

**CHARLOTTE FIREFIGHTERS'  
RETIREMENT SYSTEM  
REPORT OF ACTUARY  
ON THE VALUATION  
PREPARED AS OF JULY 1, 2002**



A Mellon Consulting Company

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October 18, 2002

Board of Trustees  
Charlotte Firefighters' Retirement System  
428 East Fourth Street  
Suite 205  
Charlotte, NC 28202

Dear Members of the Board:

We are pleased to submit herewith the results of the annual actuarial valuation of the City of Charlotte Firefighters' Retirement System prepared as of July 1, 2002. The purpose of this report is to provide a summary of the funded status of the System as of July 1, 2002, to recommend rates of contribution and to provide accounting information under Governmental Accounting Standards Board Statements No. 25 and 27 (GASB 25 and 27). While not verifying the data at source, the actuary performed tests for consistency and reasonability.

The promised benefits of the System are included in the actuarially calculated contribution rates which are developed using the entry age normal cost method. Actuarial value of plan assets is used for actuarial valuation purposes. Gains and losses are reflected in the unfunded accrued liability that is being amortized by regular annual contributions as a level percentage of payroll within a 33-year period, on the assumption that payroll will increase by 3.75% annually. Due to recent asset losses and an amortization period that already exceeds 30 years, it is likely that the next valuation, as of June 30 2002, will indicate that an employer contribution above 12.65% will be required under GASB. The assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the System and to reasonable expectations of anticipated experience under the System.

The valuation has been prepared in accordance with the parameters set forth in Statement Nos. 25 and 27 of the Governmental Accounting Standards Board. The annual required contribution (ARC) of the City under GASB for the fiscal year ending June 30, 2002 is 12.65% of payroll, which will liquidate the unfunded accrued liability over a 33-year period.

We have prepared the Schedule of Active Member Valuation Data, Schedule of Retirants and Beneficiaries Added to and Removed from Rolls, the Solvency Test and the Analysis of Financial Experience for the actuarial section of the Annual Report and the Schedule of Funding Progress and Trend Information for the financial section of the Annual Report.

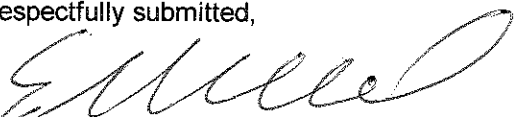
This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

In our opinion the System is operating on an actuarially sound basis. Assuming that contributions to the System are made by the City from year to year in the future at the rates recommended on the basis of the successive actuarial valuations, the continued sufficiency of the retirement fund to provide the benefits called for under the System may be safely anticipated.

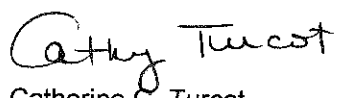
We trust that the report will meet the approval of the Board and will furnish the desired information concerning the financial condition of the Retirement System.

The Table of Contents, which immediately follows, outlines the material contained in the report.

Respectfully submitted,



Edward A. Macdonald, ASA, MAAA, FCA  
Principal, Consulting Actuary



Catherine G. Turcot  
Senior Consultant, Actuary

EAM/CGT:sr

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**CHARLOTTE FIREFIGHTERS' RETIREMENT SYSTEM  
REPORT OF ACTUARY  
ON THE VALUATION  
PREPARED AS OF JULY 1, 2002**

**SECTION I - SUMMARY OF PRINCIPAL RESULTS**

1. For convenience of reference, the principal results of the current and preceding valuations are summarized below.

<b>Valuation Date</b>	<b>July 1, 2002</b>	<b>July 1, 2001</b>
Number of active members	856	853
Annualized compensation	\$ 39,848,691	\$ 38,079,024
Retired members and beneficiaries:		
Number	411	389
Annual allowances	\$ 13,754,421	\$ 12,824,893
Number of terminated vested members	2	2
Assets:		
Market Value	\$ 224,011,606	\$ 239,904,885
Actuarial Value	254,012,864	246,613,781
Unfunded actuarial accrued liability	\$ 11,699,052	\$ 8,152,804
Amortization Period	33 years	19 years
<b>Fiscal Year Ending</b>	<b>June 30, 2003</b>	<b>June 30, 2002</b>
City annual required contribution rate (ARC):		
Normal (including expenses of 0.75%)	11.21%	11.11%
Accrued liability	<u>1.44</u>	<u>1.54</u>
Total	12.65%	12.65%
Member contribution rate	12.65%	12.65%

2. The major benefit and contribution provisions of the System as reflected in the valuation are summarized in Schedule G. There have been no change since the previous valuation.
3. Schedule E of this report outlines the full set of actuarial assumptions and methods used in the valuation. There have been no changes since the previous valuation.
4. The entry age actuarial cost method was used to prepare the valuation. Schedule F contains a brief description of the actuarial cost method.
5. Comments on the valuation results as of July 1, 2002 are given in Section IV and further discussion of the contributions is set out in Section V.

**SECTION II - MEMBERSHIP DATA**

1. Data regarding the membership of the System for use as a basis of the valuation were furnished by the Retirement System office. The valuation included 856 active members with annualized compensation totaling \$39,848,691.
2. The following table shows the number of retired members and beneficiaries as of July 1, 2002 together with the amount of their annual retirement benefits payable under the System as of that date.

**THE NUMBER AND ANNUAL BENEFITS OF  
RETIRED MEMBERS AND BENEFICIARIES  
AS OF JULY 1, 2002**

GROUP	NUMBER*	ANNUAL RETIREMENT BENEFITS
Service Retirements	335	\$ 12,187,746
Disability Retirements	61	1,344,616
Beneficiaries of Deceased Members	<u>15</u>	<u>222,059</u>
Total	411	\$ 13,754,421

\* In addition, there are two terminated members entitled to deferred vested benefits.

3. Table 1 of Schedule H shows the distribution by age and years of membership service of the number of active members included in the valuation, while Table 2 shows the number and annual benefits of retired members and beneficiaries included in the valuation, distributed by age. Table 3 shows the schedule of active member valuation data and Table 4 shows the schedule of retirants and beneficiaries added to and removed from the rolls.

### SECTION III - ASSETS

As of July 1, 2002, the total market value of assets amounted to \$224,011,606. The actuarial value of assets used for the current valuation was \$254,012,864. Schedule C shows the development of the actuarial value of assets as of July 1, 2002. Schedule D shows the allocation of the System's assets and the market value of assets for three years.

### SECTION IV - COMMENTS ON VALUATION

1. Schedule B of this report contains the valuation balance sheet which shows the present and prospective assets and liabilities of the System as of July 1, 2002. The valuation was prepared in accordance with the actuarial assumptions set forth in Schedule E and the actuarial cost method which is described in Schedule F.
2. The valuation balance sheet shows that the System has total prospective liabilities of \$367,248,775 of which \$130,540,248 is for the prospective benefits payable on account of present retired members, beneficiaries of deceased members, and terminated members entitled to deferred benefits, and \$236,708,527 is for the prospective benefits payable on account of present active members. Against these liabilities, the System has a total present actuarial value of assets of \$254,012,864 as of July 1, 2002. The difference of \$113,235,911 between the total liabilities and the total present assets represents the present value of future contributions.
3. The contributions to the System consist of normal contributions and accrued liability contributions. The valuation indicates that normal contributions at the rate of 23.11% of payroll are required under the entry age method. Of this amount, 12.65% is paid by the members and the remaining 10.46% is required by the City.
4. Prospective normal contributions at the rate of 23.11% have a present value of \$101,536,859. When this amount is subtracted from \$113,235,911 is the present value of the total future contributions to be made, there remains \$11,699,052 as the amount of unfunded accrued liability contributions. The development of the unfunded accrued liability is shown in Schedule A.

**SECTION V - CONTRIBUTIONS PAYABLE**

1. The contributions consist of a normal contribution and an accrued liability contribution as determined by actuarial valuation.
2. The normal contribution rate is calculated as the level percentage of payroll which, if applied for the average new member during the entire period of his anticipated covered service, would be required to meet the cost of all benefits payable on his behalf. On the basis of the valuation the normal contribution rate was determined to be 23.11%.
3. Section 24 of Title V of the Charlotte Firefighters' Retirement System Act states that each member shall contribute an amount equal to the Member's Compensation multiplied by 12.65%.
4. The City normal contribution rate is equal to the difference between the normal contribution rate of 23.11% and the member contribution rate of 12.65%, or 10.46% of payroll. An additional 0.75% is required for expenses, making the total City normal rate 11.21% of payroll.
5. Section 25 of Title V of the Charlotte Firefighters Retirement System Act states that the City of Charlotte shall contribute an amount equal to the Member's Compensation multiplied by 12.65%.
6. Based on a total employer rate of 12.65%, the annual accrued liability contribution rate is determined to be 1.44% of payroll. This rate will be sufficient to amortize the unfunded actuarial accrued liability within approximately 33 years following the valuation date, on the assumption that the payroll will increase 3.75% each year.



7. The following table summarizes the employer contributions which were determined by the July 1, 2002 valuation and are recommended for use.

**CITY ANNUAL REQUIRED CONTRIBUTIONS (ARC)  
FOR FISCAL YEAR ENDING JUNE 30, 2003**

CONTRIBUTION	PERCENTAGE OF ACTIVE MEMBERS' COMPENSATION
Normal (including expenses of 0.75%)	11.21%
Accrued Liability	<u>1.44</u>
Total	12.65%

**SECTION VI - ACCOUNTING INFORMATION**

1. Governmental Accounting Standards Board Statements 25 and 27 set forth certain items of required supplementary information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED PARTICIPANTS  
AS OF JULY 1, 2002**

GROUP	NUMBER
Retired participants and beneficiaries currently receiving benefits	411
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	2
Active Participants	<u>856</u>
Total	1,269

2. Another such item is the schedule of funding progress as shown below.

**SCHEDULE OF FUNDING PROGRESS**  
Dollar Amounts in Thousands

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
7/1/97	\$161,731	\$168,146	\$ 6,415	96.2%	\$26,922	23.8%
7/1/98	187,387	179,351	(8,036)	104.5	28,964	(27.7)
7/1/99	216,336	186,854	(29,482)	115.8	32,462	(90.8)
7/1/00*	235,901	239,784	3,883	98.4	33,080	11.7
7/1/01	246,614	254,767	8,153	96.8	38,079	21.4
7/1/02	254,013	265,712	11,699	95.6	39,849	29.4

All figures prior to 7/1/99 are from July 1, 1998 actuarial valuation report prepared by the prior actuary.

\* Economic and demographic assumptions were changed as of July 1, 2000 due to an experience review. In addition, the asset valuation method was changed.

3. Following is the calculation of the annual pension cost and net pension obligation for the fiscal year ending June 30, 2002.

**Annual Pension Cost and Net Pension Obligation for Fiscal Year Ending 6/30/02**

(a) Employer annual required contribution	\$ 5,062,000
(b) Interest on net pension obligation	(530,000)
(c) Adjustment to annual required contribution	<u>492,000</u>
(d) Annual pension cost (a) + (b) + (c)	\$ 5,024,000
(e) Employer contributions made for fiscal year ending 6/30/02	<u>5,062,000</u>
(f) Increase (decrease) in net pension obligation (d) - (e)	\$ (38,000)
(g) Net pension obligation beginning of fiscal year	<u>(6,845,000)</u>
(h) Net pension obligation end of fiscal year (f) + (g)	\$ (6,883,000)

**TREND INFORMATION**  
Dollar Amounts in Thousands

Year Ending	Annual Pension Cost (APC)	Percentage Of APC Contributed	Net Pension Obligation (NPO)
June 30, 2000	\$ (15)	N/A	\$(7,848)
June 30, 2001	5,540	81.9%	(6,845)
June 30, 2002	5,024	100.8	(6,883)

4. The annual required contribution (ARC) as a percentage of payroll, determined in accordance with the parameters of GASB 25/27, is shown below.

**2002/2003 FISCAL YEAR  
EMPLOYER ANNUAL REQUIRED CONTRIBUTION (ARC)  
BASED ON THE VALUATION AS OF JULY 1, 2002**

<b>EMPLOYER ANNUAL REQUIRED CONTRIBUTION (ARC)</b>	
Normal (includes expenses)	11.21%
Accrued liability	<u>1.44</u>
Total	12.65%

5. Additional information as of July 1, 2002 follows.

Valuation date	7/1/02
Actuarial cost method	Entry age
Amortization method	Level dollar open
Remaining amortization period	33 years
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return*	7.75%
Projected salary increases*	4.75-7.75%
*Includes inflation at	3.75%
Cost-of-living adjustments	N/A

**SECTION VII – EXPERIENCE**

1. As an aid to the Board in adopting service and mortality tables, the actuary prepared an experience investigation for the five-year period ending June 30, 1999. The valuation was based on the assumptions adopted by the Board at the April 27, 2000 Board meeting as a result of that investigation.
  
2. The following table shows the estimated change in the unfunded accrued liability from various factors that resulted in an increase of \$3,546,000 in the unfunded accrued liability from \$8,153,000 to \$11,699,000 during the fiscal year ending July 1, 2002.

**ANALYSIS OF FINANCIAL EXPERIENCE - CHANGE IN UNFUNDED ACCRUED LIABILITY**  
(in thousands of dollars)

Item	Amount of Increase/ (Decrease)
Interest (7.75%) added to previous unfunded accrued liability	631.8
Accrued Liability Contribution	(616.2)
Recognized Asset Loss	7,500.3
Liability (Gain)/ Loss	(2,552.6)
Salary Increases	(1,417.3)
Amendments	0
Asset Method Change	0
Assumption Changes	0
Increase In Unfunded Accrued Liability	3,546.0

**SCHEDULE A****DEVELOPMENT OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY  
AS OF JULY 1, 2002**

(1)	Present value of prospective benefits:	
(a)	Present active members	\$ 236,708,527
(c)	Present retired members, beneficiaries and former members entitled to deferred vested benefits	<u>130,540,248</u>
(c)	Total	\$ 367,248,775
(2)	Present value of future System and member normal contributions before expenses	<u>101,536,859</u>
(3)	Actuarial accrued liabilities 1(c) – (2)	\$ 265,711,916
(4)	Actuarial value of assets	<u>254,012,864</u>
(5)	Unfunded actuarial accrued liability (3) – (4)	\$ 11,699,052

SCHEDULE B - VALUATION BALANCE SHEET AND SOLVENCY TEST

## VALUATION BALANCE SHEET

RESULTS OF THE VALUATION AS OF JULY 1, 2002  
 SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES  
 OF THE CHARLOTTE FIREFIGHTERS' RETIREMENT SYSTEM

ACTUARIAL LIABILITIES

Present value of prospective benefits payable on account of present retired members, beneficiaries of deceased members, and terminated members entitled to deferred benefits	\$ 130,540,248
Present value of prospective benefits payable on account of present active members	\$ <u>236,708,527</u>
Total liabilities	\$ <u>367,248,775</u>

PRESENT AND PROSPECTIVE ASSETS

Actuarial value of assets	\$ 254,012,864
Present value of future contributions	
City and member normal contributions	101,536,859
Unfunded accrued liability contributions	<u>11,699,052</u>
Total prospective contributions	\$ 113,235,911
Total assets	\$ <u>367,248,775</u>

**SCHEDULE B (cont'd)****SOLVENCY TEST  
(\$ millions)**

Valuation Date	Aggregate Accrued Liabilities For			Reported Assets	Portion of Accrued Liabilities Covered by Reported Asset		
	(1) Active Member Contributions	(2) Retirants And Beneficiaries	(3) Active Members (Employer Financed Portion)		(1)	(2)	(3)
7/1/02	\$39.7	\$130.5	\$95.5	\$254.0	100%	100%	87.7%
7/1/01	37.7	121.1	96.0	246.6	100	100	91.5
7/1/00*	34.0	123.8	82.0	235.9	100	100	95.2
7/1/99	32.3	87.9	66.7	216.3	100	100	100.0
7/1/98	31.1	79.6	68.7	187.4	100	100	100.0
7/1/97	29.4	73.6	65.1	161.7	100	100	90.2
7/1/96	28.1	68.3	64.8	142.9	100	100	71.7
7/1/95	26.1	63.7	61.9	129.0	100	100	63.4
7/1/94	24.8	59.3	58.7	117.4	100	100	56.8
7/1/93**	22.3	59.5	54.8	109.7	100	100	51.0

All figures prior to July 1, 1999 are from July 1, 1998 actuarial report prepared by the prior actuary.

\* Economic and demographic assumptions were changed as of July 1, 2000 due to an experience review. In addition, the asset valuation method was changed.

\*\* Assumptions were changed beginning with the July 1, 1993 valuation to reflect recognition of unused sick and vacation time. The salary increase assumption was lowered from 6.0% to 5.0%.

SCHEDULE CDEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS

(1)	Actuarial Value of Assets as of July 1, 2001	\$ 246,613,781
(2)	2001/2002 Net Cash Flow	
	(a) Contributions	10,176,000
	(b) Disbursements	<u>14,232,000</u>
	(c) Net Cash Flow	
	(2)a - (2)b	(4,056,000)
(3)	Expected Investment Return [(1) x .0775] + [(2)c x .03875]	18,955,398
(4)	Expected Actuarial Value of Assets as of July 1, 2002 (1) + (2)c + (3)	261,513,179
(5)	Market Value of Assets as of July 1, 2002	224,011,606
(6)	Excess of Market Over Expected (5) - (4)	(37,501,573)
(7)	20% Adjustment Towards Market .20 x (6)	(7,500,315)
(8)	Actuarial Value of Assets as of July 1, 2002 (4) + (7)	\$ 254,012,864
(9)	Rate of Return on Market Value	(4.98%)
(10)	Rate of Return on Actuarial Value	4.68%



**SCHEDULE D**  
**ASSET INFORMATION**

<b>Investment Managers</b>	<b>Type of Investment</b>	<b>Percent Allocation</b>
Evergreen Investment Management Co. LLC	Value Equity – Large Capitalization	14.1%
Boston Partners	Value Equity – Mid Capitalization	8.2
Investment Counselors of Maryland	Value Equity – Small Capitalization	4.4
Alliance Capital Management	Growth Equity – Large Capitalization	10.0
Cadence Capital Management	Growth Equity – Mid Capitalization	7.1
Essex	Growth Equity – Small Capitalization	1.4
Morgan Stanley Dean Witter	International Equity Fund	13.9
	Emerging Markets Equity Fund	1.2
T. Rowe Price	International Equity Fund	1.8
Metropolitan Life	Real Estate Equity Fund	4.1
Banc of America Capital Management	Fixed Income	12.5
State Street Global Advisors	Fixed Income Index Fund	14.0
Baring Asset Management	International Fixed Income Fund	5.3
	Emerging Debt Fund	0.5
Internal Management	Money Market	1.5

	<b>June 30, 2002</b>	<b>June 30, 2001</b>	<b>June 30, 2000</b>
Cash	\$ (9,186,275)	\$ 457,131	\$ 218,141
Cash Equivalents	15,066,403	6,978,547	8,493,473
Fixed Income Investments	58,935,800	55,837,070	51,351,556
Equity Investments	158,815,054	176,437,942	199,908,775
Other	373,334	83,678	90,321
Accrued Income	409,094	408,997	501,164
Accrued Contributions	118,234	105,933	95,494
Accrued Liabilities/Expenses	<u>(520,037)</u>	<u>(404,413)</u>	<u>(445,797)</u>
<b>Total Market Value</b>	<b>\$ 224,011,606</b>	<b>\$ 239,904,885</b>	<b>\$ 260,213,127</b>

SCHEDULE E**OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS**

The assumptions and methods used in the valuation were selected by the Actuary and adopted by the Board April 27, 2000 unless otherwise indicated.

INVESTMENT RATE OF RETURN: 7.75% per year, compounded annually. (adopted 10-26-2000)

SALARY INCREASES: Representative values of the assumed annual rates of salary increases (adopted 10-26-2000) are as follows:

<u>Age</u>	<u>Rate*</u>
20	7.75%
25	7.75
30	7.75
35	7.25
40	6.25
45	4.75
50	4.75
55	4.75

\* Includes inflation of 3.75%

SEPARATIONS FROM ACTIVE SERVICE: For death rates, the UP 1994 Male Table was used. Representative values of the assumed annual rates of separation from active service are as follows:

<u>Age</u>	<u>Annual Rate of</u>		
	<u>Withdrawal</u>	<u>Disability*</u>	<u>Death</u>
20	2.0%	0.05%	.0006%
25	2.0	0.05	.0007
30	2.0	0.09	.0009
35	2.0	0.23	.0009
40	1.7	0.41	.0012
45	0.8	0.61	.0017
50		1.00	.0028
55		1.00	.0048

\* 65% of the disabilities are assumed to be in the line of duty.

<u>Annual Rate of Retirement*</u>			
<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
50-54	20%	60	20%
55	20	61	20
56	20	62	20
57	20	63	20
58	20	64	20
59	20	65	100

\* An additional 30% are assumed to retire at the age when first eligible for unreduced retirement and 100% are assumed to retire after completing 30 years of membership service.

DEATHS AFTER RETIREMENT: The UP 1994 Male Table is used for the period after retirement and for dependent beneficiaries. The same table is used for the period after disability set forward five years.

EXPENSES: 0.75% of payroll.

PERCENT MARRIED: 100% of active members are assumed to be married with the male three years older than his spouse.

ASSETS: Actuarial value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected actuarial value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected actuarial value. (adopted 10-26-2000)

VALUATION METHOD: Entry age actuarial cost method (adopted 7-1-98). See Schedule F for a brief description of this method.

**SCHEDULE F****ACTUARIAL COST METHOD**

1. The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future (currently 7.75 per cent), of each member's expected benefits at retirement or death is determined, based on age, service and sex. The calculations take into account the probability of a member's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his terminating with a service, disability or survivor's benefit. The present value of the expected benefits payable on account of the active members is added to the present value of the expected future payments to retired members and beneficiaries to obtain the present value of all expected benefits payable from the System on account of the present group of members and beneficiaries.
2. The employer contributions required to support the benefits of the System are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.
3. The normal contribution is determined using the entry age actuarial cost method. Under this method, a calculation is made to determine the level percentage of payroll which, if applied for the average new member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.
4. The unfunded accrued liability is determined by subtracting the present value of prospective employer normal contributions and member contributions, together with the current actuarial value of assets held, from the present value of expected benefits to be paid from the System.

SCHEDULE G**SUMMARY OF MAIN SYSTEM PROVISIONS  
AS INTERPRETED FOR VALUATION PURPOSES**

Member	An employee of the Charlotte Fire Department who is subject to the provisions of the Civil Service Act.
Membership Service Credit	Service for all periods of employment with the Charlotte Fire Department for which contributions have been paid.
Final Average Salary	A member's average monthly compensation for any 2 consecutive years within the last 5 years of membership service.
Accrued Benefit	The monthly amount of retirement benefits earned by a member as of any date computed on his Final Average Salary and Membership Service Credit at that date.
Service Retirement Benefit	
Eligibility	Age 50 and 25 years of membership service credit, age 60 and 5 years of membership service credit or 30 years of membership service credit.
Benefit	Monthly benefit is 2.6% of final average salary multiplied by years of membership service credit. Salary in the final year includes cashed-in vacation and sick days. The minimum monthly benefit is \$902.75.
Early Retirement Benefit	
Eligibility	25 years of membership service credit.
Benefit	Accrued benefit reduced by 3% for each year member is under age 50.
In the Line of Duty Disability Retirement Benefit	
Eligibility	No requirements.
Benefit	78% of final average salary or normal retirement benefit if greater.
Not in the Line of Duty Disability Retirement Benefit	
Eligibility	10 years of service.
Benefit	39% of final average salary plus 1.95% of such salary for each year of membership service credit in excess of 10 years, not less than \$902.75 per month.

Deferred Vested  
Retirement Benefit

Eligibility

5 years of service. Member contributions not withdrawn.

Benefit

Accrued benefit payable at age 60. A member may choose a refund of contributions with 4% interest in lieu of this benefit.

Termination Benefit

If a member is terminated with less than 5 years of membership service credit, he is entitled to a return of his accumulated contributions.

Death Benefit

If a member dies in service, his beneficiary is entitled to a return of the member's accumulated contributions, plus those contributions made by the City on his behalf, plus interest of 4% per year. May elect to receive actuarial equivalent monthly benefit under the 66-2/3% Joint and Survivor Option.

Optional Forms of Benefit

- (1) 10 year certain and life annuity.
- (2) 100%, 75%, 66-2/3% or 50% joint and survivorship annuity.
- (3) Joint and survivorship annuity with a pop-up provision.

Contributions

The City and the members each contribute 12.65%.

**SCHEDULE H****TABLE 1****AGE – SERVICE TABLE**

Distribution of Active Members as of July 1, 2002 by Age and Service Groups

Attained Age	Completed Years of Service									Total
	0	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	> 35	
24 & under	18	36								54
Total Pay	533,094	1,187,297								1,720,391
Avg. Pay	29,616	32,980								31,859
25 to 29	10	79	30							119
Total Pay	306,992	2,667,438	1,252,190							4,226,620
Avg. Pay	30,699	33,765	41,740							35,518
30 to 34	5	59	67	35	3					169
Total Pay	154,993	2,081,689	2,964,818	1,842,852	159,668					7,204,021
Avg. Pay	30,999	35,283	44,251	52,653	53,223					42,627
35 to 39	1	30	32	65	41	1				170
Total Pay	29,203	1,054,412	1,433,075	3,339,048	2,254,222	47,567				8,157,527
Avg. Pay	29,203	35,147	44,784	51,370	54,981	47,567				47,985
40 to 44		4	15	41	89	12				161
Total Pay		137,487	655,394	2,045,991	4,821,041	677,434				8,337,348
Avg. Pay		34,372	43,693	49,902	54,169	56,453				51,785
45 to 49			9	11	31	77	8			136
Total Pay			441,268	568,779	1,647,113	4,330,323	482,336			7,469,820
Avg. Pay			49,030	51,707	53,133	56,238	60,292			54,925
50 to 54				4	2	20	11			37
Total Pay				219,558	88,447	1,163,595	646,715			2,118,315
Avg. Pay				54,890	44,224	58,180	58,792			57,252
55 to 59				2	2		1	1	1	7
Total Pay				86,291	88,447		62,155	43,145	73,349	353,388
Avg. Pay				43,145	44,224		62,155	43,145	73,349	50,484
60 to 64				1				1	1	3
Total Pay				43,145				93,059	125,058	261,262
Avg. Pay				43,145				93,059	125,058	87,087
<b>Total</b>	<b>34</b>	<b>208</b>	<b>153</b>	<b>159</b>	<b>168</b>	<b>110</b>	<b>20</b>	<b>2</b>	<b>2</b>	<b>856</b>
Total Pay	1,024,281	7,128,324	6,746,745	8,145,665	9,058,939	6,218,920	1,191,206	136,204	198,407	39,848,691
Avg. Pay	30,126	34,271	44,096	51,231	53,922	56,536	59,560	68,102	99,204	46,552

**TABLE 2**  
**NUMBER OF RETIRED MEMBERS AND BENEFICIARIES**  
**AND THEIR BENEFITS BY AGE**

<u>Attained Age</u>	<u>Number Of Members</u>	<u>Total Annual Benefits</u>	<u>Average Annual Benefit</u>
50 & Under	17	\$ 384,437	\$ 22,614
51-55	95	3,512,425	36,973
56-60	89	3,141,377	35,296
61-65	61	2,442,688	40,044
66-70	73	2,399,181	32,865
71-75	24	670,116	27,922
76-80	32	784,922	24,529
Over 80	20	419,275	20,964
Total	411	\$ 13,754,421	\$ 33,466

**TABLE 3**  
**SCHEDULE OF ACTIVE MEMBER VALUATION DATA**

<u>Valuation Date</u>	<u>Number Prior Year</u>	<u>Exits</u>	<u>New Entrants</u>	<u>Number Current Year</u>	<u>Annual Payroll</u>	<u>Annual Average Pay</u>	<u>% Increase in Average Pay</u>
7/1/02	853	31	34	856	\$39,848,691	\$46,552	4.3%
7/1/01	780	15	88	853	38,079,024	44,641	5.3
7/1/00	783	35	32	780	33,079,899	42,410	2.3
7/1/99	778	31	36	778	32,462,456*	41,459	11.4
7/1/98	749	30	59	778	28,963,868	37,229	3.6
7/1/97	721	29	57	749	26,922,035	35,944	-0.6
7/1/96	709	25	37	721	26,072,828	36,162	3.7
7/1/95	N/A	N/A	N/A	709	24,723,956	34,872	4.7
7/1/94	N/A	N/A	N/A	724	24,120,362	33,315	2.4
7/1/93	N/A	N/A	N/A	721	23,448,153	32,522	0.0

Results prior to the 7/1/99 valuation were provided by the prior actuary.

\* Reflects all pay raises granted to firefighters effective July 7, 1999.



**TABLE 4**  
**SCHEDULE OF RETIRED MEMBERS AND BENEFICIARIES**  
**ADDED TO AND REMOVED FROM ROLLS**

Year Ended	Rolls – Beginning of Year		Added to Rolls		Removed from Rolls		Rolls – End of Year		% Increase in Annual Allowances	Average Annual Allowances
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances		
7/1/02	389	\$12,824,893	29	\$1,202,320	7	\$273,092	411	\$13,754,121	7.2	\$33,466
7/1/01	394	13,000,973**	11	287,966	16	464,046	389	12,824,893	(1.4)	32,969
7/1/00	377	9,946,747*	28	3,260,650**	11	206,424	394	13,000,973**	30.7	32,997
7/1/99	358	8,882,634	26	950,857	7	119,640	377	9,946,747*	12.0	26,384
7/1/98	337	8,199,997	24	762,314	3	79,677	358	8,882,634	8.3	24,812
7/1/97	321	7,602,561	22	698,791	6	101,335	337	8,199,997	7.9	24,332
7/1/96	307	7,046,272	19	616,589	5	60,300	321	7,602,561	7.9	23,684
7/1/95	298	6,552,767	18	613,085	9	119,580	307	7,046,272	7.5	22,952
7/1/94	N/A	N/A	N/A	N/A	N/A	N/A	298	6,552,767	0.4	21,989
7/1/93	N/A	N/A	N/A	N/A	N/A	N/A	301	6,524,697	30.1	21,677

Results prior to the 7/1/99 valuation were provided by the prior actuary.

- \* Includes 8.33% benefit adjustment effective July 1, 1998 for members retired prior to July 1, 1989.
- \*\* Includes ad hoc benefit adjustments granted since the previous valuation.