year that pension payments have been made. In each January thereafter, the officer shall receive an additional increase of 3% of the original monthly pension.

Disability Pension

If a police officer, as a result of an act of duty, is found to be disabled for service in the police department, the officer shall be granted a disability pension equal to the greater of (1) 65% of the officer's salary at the date of suspension of duty, or (2) the retirement pension that the officer would be eligible to receive if he or she retired. If the disability is the result of any cause other than an act of duty, the disability pension is 50% of salary.

Pension To Survivors

(a) Upon the death of a police officer in receipt of a pension, the surviving spouse of the police officer is entitled to the pension that the police officer was receiving as of the time of death.

(b) Upon the death of a police officer while in service, having at least 20 years of creditable service, the surviving spouse shall be entitled to the pension earned by the police officer as of the date of death.

(c) Upon the death of a police officer while in service, having at least 10 but less than 20 years of service, the surviving spouse shall be entitled to a pension of 1/2 of the salary attached to the rank held by the officer for one year immediately prior to the date of death. If death occurs as a result of the performance of duty, the 10-year requirement shall not apply.

(5) The surviving spouse of a police officer who dies in the line of duty shall be entitled to a survivor benefit of 100% of the police officer's salary.

Contributions By Police Officers

Police officers are required to contribute 9.91% of their salary to the pension fund as a condition of participation in the pension fund.

Appendix 2

Glossary of Terms used in Report

1. Actuarial Present Value. The value of an amount or series of amounts payable at various times, determined as of a given date by the application of a particular set of actuarial assumptions.

2. Actuarial Cost Method or Funding Method. A procedure for determining the actuarial present value of pension plan benefits and for determining an actuarially equivalent allocation of such value to time periods. Usually in the form of a normal cost and an actuarial accrued liability.

3. Normal Cost. That portion of the actuarial present value of pension plan benefits, which is allocated to a valuation year by the actuarial cost method.

4. Actuarial Accrued Liability or Accrued Liability. That portion, as determined by a particular actuarial cost method, of the actuarial present value of pension benefits which is not provided for by future normal costs.

5. Actuarial Value of Assets. The value assigned by the actuary to the assets of the pension plan for purposes of an actuarial valuation.

6. Unfunded Actuarial Liability. The excess of the actuarial liability over the actuarial value of assets.

7. Entry Age Actuarial Cost Method. A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age. The portion of this actuarial present value allocated to a valuation year is called the normal cost. The portion of this actuarial present value not provided at a valuation date by the actuarial present value of future normal costs is called the actuarial liability.

8. Actuarial Assumptions. Assumptions as to future events affecting pension costs.

9. Actuarial Valuation. The determination, as of a valuation date, of the normal cost, actuarial liability, actuarial value of assets, and related actuarial present values for the pension plan.

10. Accrued Benefit or Accumulated Plan Benefits. The amount of an individual's benefit as of a specific date determined in accordance with the terms of a pension plan and based on compensation and service to that date.

11. Vested Benefits. Benefits that are not contingent on an employee's future service.