

**CITY OF LINCOLN POLICE AND FIRE PENSION FUND**  
**ANNUAL ACTUARIAL VALUATION REPORT**  
**AUGUST 31, 2007**

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January 2, 2008

The City Council  
City of Lincoln Police and Fire Pension Fund  
Lincoln, Nebraska

Ladies and Gentlemen:

Submitted in this report are the results of the annual actuarial valuation of the benefits provided by the City of Lincoln Police and Fire Pension Fund.

The date of the valuation was August 31, 2007.

Valuation results are contained in Section A.

Governmental Accounting Standards information is contained in Section B.

Gain (Loss), historical data and comments are contained in Section C.

The valuation was based upon information, furnished by the City, concerning Pension Fund benefits, financial transactions, individual active members, terminated members, DROP members, retirants and beneficiaries. Data was checked for year to year consistency but was not otherwise audited by us. This information is summarized in Section D.

Descriptions of the actuarial cost methods and actuarial assumptions are contained in Section E, along with a glossary of technical terms.

To the best of our knowledge, this report is complete and accurate and was made in accordance with generally recognized actuarial methods in compliance with the Pension Fund provisions. The actuarial assumptions used for the valuation produce results which we believe are reasonable.

Respectfully submitted,



Louise M. Gates, ASA



W. James Koss, ASA, EA

LMG/WJK:lr

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**SECTION A**  
**VALUATION RESULTS**

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## ACTUARIAL BALANCE SHEET - AUGUST 31, 2007

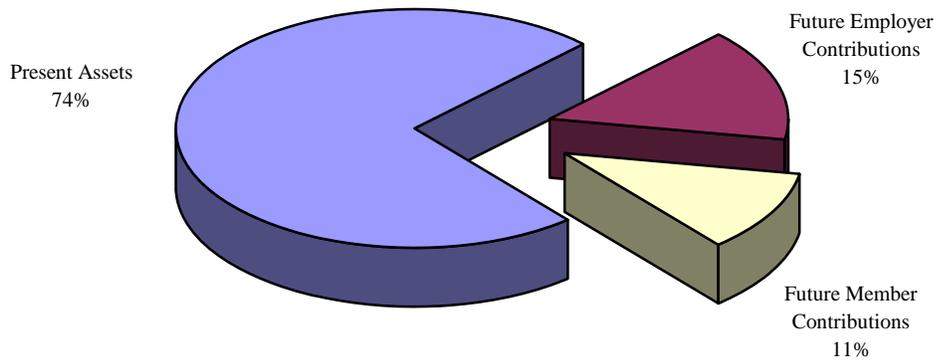
### Present Resources and Expected Future Resources

<b>A. Valuation assets</b> Net assets from system financial statements (market value)	\$181,130,654	
Valuation adjustment	(9,866,863)	
<b>Valuation assets</b>		\$171,263,791
<b>B. Actuarial present value of expected future employer contributions</b>		
For normal costs	36,818,944	
For UAAL	(1,676,333)	
<b>Total</b>		35,142,611
<b>C. Actuarial present value of expected future member contributions</b>		25,990,461
<b>D. Total Actuarial Present Value of Present and Expected Future Resources</b>		<b>\$232,396,863</b>

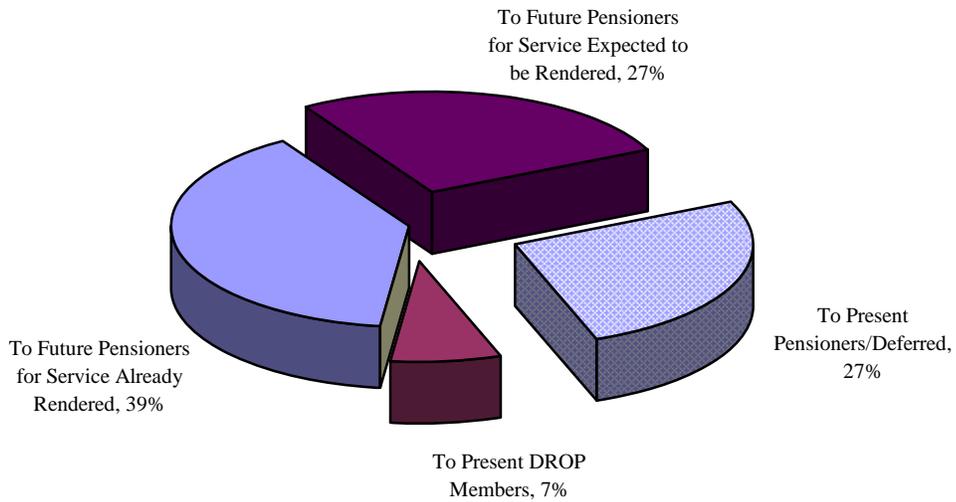
### Actuarial Present Value of Expected Future Benefit Payments and Reserves

A. To retirants and beneficiaries		\$ 59,395,512
B. To DROP members		17,202,145
C. To vested terminated members		2,126,735
D. To present active members		
Allocated to service rendered prior to valuation date	\$90,863,066	
Allocated to service likely to be rendered after valuation date	62,809,405	
<b>Total</b>		<b>153,672,471</b>
<b>E. Total Actuarial Present Value of Expected Future Benefit Payments</b>		<b>\$232,396,863</b>

# SOURCES AND USES OF FUNDS AS OF AUGUST 31, 2007



*Sources of Funds*



*Uses of Funds*

**COMPUTED CONTRIBUTIONS  
FOR THE FISCAL YEAR BEGINNING SEPTEMBER 1**

<b>Contributions for the Indicated Fiscal Year</b>	<b>Contributions Expressed as Percents of Payroll*</b>	
	<b>2008</b>	<b>2007</b>
<i>Normal Cost</i>		
Age & Service Benefits	15.73 %	15.62 %
Disability Benefits	0.59 %	0.48 %
Death Before Retirement	0.43 %	0.53 %
Deferred Age & Service Benefits	1.23 %	1.40 %
Refund of Member Contributions	0.51 %	0.60 %
Total	18.49 %	18.63 %
<i>Member Contributions (weighted average)</i>	7.88 %	7.90 %
<i>Employer Normal Cost</i>	10.61 %	10.73 %
<i>Amortization Payment</i>		
Unfunded Actuarial Accrued Liability	(0.62)%	1.42 %
<b>EMPLOYER CONTRIBUTION RATE</b>	<b>9.99 %</b>	<b>12.15 %</b>

\* Payroll for active members not included in the DROP

Unfunded actuarial accrued liabilities as of August 31, 2007 were amortized as a level percent of active member payroll over a period of 10 years. A procedure for determining dollar contribution amounts is described on the following page.

## **FINANCIAL OBJECTIVE**

The financial objective of the Pension Fund is to establish and receive contributions, expressed as percents of active member payroll, which will remain approximately level from year-to-year and will not have to be increased for future generations of citizens. This objective meets the requirements of the laws governing the operation of the Pension Fund.

## **CONTRIBUTION RATES**

The Pension Fund is supported by member contributions, City contributions and investment income from Pension Fund assets.

Contributions which satisfy the financial objective are determined by an annual actuarial valuation and are sufficient to:

- cover the actuarial present value of benefits assigned to the current year by the actuarial cost methods described in Section E (the normal cost); and
- amortize over a period of future years the actuarial present value of benefits not covered by valuation assets or anticipated future normal costs (unfunded actuarial accrued liability).

## **DETERMINING DOLLAR CONTRIBUTIONS**

For any period of time, the percent-of-payroll contribution rate needs to be converted to dollar amounts. We recommend the following procedure:

Contribute dollar amounts at the end of each payroll period which are equal to the City's percent-of-payroll contribution requirement multiplied by the covered active member Non-DROP payroll for the period. Adjustments should be made as necessary to exclude items of pay that are not covered compensation for Pension Fund benefits and to include special payments that are covered compensation.

## DEVELOPMENT OF FUNDING VALUE OF RETIREMENT SYSTEM ASSETS

<b>Year Ended August 31:</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>Beginning of Year Values</b>			
(1) Cost Value	\$130,423,543	\$136,001,209	\$142,664,280
(2) Market Value	137,781,079	153,324,765	164,696,618
(3) Funding Value	136,973,679	145,730,474	157,527,392
(4) Non Investment Net Cashflow	(2,780,701)	(2,509,252)	(3,654,704)
(5) Expected Income (7.5%)	10,170,635	10,837,390	11,679,981
(6) Actual Income	18,324,387	13,881,104	20,088,740
(7) Gain/(Loss)	8,153,752	3,043,714	8,408,759
(8) Recognized Income			
(a) Expected	10,170,635	10,837,390	11,679,984
(b) Current Year's Base	2,038,438	760,929	2,102,190
(c) 1 year ago	809,562	2,038,438	760,929
(d) 2 years ago	(140,147)	809,562	2,038,438
(e) 3 years ago	(1,340,992)	(140,149)	809,562
(f) Total Income Recognized	11,537,496	14,306,170	17,391,103
<b>End of Year Values</b>			
(9) Cost Value	136,001,209	142,664,280	146,958,002
(10) Market Value	153,324,765	164,696,618	181,130,654
(11) Funding Value (3) + (4) + (8f)	145,730,474	157,527,392	171,263,791
(12) Funding Value / MV	95.05%	95.65%	94.55%
(13) Net Return on Funding Value	8.51%	9.90%	11.17%
(14) Net Return on Market Value	13.44%	9.13%	12.33%

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## **SECTION B**

### **DISCLOSURES AND SUPPLEMENTARY INFORMATION REQUIRED BY STATEMENTS NO. 25 AND NO. 27 OF THE GOVERNMENTAL ACCOUNTING STANDARDS BOARD**

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

## REQUIRED SUPPLEMENTARY INFORMATION

### ANALYSIS OF FUNDING PROGRESS

Actuarial Valuation Date	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL)	(3) Percent Funded (1)/(2)	(4) Unfunded AAL (2) - (1)	(5) Payroll**	(6) Unfunded AAL as a Percentage of Covered Payroll (4)/(5)
8/31/98	\$109,213,474	\$ 94,847,667	115.1 %	\$(14,365,807)	\$21,860,493	(65.7)%
8/31/99	113,902,477	104,691,766	108.8 %	(9,210,711)	23,611,284	(39.0)%
8/31/00	121,404,314	115,671,249	105.0 %	(5,733,065)	25,808,088	(22.2)%
8/31/01	128,069,831	122,660,542	104.4 %	(5,409,289)	28,215,685	(19.2)%
8/31/02	128,319,145	130,875,473	98.0 %	2,556,328	26,606,881	9.6 %
8/31/03	132,577,506	137,507,824	96.4 %	4,930,318	27,415,330	18.0 %
8/31/04	136,973,679	144,178,758	95.0 %	7,205,079	28,124,862	25.6 %
8/31/05	145,730,474	151,978,408	95.9 %	6,247,934	29,029,309	21.5 %
8/31/06	157,527,392	161,583,285	97.5 %	4,055,893	30,724,333	13.2 %
8/31/07	171,263,791	169,587,458	101.0 %	(1,676,333)	30,546,235	(5.5)%

### SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year Beginning Sept. 1	Actuarial Valuation Date	Annual Required Contribution*
1999	8/31/98	\$ 91,814
2000	8/31/99	820,610
2001	8/31/00	1,877,926
2002	8/31/01	2,233,836
2003	8/31/02	3,297,577
2004	8/31/03	3,684,264
2005	8/31/04	4,077,037
2006	8/31/05	4,056,195
2007	8/31/06	4,076,536
2008	8/31/07	3,316,464

\* Annual required contribution is equal to the contribution percent times the valuation payroll (item (5)) projected to the appropriate fiscal year. The current projection factor is based on pay increases of 4.25% per year. The employer contribution rate as of 8/31/02 & beyond is based on a 10 year amortization of the UAAL.

\*\* Non-DROP payroll in 2002 and later.

## NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

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

Valuation date:	August 31, 2007
Actuarial cost method:	Entry Age
Amortization method:	10 years, level percent, open
Asset valuation method:	4 year smoothed market
Actuarial assumptions:	
Investment rate of return:	7.50%
Projected salary increases*:	4.25% - 8.25%
*Includes wage inflation at:	4.25%
Cost-of-living adjustments:	none

Membership data as of August 31, 2007 is provided on the following page and in Section D of this report.

## MEMBERSHIP DATA - AUGUST 31, 2007

### Active Members (Not Participating in DROP)

Tabulated by Valuation Divisions

Valuation Division	No.	Employee Contribution Percentage	Annual Payroll	Average Age	Average Service	Average Pay
Police						
- Old Plan	2	7.6%	\$ 117,583	38.8	14.5	\$58,792
- Plan A	210	8.0	11,373,477	35.4	9.9	54,159
- Plan B	42	7.6	2,647,878	43.5	18.2	63,045
- Plan C	22	7.0	1,486,863	54.5	32.4	67,585
Fire						
- Plan A	157	8.0	8,533,832	36.6	7.8	54,356
- Plan B	98	7.6	6,386,602	47.7	21.1	65,169
<b>Total</b>	<b>531</b>	<b>7.9</b>	<b>\$30,546,235</b>	<b>39.5</b>	<b>13.0</b>	<b>\$57,526</b>

### DROP Members

Number	Annual Benefit
47	\$1,514,600

The annual additions to the DROP account shown above do not include annuity withdrawal payments

### Retirants and Beneficiaries

Tabulated by Type of Benefit

Age & Service		Disability		Survivor Beneficiaries		Total	
No.	Annual Benefit	No.	Annual Benefit	No.	Annual Benefit	No.	Annual Benefit
286	\$5,170,207	39	\$578,846	45	\$428,018	370	\$6,177,071

### Deferred Vested Members

No.	Estimated Annual Benefit
28	\$279,753

## DEVELOPMENT OF ANNUAL PENSION COST AND NET PENSION OBLIGATION

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
Fiscal year		ARC	Interest on	ARC	Pension	Actual Reported	Change in	NPO
Beginning	Ending	(Annual Required Contribution)	NPO	Adjustment	Cost (C)+(D)-(E)	Employer Contribution	NPO (F)-(G)	Balance Sum of col (H)
9/1/1993	8/31/1994	\$ 580,796			\$ 580,796	\$ 388,813	\$ 191,983	\$ 191,983
9/1/1994	8/31/1995	-	\$ 13,439	\$ 19,801	(6,362)	400,022	(406,384)	(214,401)
9/1/1995	8/31/1996	695,015	(15,008)	(24,103)	704,110	419,583	284,527	70,126
9/1/1996	8/31/1997	545,702	4,909	8,680	541,931	430,884	111,047	181,173
9/1/1997	8/31/1998	530,891	12,682	24,997	518,576	491,945	26,631	207,804
9/1/1998	8/31/1999	961,584	14,546	32,467	943,663	908,234	35,429	243,233
9/1/1999	8/31/2000	91,814	17,026	43,928	64,912	941,282	(876,370)	(633,137)
9/1/2000	8/31/2001	820,610	(44,320)	(137,510)	913,800	1,111,434	(197,634)	(830,771)
9/1/2001	8/31/2002	1,877,926	(62,308)	(180,434)	1,996,052	1,541,649	454,403	(376,368)
9/1/2002	8/31/2003	2,233,836	(28,228)	(81,743)	2,287,351	1,780,604	506,747	130,379
9/1/2003	8/31/2004	3,297,577	9,778	15,300	3,292,055	1,991,672	1,300,383	1,430,762
9/1/2004	8/31/2005	3,684,264	107,307	167,903	3,623,668	2,562,850	1,060,818	2,491,580
9/1/2005	8/31/2006	4,077,037	186,869	292,392	3,971,514	2,892,711	1,078,803	3,570,383
9/1/2006	8/31/2007	4,056,195	267,779	418,991	3,904,983	3,494,590	410,393	3,980,776

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## **SECTION C**

### **VALUATION ANALYSIS, COMMENTS AND DROP PROVISIONS**

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**DERIVATION OF ACTUARIAL GAIN (LOSS)  
YEAR ENDED AUGUST 31, 2007**

The actuarial gains or losses realized in the operation of the Pension Fund provide an experience test. Gains and losses are expected to cancel each other over a period of years (in the absence of double-digit inflation) and sizable year to year fluctuations are common. Detail on the derivation of the actuarial gain (loss) is shown below, along with a year by year comparative schedule.

(1) UAAL* last valuation	\$4,055,893
(2) Total normal cost	5,690,764
(3) Actual employer and employee contributions	5,538,566
(4) Interest accrual at 7.5%	309,899
(5) Expected UAAL before changes (1) + (2) - (3) + (4)	4,517,990
(6) Increase from benefit changes	0
(7) Increase from revised actuarial assumptions and methods	(1,048,237)
(8) Expected UAAL after changes	3,469,753
(9) Actual UAAL this valuation	(1,676,333)
(10) Gain (loss) (8) - (9)	5,146,086
(11) Gain (loss) as percent of actuarial accrued liabilities at start of year (\$161,583,285).	3.2%

<b>Valuation Date</b>	<b>Actuarial Gain (Loss) As % of Beginning Accrued Liabilities</b>
Aug. 31, 1998	5.9 %
Aug. 31, 1999	(10.9)%
Aug. 31, 2000	(1.9)%
Aug. 31, 2001	1.3 %
Aug. 31, 2002	(5.3)%
Aug. 31, 2003	(0.5)%
Aug. 31, 2004	(0.3)%
Aug. 31, 2005	1.7 %
Aug. 31, 2006	2.3 %
Aug. 31, 2007	3.2 %

**ACTUARIAL ACCRUED LIABILITIES & VALUATION ASSETS  
COMPARATIVE STATEMENT (\$ AMOUNTS IN THOUSANDS)**

Valuation Date	Accrued Liability (AAL)	Valuation Assets	Unfunded Actuarial Accrued Liability(UAAL)	Actuarial Valuation Assets To AAL	Ratio of UAAL to Valuation Payroll
Dec. 31, 1984	\$ 33,651	\$ 34,318	\$ (667)	102 %	-
Dec. 31, 1985	37,083	39,895	(2,812)	108 %	-
Dec. 31, 1986	41,016	44,671	(3,655)	109 %	-
Dec. 31, 1987	46,239	50,417	(4,178)	109 %	-
Dec. 31, 1988	50,820	55,693	(4,873)	110 %	-
Dec. 31, 1989	54,676	61,144	(6,468)	112 %	-
Dec. 31, 1990#@	55,127	66,511	(11,384)	121 %	-
Aug. 31, 1991#	59,149	68,390	(9,241)	116 %	-
Aug. 31, 1992@	63,407	77,980	(14,573)	123 %	-
Aug. 31, 1993	67,910	86,583	(18,673)	127 %	-
Aug. 31, 1994	70,517	83,308	(12,791)	118 %	-
Aug. 31, 1995#	79,202	92,235	(13,033)	116 %	-
Aug. 31, 1996	81,583	94,348	(12,765)	116 %	-
Aug. 31, 1997*	91,023	101,476	(10,453)	111 %	-
Aug. 31, 1998	94,848	109,213	(14,365)	115 %	-
Aug. 31, 1999#@	104,692	113,902	(9,210)	109 %	-
Aug. 31, 2000	115,671	121,404	(5,733)	105 %	-
Aug. 31, 2001	122,661	128,070	(5,409)	104 %	-
Aug. 31, 2002#@	130,875	128,319	2,556	98 %	10 %
Aug. 31, 2003	137,508	132,578	4,930	96 %	18 %
Aug. 31, 2004	144,179	136,974	7,205	95 %	26 %
Aug. 31, 2005	151,978	145,730	6,248	96 %	22 %
Aug. 31, 2006	161,583	157,527	4,056	97 %	13 %
Aug. 31, 2007@	169,587	171,264	(1,677)	101 %	-

# After changes in benefit provisions

@ After changes in actuarial assumptions or methods

\* After inclusion of "old" plan

**Two tests** of funding progress based on the relationship between valuation assets and actuarial accrued liabilities are shown above. These tests are, however, dependent upon the actuarial cost method.

**The Ratio of Valuation Assets to Actuarial Accrued Liabilities** is a traditional measure of a system's funding progress. Except in years when the benefit provisions are amended or actuarial assumptions are revised, the ratio can be expected to gradually tend toward 100%, assuming computed contribution amounts are received by the plan.

**The Ratio of Unfunded Actuarial Accrued Liabilities to Valuation Payroll** is another relative index of condition. In an inflationary economy, the value of dollars is decreasing. This environment results in employee pays increasing in dollar amounts, retirement benefits increasing in dollar amounts, and then, unfunded actuarial accrued liabilities increasing in dollar amounts - all at a time when the actual substance of these items may be decreasing. When looking at dollar amounts, the effects of inflation can hide the actual funding progress from year to year. Unfunded actuarial accrued liabilities dollars divided by active employee payroll dollars provides an index which attempts to eliminate the misleading effects of inflation. The smaller the ratio of unfunded liabilities to active member payroll, the stronger the system. Observation of this relative index over a period of years will give an indication of whether the system is becoming financially stronger or weaker.

## COMMENTS

### **Cost-of-Living Adjustments**

Effective October 1992 the Pension Fund Ordinance provides for cost-of-living (COLA) benefits to pensioners. The source of funding for the COLA benefits is not guaranteed. The City has indicated that the payment of COLA is not guaranteed and has chosen not to pre-fund this benefit. Therefore, COLA benefits and the corresponding pool of assets were not included in this valuation of the Pension Fund or in the determination of the employer contribution. If both the benefit and the assets were included in the valuation, the resulting employer contribution would be higher than the figures reported herein. The plan's auditor should review this matter for compliance with GASB Statement No. 25.

### **Experience During Year**

The aggregate experience of the System was favorable during the year ended August 31, 2007. During this period, the Pension Fund earned more than the long-term assumed rate of investment return (7.5% net of expenses). Market smoothing techniques used for your actuarial valuations recognize only part of the current and prior investment gains and losses. Investment experience (including gains and losses from prior years) was more favorable than expected, resulting in an investment gain.

### **Plan Changes**

There were no benefit changes reported to the actuary in connection with the August 31, 2007 valuation of the Pension Fund. However, there were several changes made to the actuarial assumptions and methods adopted by the pension fund for use in this and future valuations pursuant to the recent experience study (see our report dated September 11, 2007). These changes are noted in Section E of this report.

## **Employer Contributions**

The employer contributions to the System during the 2006-2007 fiscal year were lower than recommended. In general and in the absence of offsetting actuarial gains, reduced contributions during a given year automatically increase the amount of future employer contributions. During 2006, the City modified the ordinance such that City contributions to the Pension Fund will equal the City's computed normal cost contribution. This policy change will affect the pension contributions made during the City's 2008-2009 fiscal year. If the City follows this policy literally, the policy will result in lower than recommended contributions in some years and higher than recommended contributions in other years. Even though there is a modest funding surplus as of August 31, 2007, and recommended contributions are currently lower than the policy contribution, the existence of a funding surplus in the future is not a certainty. If during the life of the Pension Fund, there are more actuarial losses than actuarial gains, the current City funding policy will likely have an adverse effect on the Pension Fund in the long run and potentially lead to an ever increasing Net Pension Obligation in accordance with GASB Statement No. 27.

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## **SECTION D**

### **SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA SUBMITTED BY THE PENSION FUND**

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# SUMMARY OF BENEFIT PROVISIONS EVALUATED OR CONSIDERED (AUGUST 31, 2007)

## Normal Retirement

### *Eligibility.*

Plan A: Attained age 50.

Others: Attained age 53.

### *Amount.*

Plan A members: Member receives a pension equal to 2.56% of regular pay times years of service up to 25 years. (Maximum pension is 64% of regular pay).

Others: 1) A member with 21 or more years of service shall receive a pension equal to 58% (Plan B) or 54% (Plan C) of regular pay, plus 2% of regular pay for each year of service rendered after becoming eligible for retirement, to a maximum increase of 10% of regular pay.

2) A member with less than 21 years service shall receive a pension equal to 58% (Plan B) or 54% (Plan C) of regular pay times the ratio of a) his number of years of service, to b) 21 years.

Minimum annual benefit is \$3,600 (not applicable to children recipients).

## Regular Pay

The average base pay of a member during the 26 consecutive pay periods preceding retirement or death.

## Early Retirement

*Eligibility.* Attained age 50 and 21 years of service.

Plan A members: Member receives a pension equal to 2.56% of regular pay times the ratio of years of service up to 25 years.

Others: 1) A member with 21 or more years of service shall receive a pension equal to 52% (Plan B) or 48% (Plan C) of regular pay, plus 2% of regular pay for each year of service rendered after becoming eligible for early retirement, to a maximum of 6%.

2) A member with less than 21 years of service shall receive a pension equal to 58% (Plan B) or 54% (Plan C) of regular pay times that ratio of (a) his number of years of service, to (b) 21 years.

# SUMMARY OF BENEFIT PROVISIONS EVALUATED OR CONSIDERED

## Vested (Deferred) Retirement

**Eligibility.** Termination of employment after 10 or more years of service. Benefit commences at age 53 (age 50 for Plan A members), actuarially reduced benefit available at age 50.

**Amount.**

Plan A members: A pension equal to 2.56% of regular pay times years of service up to 25 years.

Others: A pension equal to 54% or 58% of regular pay at termination times the ratio of the number of years of service divided by 21 years (ratio shall not exceed one).

A member terminating employment prior to age 50 and after 10 or more years of service has the option to withdraw his accumulated contributions and receive a reduced pension at age 53 (reduced to reflect withdrawal of contributions).

## Duty Death or Duty Disability Resulting In Death

**Eligibility.** Active member dies in the line of duty or as a result of injuries received while in the line of duty.

**Amount.** (1) If a member dies prior to becoming eligible for a normal retirement, the member's surviving spouse receives a pension equal to 54% or 58% of his regular pay. Upon the spouse's remarriage or death, the pension is payable to any dependent children until 19 years of age.

(2) If a member dies after becoming eligible for a normal retirement, his designated beneficiary receives a pension equal to Option A (joint and 100% survivor actuarial equivalent benefit) which would have been payable had the deceased member retired and elected Option A.

The above amounts are subject to deduction of the amount received from worker's compensation.

## Non-Duty Death

**Eligibility.** Attained age 50 and 21 years of service.

**Amount.** A designated beneficiary shall receive a pension equal to the pension which would have been payable had the member retired the day prior to his death and elected Option A, except that the early retirement actuarial reduction shall not be applied.

# SUMMARY OF BENEFIT PROVISIONS EVALUATED OR CONSIDERED

## Duty Disability

**Eligibility.** An active member becomes totally and permanently disabled from performing their duty resulting from a cause occurring while in the line of duty.

**Amount.** Plan A: 58% of regular pay.

Plans B & C: A pension equal to 54% or 58% of regular pay respectively, plus 2% of regular pay for each year of service rendered after becoming eligible for retirement, to a maximum increase of 10% of regular pay. Such pension shall continue after the member's death to the member's surviving spouse, minor children or designated Option A beneficiary (a reduced amount in this case).

The above amounts are subject to deduction of the amount received from worker's compensation.

## Non-Duty Disability

**Eligibility.** An active member becomes totally and permanently disabled while not in the line of duty.

**Amount.** A pension equal to the following percent of regular pay:

- (i) 21% or 23%; if 5 or more, but less than 10 years of service
- (ii) 36% or 39%; if 10 or more, but less than 15 years of service
- (iii) 49% or 53%; if 15 or more years of service.

(Plans A & B are eligible for higher amounts. Plan C is eligible for lower amount.)

If death results from such disability, the pension shall be paid to the member's surviving spouse until the spouse's death or remarriage, or a reduced pension will be paid to a designated beneficiary.

## Death After Retirement

Plan A members receive a death benefit after retirement equal to the member's accumulated contributions multiplied by the ratio of the number of expected payments **not** received to the number of expected payments (the ratio cannot be less than zero)\*.

## Employee Contributions

Plan A members: 8% of pay

Plan B members: 7.6% of pay

Plan C members: 7.0% of pay

Upon attaining 21 years of service member contributions are discontinued for Plan B and Plan C members. Plan C members are eligible for the lower benefit formula.

## **DROP PROGRAM SUMMARY OF PROVISIONS**

DROP: Deferred Retirement Option Plan

Eligibility for the DROP

- Members of Plans B and C may join the DROP within 1 year of becoming eligible for Normal retirement benefits as described in the Summary of benefit provisions in this report
- Grandfather provision allows members of Plans B and C who were eligible to retire on the date of DROP implementation, a one time opportunity to join the DROP.
- Members of Plan A may join the DROP at any time after meeting the eligibility conditions for Normal retirement as described in the Summary of benefit provisions in this report

DROP benefits

- 100% of the member's accrued benefit at the time of DROP will be contributed to the member's DROP account.
- If the member elects annuity withdrawal (available to members of Plans B and C) the lump sum payment and corresponding reduced annuity will be credited to the member's DROP account.

DROP funding Period

- Both the City and the employee will contribute (in accordance with the provisions of each Plan) to the System until the employee enters the DROP.

DROP Period

- Maximum of 5 years.

The rates of retirement /DROP are shown in Section E of this report

## RETIRANTS AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS COMPARATIVE STATEMENT

Year Ended	Added to Rols			Removed from Rols		Rols End of Year		% Incr.	Average	Expected Removals
	No.**	Annual Benefits	Post-Ret. Increases	No.	Annual Benefits	No.	Annual Benefits	Annual Benefits	Annual Benefit	
Dec. 31, 1981	7	\$ 42,675	\$ 31,587	3	\$ 7,427	76	\$ 403,141	19.9%	\$ 5,304	2.0
Dec. 31, 1982	8	84,321		2	9,043	82	478,419	18.7%	5,834	2.0
Dec. 31, 1983	3	21,512		4	17,233	81	482,698	0.9%	5,959	2.2
Dec. 31, 1984	6	75,732		1	3,600	86	554,830	14.9%	6,452	2.1
Dec. 31, 1985	12	102,224		6	26,240	92	630,814	13.7%	6,857	2.1
Dec. 31, 1986	8	89,719		2	4,810	98	715,723	13.5%	7,303	2.2
Dec. 31, 1987	12	123,986		4	21,530	106	818,178	14.3%	7,719	2.4
Dec. 31, 1988	6	109,203		2	11,578	110	915,803	11.9%	8,325	2.5
Dec. 31, 1989	7	114,257		3	10,800	114	1,019,260	11.3%	8,941	2.6
Dec. 31, 1990	11	116,420		3	19,220	122	1,116,460	9.5%	9,151	2.6
Aug. 31, 1991	22 #	308,940	42,470	2	7,200	142	1,460,670	30.8%	10,286	2.9
Aug. 31, 1992	16	221,944		1	3,816	157	1,678,798	14.9%	10,693	3.0
Aug. 31, 1993	17	219,974		1	10,698	173	1,888,074	12.5%	10,914	3.4
Aug. 31, 1994	16	218,777		4	17,829	185	2,089,022	10.6%	11,292	3.9
Aug. 31, 1995	16	211,219		4	37,158	197	2,263,083	8.3%	11,488	4.0
Aug. 31, 1996	8	149,099		2	16,566	203	2,395,616	5.9%	11,801	4.4
Aug. 31, 1997	73 ##	590,041		4	56,890	272	3,042,547	27.0%	11,186	4.8
Aug. 31, 1998	10	155,262		11	71,670	271	3,126,139	2.7%	11,536	9.5
Aug. 31, 1999	23	414,130		1	22,889	293	3,517,380	12.5%	12,005	9.1
Aug. 31, 2000	17	335,244		7	62,014	303	3,790,610	7.8%	12,510	9.3
Aug. 31, 2001	14	225,737		16	105,022	301	3,911,325	3.2%	12,994	9.3
Aug. 31, 2002	18	278,160		14	115,340	305	4,074,145	4.2%	13,358	9.1
Aug. 31, 2003	15	219,569		11	119,499	309	4,174,215	2.5%	13,509	9.1
Aug. 31, 2004	12	175,551		5	74,835	316	4,274,931	2.4%	13,528	9.4
Aug. 31, 2005	30	702,721		12	73,072	334	4,904,580	14.7%	14,684	9.5
Aug. 31, 2006	10	262,420		4	36,362	340	5,130,638	4.6%	15,090	10.3
Aug. 31, 2007	38	1,101,713		8	55,280	370	6,177,071	20.4%	16,695	10.8

\*\* Includes retirements from the DROP

# Includes one member not previously reported

## Includes the addition of "old plan" members

**DROP MEMBERS - BY ATTAINED AGES**  
**AUGUST 31, 2007**

Attained Ages	No.	DROP Annual Benefits
50	4	\$ 151,222
51	3	135,603
52	3	118,858
53	5	158,217
54	11	366,566
55	8	243,295
56	3	86,066
57	3	59,274
58	2	51,255
59	1	32,832
60	2	49,960
61	1	41,994
62	1	19,458
<b>Total</b>	<b>47</b>	<b>\$1,514,600</b>

**RETIRANTS AND BENEFICIARIES - BY ATTAINED AGES**  
**AUGUST 31, 2007**

Attained Ages	Age and Service Retirants		Disability Retirants		Survivor Beneficiaries	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 50			10	\$ 223,745	1	\$ 4,248
50	1	\$ 33,015	2	42,793	1	9,405
51						
52	1	35,767	1	14,074	1	3,057
53	6	108,330			2	22,461
54	7	149,242	3	38,979	1	2,539
55	10	317,331	1	14,205	2	11,016
56	11	220,714			1	15,127
57	16	354,350	1	14,065	1	36,023
58	14	260,850			1	20,833
59	11	236,956	1	13,280	2	56,817
60	17	263,603	1	13,063		
61	8	167,981				
62	18	350,991	1	4,014		
63	13	285,213	2	24,383	1	12,029
64	14	247,102	3	30,520	1	4,014

(Continued on next page)

**RETIRANTS AND BENEFICIARIES - BY ATTAINED AGES**  
**AUGUST 31, 2007**  
**(CONTINUED)**

Attained Ages	Age and Service Retirants		Disability Retirants		Survivor Beneficiaries	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
65	11	\$ 197,337				
66	10	161,116	2	\$ 25,380		
67	16	280,567	2	29,871	1	\$ 14,294
68	15	267,547				
69	9	155,894			4	54,431
70	11	134,825	2	20,325	1	13,265
71	15	240,843			2	25,678
72	4	59,434	3	23,108		
73	6	93,098				
74	3	46,374				
75	4	60,235				
76	4	55,532	3	39,058		
77	6	78,283			2	17,564
78	3	57,981			1	5,584
79	3	45,595	1	7,983		
80	6	63,254			1	4,868
81	1	16,078			2	17,880
82	5	52,404			2	9,105
83	2	35,250				
84					1	4,032
85 and over	5	37,115			13	63,748
<b>Total</b>	<b>286</b>	<b>\$5,170,207</b>	<b>39</b>	<b>\$578,846</b>	<b>45</b>	<b>\$428,018</b>

**VESTED TERMINATED MEMBERS - BY ATTAINED AGES  
AUGUST 31, 2007**

<b>Attained Ages</b>	<b>No.</b>	<b>Estimated Annual Benefits</b>
32	1	\$ 12,922
37	2	20,753
38	3	34,014
39	1	19,148
40	2	10,446
41	2	4,631
43	2	15,656
44	5	35,082
45	1	2,073
46	1	4,775
47	3	29,129
48	2	33,805
49	2	52,702
54	1	4,617
<b>Total</b>	<b>28</b>	<b>\$279,753</b>

## ACTIVE MEMBERS INCLUDED IN VALUATION

Valuation Date	Active Members	Vested Term. Members	Valuation Payroll**	Average			% Increase
				Age	Service	Pay	
Dec. 31, 1988	483	19	\$12,937,333	39.5	14.7	\$26,785	0.1 %
Dec. 31, 1989	496	24	13,742,308	39.5	14.7	27,706	3.4 %
Dec. 31, 1990	510	30	15,014,896	39.6	14.7	29,441	6.3 %
Aug. 31, 1991	490	36	15,157,150	39.3	14.4	30,933	5.1 %
Aug. 31, 1992	471	37	15,364,976	40.0	15.0	32,622	5.5 %
Aug. 31, 1993	516	38	16,721,658	39.3	14.5	32,406	(0.7)%
Aug. 31, 1994	521	42	17,698,377	39.0	13.4	33,970	4.8 %
Aug. 31, 1995	526	41	18,561,302	39.1	14.5	35,288	3.9 %
Aug. 31, 1996	545	42	19,224,719	39.1	14.3	35,275	0.0 %
Aug. 31, 1997	549	43	20,908,549	38.9	13.3	38,085	8.0 %
Aug. 31, 1998	561	47	21,860,493	38.8	13.2	38,967	2.3 %
Aug. 31, 1999	545	48	23,611,284	39.1	13.5	43,323	11.2 %
Aug. 31, 2000	543	45	25,808,088	39.5	13.8	47,529	9.7 %
Aug. 31, 2001	584	41	28,215,685	39.3	13.3	48,315	1.7 %
Aug. 31, 2002	536	36	26,606,881	38.4	12.3	49,640	2.7 %
Aug. 31, 2003	535	31	27,415,330	38.7	12.5	51,244	3.2 %
Aug. 31, 2004	533	25	28,124,862	38.8	12.5	52,767	3.0 %
Aug. 31, 2005	533	25	29,029,309	39.1	12.9	54,464	3.2 %
Aug. 31, 2006	558	25	30,724,333	39.2	12.8	55,062	1.1 %
Aug. 31, 2007	531	28	30,546,235	39.5	13.0	57,526	4.5 %

## ADDITIONS TO AND REMOVALS FROM ACTIVE MEMBERSHIP ACTUAL AND EXPECTED NUMBERS

Year Ended	Number Added During Year		Normal Retirement*		Disability Retirement		Died-In-Service		Terminations		Active Members End of Year
	A	E	A	E	A	E	A	E	A	E	
Aug. 31, 1993	63	18	12	8.2	2	1.2	0	1.2	4	13.0	516
Aug. 31, 1994	38	33	12	8.6	2	1.2	0	1.3	19	15.8	521
Aug. 31, 1995	26	21	12	7.9	0	1.3	0	1.3	9	17.8	526
Aug. 31, 1996	34	15	8	9.2	0	1.2	0	1.4	7	15.8	545
Aug. 31, 1997	31	27	20	8.3	0	1.4	0	1.4	7	16.6	549
Aug. 31, 1998	42	30	8	8.1	0	1.3	0	1.3	22	18.6	561
Aug. 31, 1999	23	39	19	9.4	1	1.3	0	1.3	19	16.8	545
Aug. 31, 2000	29	31	8	12.5	0	0.5	0	0.6	23	13.9	543
Aug. 31, 2001	61	20	6	14.3	3	0.6	0	0.6	11	14.0	584
Aug. 31, 2002	21	69	54	15.7	0	0.6	0	0.6	15	16.5	536
Aug. 31, 2003	21	22	13	11.1	0	0.5	0	0.5	9	15.3	535
Aug. 31, 2004	28	30	19	12.4	0	0.5	0	0.4	11	14.3	533
Aug. 31, 2005	24	24	9	12.7	2	0.5	0	0.4	13	14.6	533
Aug. 31, 2006	42	17	7	14.7	0	0.5	0	0.5	10	14.1	558
Aug. 31, 2007	19	46	23	17.2	3	0.6	1	0.5	19	14.9	531
5 Year Total	134	139	71	68.1	5	2.6	1	2.3	62	73.2	

*A* Represents actual number      *E* Represents expected number based on assumptions outlined in Section C

\* Includes new retirements and DROP members (from active status) beginning with August 31, 2002 valuation

\*\* Reflects Non-DROP payroll in 2002 and later

**ACTIVE POLICEMEN NOT PARTICIPATING IN DROP - AUGUST 31, 2007**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	10							10	\$ 415,078
25-29	29	7						36	1,604,935
30-34	14	45	2					61	3,084,276
35-39	4	17	28	10				59	3,373,882
40-44	1	4	7	26	2			40	2,442,965
45-49	1		1	13	10	8		33	2,133,516
50-54		1		1	2	9	11	24	1,617,438
55-59						1	11	12	883,126
61							1	1	70,585
<b>Totals</b>	<b>59</b>	<b>74</b>	<b>38</b>	<b>50</b>	<b>14</b>	<b>18</b>	<b>23</b>	<b>276</b>	<b>\$15,625,801</b>

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

Age:                   38.2 years  
Service:               13.0 years  
Annual Pay:           \$56,615

**ACTIVE FIREMEN NOT PARTICIPATING IN DROP - AUGUST 31, 2007**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	1							1	\$ 41,555
25-29	19	4						23	1,048,737
30-34	22	15	9					46	2,374,766
35-39	6	20	13	2				41	2,333,489
40-44	2	9	14	23	5			53	3,253,518
45-49	1	6	10	15	9	3		44	2,696,142
50-54		2		7	14	11	5	39	2,587,211
55-59			1		1		6	8	585,016
<b>Totals</b>	<b>51</b>	<b>56</b>	<b>47</b>	<b>47</b>	<b>29</b>	<b>14</b>	<b>11</b>	<b>255</b>	<b>\$14,920,434</b>

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

Age: 40.9 years  
Service: 12.9 years  
Annual Pay: \$58,512

# FINANCIAL INFORMATION FURNISHED FOR THE ACTUARIAL VALUATION

## Reported Market Value of Assets\* for the Year Ended August 31, 2007

Market Value of Assets, Beginning of Year \$179,365,461

### REVENUES

Contributions From		
Members	\$ 2,043,976	
Employer	3,293,138	
EMS	201,452	
Total Contributions		5,538,566

Other Income		
12(B)1 Rebates		17,685

Investment Income		
Net Interest	961,267	
Net Dividends	2,645,110	
Amortization of premiums and discounts	(6,061)	
Net Gain on Investments	21,213,691	
Other	(73,610)	
Total Investment Income		<u>\$ 24,740,397</u>

Total Revenues		<u>\$ 30,296,648</u>
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### EXPENDITURES

Retirement Benefits Paid		
Base Pension		\$ 6,183,460
DROP Payments		2,331,627

Refunds of Member Contributions		
Trustee-to-trustee transfer	\$ 721,048	
Direct refund to employee	235,570	
Total Refunds		\$ 956,618

Administrative Expenses		244,356
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Investment Expense		199,429
--------------------	--	---------

Change in Payables		<u>110,117</u>
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Total Expenditures		\$ 10,025,607
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Market Value of Assets, End of Year		\$199,636,502
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\* Includes COLA pool assets of \$18,505,849

# FINANCIAL INFORMATION FURNISHED FOR THE ACTUARIAL VALUATION

## Reported COLA Pool Assets for the Year Ended August 31, 2007

COLA Pool Market Value, Beginning of Year	\$14,668,843
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### ADDITIONS

Additions to COLA Pool	\$ 2,198,300
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Investment Income	
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COLA Pool Earnings	\$ 2,009,573
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Total Earnings	<u>\$ 2,009,573</u>
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Total Additions	\$ 4,207,873
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### EXPENDITURES

COLA Pool Payments	
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To Retirants and Beneficiaries	\$ 323,827
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To DROP Members	47,040
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Total COLA Pool Payments	<u>\$ 370,867</u>
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Total Expenditures	\$ 370,867
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COLA Pool Market Value, End of Year	\$ 18,505,849
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## **SECTION E**

**FINANCIAL PRINCIPLES, ACTUARIAL VALUATION PROCESS,  
ACTUARIAL COST METHODS, ACTUARIAL ASSUMPTIONS,  
AND DEFINITIONS OF TECHNICAL TERMS**

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## BASIC FINANCIAL PRINCIPLES AND OPERATION OF THE PENSION FUND

***Benefit Promises Made Which Must Be Paid For:*** A retirement program is an orderly means of handing out, keeping track of, and financing pension promises to a group of employees. As each member of the retirement program acquires a unit of service credit the member is, in effect, handed an "IOU" which reads: "The Pension Fund promises to pay you one unit of retirement benefits, payments in cash commencing when you retire."

The principal related financial question is: When shall the money required to cover the "IOU" be contributed? This year, when the benefit of the member's service is received? Or, some future year when the "IOU" becomes a cash demand?

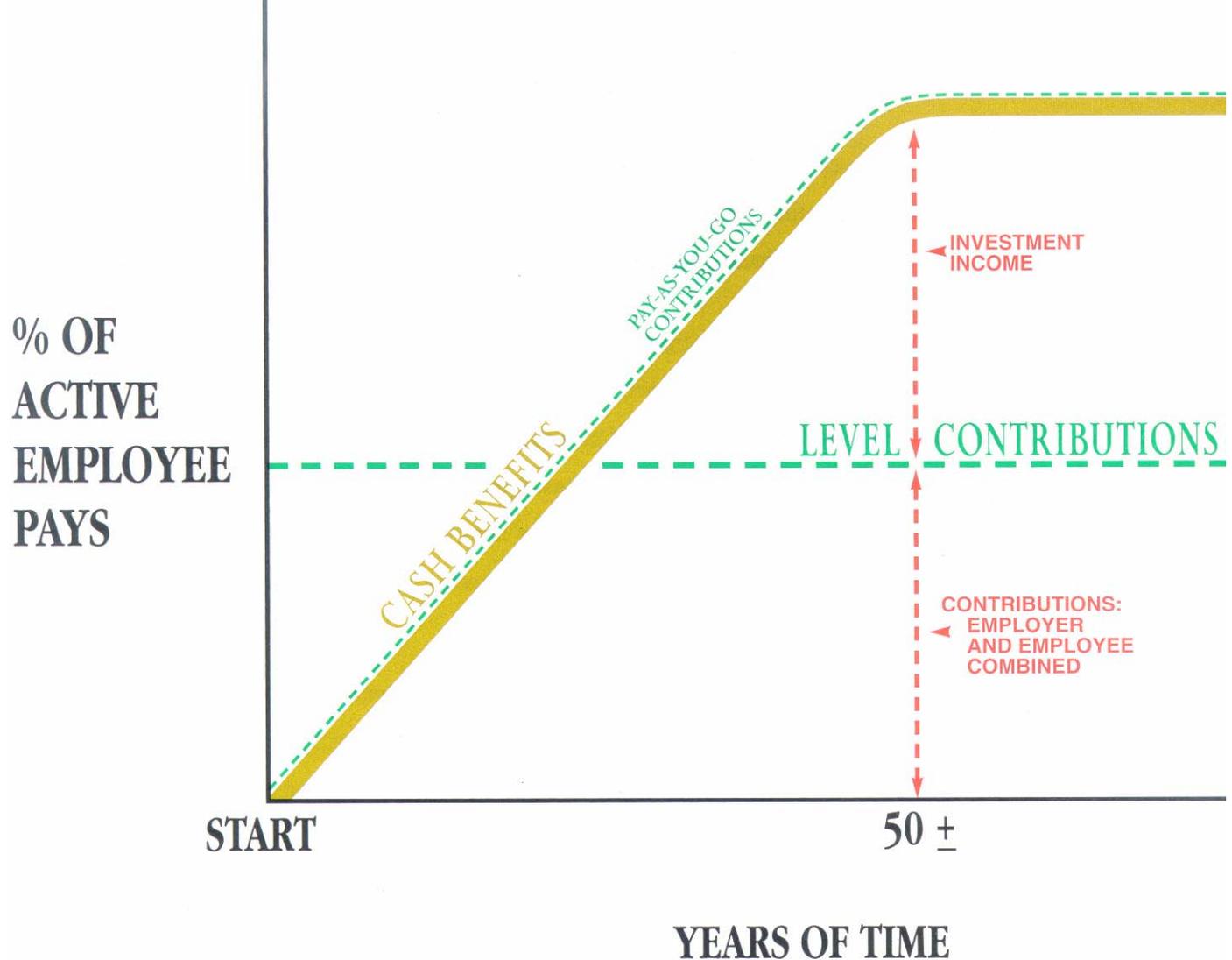
This Pension Fund addresses this question by having as its ***financial objective the establishment and receipt of contributions, expressed as percents of active member payroll, which will remain approximately level*** from year to year and will not have to be increased for future generations of taxpayers.

Translated into actuarial terminology, a level percent-of-payroll contribution objective means that the contribution rate must be at least:

***Normal Cost*** (the present value of future benefits assigned to members' service being rendered in the current year)

. . . plus . . .

***Interest on the Unfunded Actuarial Accrued Liability*** (the difference between the actuarial accrued liability and current system assets).



**CASH BENEFITS LINE.** This relentlessly increasing line is the fundamental reality of retirement plan financing. It happens each time a new benefit is added for future retirements (and happens regardless of the design for contributing for benefits).

**LEVEL CONTRIBUTION LINE.** Determining the level contribution line requires detailed assumptions concerning a variety of experiences in future decades, including:

Economic Risk Areas

- Rates of investment return
- Rates of pay increase
- Changes in active member group size

Non-Economic Risk Areas

- Ages at actual retirement
- Rates of mortality
- Rates of withdrawal of active members (turnover)
- Rates of disability

## THE ACTUARIAL VALUATION PROCESS

*The financing diagram* on the previous page shows the relationship between the two fundamentally different philosophies of paying for retirement benefits: the method where contributions match cash benefit payments (or barely exceed cash benefit payments, as in the Federal Social Security program) which is an *increasing contribution method*; and the *level contribution method* which equalizes contributions between the generations.

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*The actuarial valuation* is the mathematical process by which the level contribution rate is determined, and the flow of activity constituting the valuation may be summarized as follows:

A. *Covered Person Data*, furnished by plan administrator.

Retired lives now receiving benefits

Former employees with vested benefits not yet payable

Active employees

B. + *Asset data* (cash & investments), furnished by plan administrator

C. + *Assumptions concerning future financial experience in various risk areas*, which assumptions are established by the City Council after consulting with the actuary

D. + *The funding method* for employer contributions (the long-term, planned pattern for employer contributions)

E. + *Mathematically combining the assumptions, the funding method, and the data*

F. = **Determination of:**

Plan financial position

and/or New Employer Contribution Rate

## ACTUARIAL COST METHODS USED FOR THE VALUATION

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

- (i) the annual normal costs for each individual active member, payable from the member's actual date of employment to projected date of DROP or retirement, are sufficient to accumulate the actuarial present value of the member's benefit at the time of retirement;
- (ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

***Amortization of Unfunded Actuarial Accrued Liabilities:*** Unfunded actuarial accrued liabilities were amortized as a level percent of active member payroll over a period of 10 years. Active member payroll was assumed to increase 4.25% a year for the purpose of determining the level percent contributions (please refer to the comments in Section C for important additional information).

## ACTUARIAL ASSUMPTIONS IN THE VALUATION PROCESS

The actuary calculates contribution requirements and actuarial present values for a retirement plan by applying actuarial assumptions to the benefit provisions and people information of the plan, using the actuarial cost methods described on page E-4.

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

- (i) long-term rates of investment return to be generated by the assets of the plan
- (ii) patterns of pay increases to members
- (iii) rates of mortality among members, retirants and beneficiaries
- (iv) rates of withdrawal of active members
- (v) rates of disability among active members
- (vi) the age patterns of actual retirements.

In making a valuation, the actuary calculates the monetary effect of each assumption 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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The employer contribution rate has been computed to remain level from year to year so long as benefits and the basic experience and make-up of members do not change. Examples of favorable experience which would tend to reduce the employer contribution rate are:

- (1) Investment returns in excess of 7.5 percent per year.
- (2) Member non-vested terminations at a higher rate than outlined on page E-9.
- (3) Life expectancy among retirants and beneficiaries that is lower than indicated on page E-8.
- (4) Increases in the number of active members.

Examples of unfavorable experience which would tend to increase the employer contribution rate are:

- (1) Pay increases in excess of the rates outlined on page E-7.
- (2) An increase in the rates of retirement (DROP) over the rates outlined on page E-10.
- (3) A pattern of hiring employees at older ages than in the past.

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Actual experience of the plan will not coincide exactly with assumed experience, regardless of the choice of the assumptions, the skill of the actuary or the precision of the calculations. 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 one or more of the assumptions is modified to reflect experience trends (but not random or temporary year to year fluctuations).

**Investment Return** (net of administrative expenses):

7.5% a year, compounded annually. This rate consists of a real rate of return of 3.0% a year plus a long-term rate of wage inflation of 4.25% a year.

This assumption is used to equate the value of payments due at different points in time. Approximate rates of investment return, for the purpose of comparisons with assumed rates, are shown below. Actual increases in average active member pay are also shown for comparative purposes.

	<b>Year Ended August 31,</b>				
	<b>2007</b>	<b>2006</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>
Rate of Investment Return	11.2 %	9.9 %	8.5 %	5.9 %	5.8 %
Increase in Average Pay	4.5 %	1.1 %	3.2 %	3.0 %	3.2 %

The nominal rate of return was computed using the approximate formula  $i = \frac{I}{A + B - I}$  where I is recognized investment income net of expenses and COLA Pool appropriation, A is the beginning of year asset value, and B is the end of year asset value.

These rates of return should not be used for measurement of an investment advisor's performance or for comparisons with other systems -- *to do so will mislead*.

**Pay Projections:** These assumptions are used to project current pays to those upon which benefits will be based. The base economic assumption was first used for the August 31, 2007 valuation.

<b>Sample Ages</b>	<b>Annual Rate of Pay Increase for Sample</b>		
	<b>Base (Economic)</b>	<b>Merit and Longevity</b>	<b>Total</b>
20	4.25%	4.00%	8.25%
25	4.25%	3.30%	7.55%
30	4.25%	2.80%	7.05%
35	4.25%	2.50%	6.75%
40	4.25%	2.20%	6.45%
45	4.25%	1.80%	6.05%
50	4.25%	1.20%	5.45%
55	4.25%	0.70%	4.95%

***Pay Projections continued***

If the number of active members remains constant, the total active member payroll is eventually expected to increase by 4.25% annually, the base portion of the individual pay increase assumptions. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities.

Changes in average pay and total payroll actually experienced is shown below. After 2002, payroll is non-DROP payroll.

<b>Increase in</b>	<b>Year Ended August 31,</b>				
	<b>2007</b>	<b>2006</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>
Average pay	4.5 %	1.1 %	3.2 %	3.0 %	3.2 %
Total payroll	(0.6)%	5.8 %	3.2 %	2.6 %	3.0 %

***Mortality Table:*** The 1994 Group Annuity Mortality table set forward 2 years for men and 1 year for women. This table was first used for the August 31, 2007 valuation. Sample values follow:

<b>Sample Ages</b>	<b>Actuarial Present Value of \$1 Monthly for Life</b>		<b>Future Life Expectancy (Years)</b>	
	<b>Men</b>	<b>Women</b>	<b>Men</b>	<b>Women</b>
55	\$128.77	\$139.07	24.39	29.24
60	117.81	130.06	20.18	24.70
65	105.49	119.41	16.37	20.46
70	92.10	107.06	12.98	16.54
75	77.51	92.46	9.96	12.90
80	62.98	76.69	7.44	9.71

This assumption is used to measure the probabilities of each benefit payment being made after retirement and was first used in the 8/31/07 valuation. Fifty percent of the mortality rates in this table were used to determine the probability of members dying before retirement. 50% of the assumed deaths before retirement were assumed to be duty related and 50% were assumed to be non-duty related.

**Rates of separation from active membership:** The 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 remaining in employment.

Sample Ages	Years of Service	Percent Separating within Next Year	
		Police	Fire
ALL	0	12.00%	8.00%
	1	8.00%	6.00%
	2	7.00%	4.50%
	3	6.00%	3.00%
	4	5.00%	2.00%
25	5 & Over	4.50%	2.00%
30		4.35%	1.40%
35		3.50%	1.00%
40		2.10%	0.80%
45		1.00%	0.60%
50		0.62%	0.10%
55		0.50%	0.10%

The rates were first used for the August 31, 2007 valuation.

**Rates of Disability:** These assumptions represent the probabilities of active members becoming disabled as a result of non-duty related causes or as a result of duty related causes.

Sample Ages	Percent Becoming Disabled within Next Year	
	Men	Women
20	0.04%	0.04%
25	0.05%	0.05%
30	0.05%	0.05%
35	0.08%	0.08%
40	0.12%	0.12%
45	0.19%	0.19%
50	0.34%	0.34%
55	0.50%	0.50%
60	0.67%	0.67%

Sixty percent of the disability rates in this table were used to determine the probability of disability retirements. Fifty percent of assumed liabilities were assumed to be duty related and 50% were assumed to be non-duty related.

**Rates of Retirement and DROP Entry:** These rates are used to measure the probabilities of an eligible member retiring and/or “dropping” within 1 year of the indicated age.

Ages	Rates of Retirement and/or DROP Entry				
	Old Plan	Plan A		Plans B & C	
		Police	Fire	Police	Fire
50	35%	36%	18%	28%	6%
51	15	20	18	12	6
52	15	20	18	12	6
53	15	16	12	24	24
54	15	16	24	24	24
55	40	24	24	36	18
56	15	8	24	16	18
57	15	8	24	12	30
58	15	8	24	12	42
59	15	8	24	12	18
60	100	100	35	100	18
61	100	100	45	100	42
62	100	100	60	100	42
63	100	100	80	100	80
64	100	100	90	100	90
65	100	100	100	100	100

A member was assumed to be eligible for retirement upon meeting the conditions shown in Section D.

These rates were first used for the August 31, 2007 valuation.

**Active Member Group Size:** The number of active members was assumed to remain constant. This assumption is unchanged from previous valuations.

## MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

<b>Marriage Assumption:</b>	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits.
<b>Decrement Timing:</b>	All decrements are assumed to occur mid- year.
<b>Eligibility Testing:</b>	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
<b>Benefit Service:</b>	Exact fractional service is used to determine the amount of benefit payable.
<b>Decrement Operation:</b>	Disability decrements do not operate during the first 5 years of service. They also do not operate during retirement eligibility.
<b>Normal Form of Benefit:</b>	The assumed normal form of benefit is the straight life form.
<b>Incidence of Contributions:</b>	Contributions are assumed to be received continuously throughout the applicable fiscal year based upon the contribution rate shown in this report, and the actual payroll at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.
<b>Funding Period:</b>	Both the City and employee contribute (in accordance with the provisions of each plan) to the System until the employee enters the DROP or otherwise exits the System.
<b>Pay Increase Timing:</b>	Beginning of year

## DEFINITIONS OF TECHNICAL TERMS

**Accrued Service:** Service credited under the system which was rendered before the date of the actuarial valuation.

**Actuarial Accrued Liability:** The difference between the actuarial present value of system benefits and the actuarial present value of future normal costs. Also referred to as "past service liability."

**Actuarial Assumptions:** Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment (income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

**Actuarial Cost Method:** A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future benefits" between future normal costs and actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

**Actuarial Equivalent:** One series of payments is said to be actuarially equivalent to another series of payments if the two series have the same actuarial present value.

**Actuarial Gain (Loss):** The difference between actual unfunded actuarial accrued liabilities and anticipated unfunded actuarial accrued liabilities -- during the period between two valuation dates. It is a measurement of the difference between actual and expected experience.

**Actuarial Present Value:** The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payments.

## DEFINITIONS OF TECHNICAL TERMS

***Amortization:*** Paying off an interest-discounted amount with periodic payments of interest and (generally) principal -- as opposed to paying off with a lump sum payment.

***Credited Projected Benefit:*** The portion of a member's projected benefit attributable to service before the valuation date - allocated based on the ratio of accrued service to projected total service and based on anticipated future compensation.

***Normal Cost:*** The portion of the actuarial present value of future benefits that is assigned to the current year by the actuarial cost method. Sometimes referred to as "current service cost."

***Unfunded Actuarial Accrued Liabilities:*** The difference between actuarial accrued liabilities and valuation assets. Sometimes referred to as "unfunded past service liability" or "unfunded supplemental present value."

Most retirement systems have unfunded actuarial accrued liabilities. They arise each time new benefits are added and each time an actuarial loss occurs.

The existence of unfunded actuarial accrued liabilities is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial accrued liabilities do not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial accrued liabilities and the trend in their amount (after due allowance for devaluation of the dollar).

January 2, 2008

Mr. Paul Lutomski  
City-County Building  
555 South 10th Street  
Lincoln, Nebraska 68508

Dear Paul:

Enclosed are 20 copies of the actuarial valuation as of August 31, 2007 of the City of Lincoln Police and Fire Pension Fund.

Please do not hesitate to call if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Louise Gates".

Louise M. Gates

LMG:lr  
Enclosures

cc: Mr. John Cripe (with enclosure)