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City of Hartford Municipal Employee's Retirement Fund (MERF)

Actuarial Survey

July 1, 2003

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Table of Contents

Letter

Section		Page
I	Actuarial Costs for Maintaining MERF	1
П	Actuarial Balance Sheet	3
Ш	Comments on Valuation Results	5
IV	Accounting Information	7
V	Hartford MERF- Summary of Principal Provisions of Pension Plan	10
VI	Actuarial Cost Method	17
VII	Actuarial Assumptions	18
VШ	Membership Data	21
IX	City of Hartford Section 415(m) Fund	31

Section I

Actuarial Costs for Maintaining MERF

			Police	Firefighters	Board of Education	General Government	Total Membership
A	ctive Membership						
	umber of Employees nnual Payroll (000)	(1)	432 \$29,300	371 \$22,584	980 \$33,636	544 \$24,819	2,327 \$110,339
N	ormal Actuarial Costs						
A.	Actuarial Present Value of Future Benefits (000)						
	Active Members Terminated Non-Vested Members Terminated Vested Members Retired Members Old Plans COLA 1987/1990/1997/1999/2001 Total		\$134,087 374 531 186,890 <u>1,566</u> \$323,448	\$115,059 314 288 162,571 	\$89,095 273 1,403 85,703 1,743 \$178,217	\$103,230 359 4,051 214,291 308 \$322,239	\$441,471 1,320 6,273 649,455 5,128 \$1,103,647
В.	Valuation Assets (Adjusted Value) (000)		\$307,834	\$276,469	\$118,514	\$265,572	\$968,389*
C.	Actuarial Present Value of Future Employee Contributions (000)		\$16,528	\$16,926	\$13,719	\$9,556	\$56,729
D.	Actuarial Present Value of Future Normal Costs (A) - (B) - (C) (000)		(\$914)	(\$13,652)	\$45,984	\$47,111	\$78,529
E.	Actuarial Present Value of Future Salaries (000)		\$226,691	\$220,958	\$357,631	\$196,168	\$1,001,448
F.	Normal Actuarial Costs as Percentage of Payroll						
	Service Pension (D)/(E) Disability Pension	(2) (3)	-0.40% 3.00%	-6.18% 3.00%	12.86% 	24.02% 	
	Total Normal Cost Percent Payable by City		2.60%	-3.18%	13.86%	25.02%	•

^{*} Includes \$3.0 million receivable from CMERS.

- (1) Salaries have been adjusted for groups in negotiations by 3% per year for the period of each open contract, and non-bargaining groups by 3% per year for one full fiscal year from the measurement date.
- (2) Normal Actuarial Costs as level percentage of future payrolls (including overtime) for funding actuarial present values required for all future service pensions, survivor's benefits thereon, and refunds on terminations.
- (3) Annual term Normal Actuarial Costs for establishing actuarial liabilities for new disability pensions, and survivor benefits thereon, at time pensions are approved.
- (4) Social Security (F.I.C.A.) taxes are also paid by the City and Employees, except for primarily Police and Firefighters. The tax rate is 7.65% for 2003 and 7.65% for 2004 and is applied to earnings below the wage base. For 2003 the wage base is \$87,000, increasing to \$87,900 for 2004. All employees hired on or after April 1, 1986 must be covered by the Medicare portion of the Social Security Act. The Medicare tax rate is 1.45%.

Section II

Actuarial Balance Sheet as of July 1, 2003

Valuation Assets on July 1, 2003 (Adjusted Value)

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Investments held by City Treasurer (includes Cash and Accounts Payable)	\$ 11,594,000
Assets held by Banks as Investment Managers and Custodians at Adjusted Value (1)	946,141,000
Estimated Experience Assets of One Insurance Company (including Reserves for Purchased Annuities)	7,654,000
Receivable from CMERS*	3,000,000
Total Valuation Assets (Adjusted Value) July 1, 2003	\$968.389.000

Actuarial Liabilities on July 1, 2003

Actuarial Liability for Inactive Members (2)

Regular Retirement Annuities	\$566,202,000 (3)	
Disability Retirement Annuities	63,193,000	
Survivor-Only Annuities	25,188,000	
Deferred Benefits for Terminated Non-Vested Members	1,320,000	
Deferred Benefits for Terminated Vested Members	6,273,000	
		662,176,000
Actuarial Liability for Future Retirement Benefits for		
Currently Active Members (4)		306,213,000
Total Actuarial Liabilities		\$968,389,000

- (1) See Actuarial Assumptions for explanation of Adjusted Value of Valuation Assets. Cost basis and market value are shown on following page.
- (2) Includes actuarial liabilities for retiree Cost of Living Adjustment (COLA) effective July 1, 1987, July 1, 1990, July 1, 1997, July 1, 1999, and July 1, 2001 for both MERF and the unfunded plans (PBF, FRF, and RAF). Unfunded plans COLA actuarial liability included is \$2,792,000 for 1987 COLA, \$741,000 for 1990 COLA, \$1,237,000 for 1997 COLA, \$247,000 for 1999 COLA, and \$111,000 for 2001 COLA.
- (3) Includes actuarial liabilities for annuities purchased from insurance companies revalued on the actuarial basis used for this survey.
- (4) The Actuarial Present Value of Future Retirement Benefits for currently active members is \$441,471,000. This includes the actuarial accrued liability for Local 1716 members who transferred to the State Plan on July 1, 1986 and for Local 566 members who transferred on August 1, 1988. The difference between this Actuarial Present Value and the Actuarial Liability for current members will be funded by future City and Employee Contributions.
 - * Connecticut Municipal Employees' Retirement System (CMERS). Estimated value of assets expected to be transferred from CMERS to this plan for members whose pension benefits were transferred prior to July 1, 2003.

Assets as of July 1, 2003

Investment Managers	Cost Basis	Market Value
Treasurer's Account (includes Cash and Accounts Payable)	\$ 11,598,000	\$ 10,851,000
Citibank - Advisory Accounts	826,487,000	885,544,000
Insurance Carrier*	6,533,000	7,164,000
Total	\$844,618,000	\$903,559,000
Receivable from CMERS**	3,000,000	3,000,000
Grand Total	\$847,618,000	\$906,559,000

^{*} Aetna Life

^{**} Connecticut Municipal Employees' Retirement System (CMERS). Estimated value of assets expected to be transferred from CMERS to this plan for members whose pension benefits were transferred prior to July 1, 2003.

Section III

Comments on Valuation Results

The recommended contribution rates are Normal Actuarial Costs of 2.60% for Police, (3.18%) for Firefighters, 13.86% for Board of Education and 25.02% for General Government. The Normal Actuarial Cost ratios should be applied to the appropriate membership payrolls.

Changes in Contribution Rates

Contribution rates have increased for all groups except for Firefighters as compared to last year primarily due to investment losses and Early Retirement Incentive only partially offset by the change of Actuarial Assumptions, combined with steady increases in benefit payments caused by several years of pension enhancements. Please note that the salaries used were adjusted for groups which are currently in negotiations by 3% per year for the period of each open contract and non-bargaining groups by 3% per year for one full fiscal year from the measurement date. Also, for Police under age 45, overtime has been limited to no more than 20% of base pay as the actual overtime rate in 2003 is not expected to continue.

Adjusted Value of Assets

The adjusted value of assets includes \$3 million in funds assumed owed the MERF from the State of Connecticut Municipal Employees' Retirement System (CMERS). The \$3 million is the estimated value of assets expected to be transferred from CMERS to this plan for members whose pension benefits were transferred prior to July 1, 2003.

Investment Returns

According to the Funds Evaluation Services of SEI, State Street, and Russell/Mellon, the combined pension fund had the following investment returns (gross of fees):

12-Month Period Ending	Rate of Return	12-Month Period Ending	Rate of Return
June 30, 1990	10.0%	June 30, 1997	20.7%**
December 31, 1990	1.6%	December 31, 1997	21.6%**
June 30, 1991	8.3%	June 30, 1998	18.0%**
December 31, 1991	19.4%	December 31, 1998	13.7%**
June 30, 1992	10.1%	June 30, 1999	10.4%**
December 31, 1992	9.4%	December 31, 1999	12.1%**
June 30, 1993	12.1%	June 30, 2000	8.8%**
December 31, 1993	9.3%	December 31, 2000	3.2%**
June 30, 1994	2.9%	June 30, 2001	-2.1%***
December 31, 1994	0.9%	December 31, 2001	-2.7%***
June 30, 1995	15.1%	June 30, 2002	-3.1%***
December 31, 1995	21.0%	December 31, 2002	-6.7%***
June 30, 1996	14.9%	June 30, 2003	4.6%***
December 31, 1996	13.1%*	December 31, 2003	21.3%***

^{*} Sum of first 9 months by SEI of 8.0% and last 3 months by State Street of 5.1%.

^{** 12} months of State Street.

^{***} Starting January 1, 2001 provided by Russell/Mellon analytical services.

Please note that if the last three fiscal years' (2000-2001, 2001-2002, and 2002-2003) gross rates of return on market value are compounded, the average annual rate of return was -0.3%. For the three previous fiscal years (1999-2000, 2000-2001, and 2001-2002), the gross average annual rate was 1.1%. On a calendar year basis, the 2001, 2002, and 2003 and the 2000, 2001, and 2002 gross average annual rates were 3.3% and -2.2%, respectively (4.0% for average of 1999, 2000, and 2001).

The net return on adjusted assets for 2000-2001, 2001-2002, and 2002-2003 were estimated to be 8.1% and 3.0%, and 5.8% respectively. Investment expenses for 2000-2001, 2001-2002, and 2002-2003 have been estimated to be 0.34%, 0.36%, and 0.28% of adjusted assets, respectively.

Please note adjusted assets are used to determine City contribution rates. Under the basis for determining adjusted assets, each year's gains are distributed over four years in order to moderate fluctuations and their impact on the plan's contribution rate. The gains not recognized in the adjusted asset total this year will be included in following years.

1999 Experience Study

This study reflects the application of the results of the 1999 Experience Study of December 17, 1999. It is recommended that the City have another review of actual and expected experience in 2005 in order to update the actuarial assumptions at that time.

Membership

The active membership of MERF as of October 1, 2003, was 2,327, a decrease of 192 from the total of 2,519 last year. Police membership increased by 7, Firefighters increased by 10, Board of Education decreased by 117, and General Government decreased by 92.

Status of Fund

Please note the comments on the sound financial condition of the MERF fund found in the letter of this report.

Change of Actuarial Assumptions

Please refer to Section VII Actuarial Assumptions (pages 18-20) for a list of new and old actuarial assumptions.

Section IV

Accounting Information

A. FASB Statements No. 35

The following information is based on Statement No. 35 (Accounting and Reporting by Defined Benefit Pension Plans) of the Financial Accounting Standards Board. The figures below are the actuarial present value of plan benefits accumulated through July 1, 2003. For retired members and survivors, this includes the actual benefit they are receiving including the COLA's effective July 1, 1987, July 1, 1990, July 1, 1997, July 1, 1999, and July 1, 2001. It also includes the COLA for retirees and survivors under the three unfunded plans, PBF, FRF, and RAF. Deferred benefits for members who terminated in a vested status, accumulated contributions of members who terminated in a non-vested status, and accrued benefits for Locals 1716 and 566, net of amortization payments to Connecticut Municipal Employees' Retirement System (CMERS), are also included.

For active members, we have calculated the benefits accumulated for service to July 1, 2003 and have considered the compensation over the appropriate averaging period ending on July 1, 2003. In computing actuarial present values, the regular valuation assumptions outlined in Section VII are used. There is no projection of future salary increases.

The asset figure is the market value of assets and is less than the adjusted asset figure used in the valuation. The adjusted asset figure is found in Section Π , Actuarial Balance Sheet.

Actuarial Present Value of Accumulated Plan Benefits as of July 1, 2003

Vested (including employee contributions for non-vested members) Non-Vested	\$853,184,000 <u>7,261,000</u>
Total	\$860,445,000
Net Assets at Market Value Available for Benefits as of July 1, 2003	\$903,559,000*

^{*} Excludes \$3 million receivable from CMERS.

B. GASB Statement No. 5

The following information provided is based on Statement No. 5 of the Governmental Accounting Standards Board on "Disclosure of Pension Information by Public Employee Retirement Systems and State and Local Governmental Employees".

The amount shown below as "pension benefit obligation" is a standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases estimated to be payable in the future as a result of employee service to date. The measure is the actuarial present value of credited projected benefits and is intended to help users assess the plan's funding status on a going-concern basis, assess progress made in accumulating sufficient assets to pay benefits when due, and make comparisons among plans. The measure is independent of the actuarial funding method used to determine contributions to the plan.

The Pension Benefit Obligation was based on the actuarial valuation at July 1, 2003. Significant actuarial assumptions used include (a) rate of return on the investment of present and future assets of 8 percent per year compounded annually, (b) projected salary increase of 3 percent per year compounded annually, attributable to inflation*, (c) additional projected salary increases which vary by age and group, attributable to promotion or merit, and (d) no post-retirement benefit increases.

At July 1, 2003 the excess of Pension Benefit Obligation over assets (Cost Basis) was \$77,640,000 as follows:

Pension Benefit Obligation:

Retirees and beneficiaries currently receiving benefits (1)	\$654,583,000
Terminated employees not yet receiving benefits	7,593,000
Current employees:	
Accumulated employee contributions including allocated investments earnings	55,418,000
Employer-Financed Vested Employees (2) Employer-Financed Non-Vested Employees	181,527,000 23,137,000
Total Pension Benefit Obligation	\$922,258,000
Net assets available for benefits, Cost Basis (Market Value \$912,621,000)**	\$844,618,000**
Excess of Pension Benefit Obligation over assets	\$77,640,000

- (1) Includes \$2,792,000 for Old Plans COLA effective 7/1/1987, \$741,000 for Old Plans COLA effective 7/1/1990, \$1,237,000 for Old Plans COLA effective 7/1/1997, \$247,000 for Old Plans COLA effective 7/1/1999, and \$111,000 for Old Plans COLA effective 7/1/2001.
- (2) Includes \$14,194,000 for Locals 1716 and 566 now in CMERS.
 - * For Police, overtime for those under age 45 was limited to 20% of base pay. No salary scale for one year.
- ** Excludes \$3 million receivable from CMERS.

C. GASB Statements No. 25 and 27

The following information is based on the Governmental Accounting Standards Board Statement No. 25 on "Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans" and Statement No. 27 on "Accounting for Pensions by State and Local Governmental Employers".

Schedule of Employer Contributions

			Net		
	Annual		Annual		Net
Year Ended June 30	Required	Percentage Contributed	Required	Miscellaneous **	Percentage Contributed
Teal Ended June 30	Countingen	Contributed	Countinum	Miscenaneous	Contributed
1998	\$9,019,116	100%	\$8,563,860	\$455,256	100%
1999	8,984,312	100%	8,576,940	407,372	100%
2000	7,301,471	100%	7,036,870	264,601	100%
2001	759,283	100%	470,000	289,283	100%
2002	332,806	100%	0	332,806	100%
2003	2,463,804	100%	2,196,698	267,106	100%

^{*} City's cash contribution to MERF.

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets * (a)	Actuarial Accrued Liability (AAL) # (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a÷b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)÷c)
7/1/1998	\$772,757,000	\$716,332,000	\$(56,425,000)	107.9%	\$106,825,000	-52.8%
7/1/1999	858,805,000	753,379,000	(105,426,000)	114.0%	110,398,000	-95.5%
7/1/2000	944,652,000	805,453,000	(139,199,000)	117.3%	112,921,000	-123.3%
7/1/2001	978,884,000	865,570,000	(113,314,000)	113.1%	119,609,000	-94.7%
7/1/2002	957,390,000	880,444,000	(76,946,000)	108.7%	117,498,000	-65.5%
7/1/2003	965,389,000	922,258,000	(43,131,000)	104.7%	110,339,000	-39.1%

During the fiscal year ending June 30, 1997, the City implemented the provisions of Governmental Accounting Standards Board (GASB) Statement No. 25, "Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans", and elected to implement early the provisions of GASB Statement No. 27, "Accounting for Pensions by State and Local Governmental Employers". The information required for completion of GASB No. 25 and No. 27 for the fiscal year ending June 30, 2003 was prepared based upon the previous year's actuarial valuation (2002 Actuarial Survey) and additional information for fiscal year 2002-2003. It was contained in a separate report which was sent to the City's auditors, Scully & Wolf, LLP on January 6, 2004.

The information required for completion of GASB No. 25 and No. 27 for the fiscal year ending June 30, 2004 will be prepared based upon the current year's actuarial valuation (2003 Actuarial Survey) and additional information for fiscal year 2003-2004. It will be contained in a separate report and submitted to the City's auditors.

^{**} Funds transferred from State of Connecticut's Connecticut Municipal Employees' Retirement System (CMERS) and Aetna annuity payments.

^{*} Excludes receivable from CMERS.

[#] Liability shown on a PBO basis.

Sect. V

Hartford MERF - Summary of Principal Provisions of Pension Plan July 1, 2003

PROVISIONS FOR:

POLICE OFFICERS AND FIREFIGHTERS

Retirement Pensions:

Firefighters hired before July 1, 2000: 2.65% of Final Average Pay (rate of weekly pay immediately preeding retirement times 52, plus for firefighters who work a 42 hour week, holiday pay) multiplied by years of service up to 20 plus a decreasing percentage for years over 20.

Firefighters hired after June 30, 2000: 2.5% of Final Average Pay (rate of weekly pay immediately preceding retirement times 52, plus for firefighters who work a 42 hour week, holiday pay) multiplied by years of service up to 20 plus 2% of Final Average Pay for years of service over 20.

Sworn Police Officers hired before July 2, 1999: 2.65% of Final Average Pay for highest 3 of last 5 years multiplied by years of service up to 20 plus a decreasing percentage for years over 20. Final Average Pay includes a provision for over-time and private duty pay.

Sworn Police Officers hired after July 1, 1999: 2.5% of Final Average Pay for highest 3 of last 5 years times years of service up to 20 plus 2% for years of service over 20.

BOARD OF EDUCATION MEMBERS

2% of Final Average Pay for highest 5 of last 10 years times years of service, with maximum benefit of 70% of Final Average Pay. Final Average pay for HFSHP and Local 2221, Hartford Federation of Paraprofessionals is based on highest 3 out of last 5 years. Benefit for Local 2221 is 2.5% of Final Average Pay multiplied by years of service up to 20 plus 2% of Final Average Pay for years of service over 20 (maximum of 10 years).

GENERAL GOVERNMENT MEMBERS

2% of Final Average Pay for highest 2 of last 5 years times years of service with maximum benefit of 70% of Final Average Benefit for CHPEA*, HMEA**, Non-bargaining (excluding Library) and MLA members is 2.5% of Final Average Pay. Non-bargaining (excluding Library) have a maximum benefit of 80% of Final Average Pay. CHPEA*, HMEA**, and MLA members have a maximum benefit of 70% of Final Average Pay (highest 2 of last 5 years). For CHPEA*, and HMEA** (who retire prior to July 1, 2000) members increase maximum benefit to 80% of Final Average Pay with sick exchange provision. Benefits for Non-bargaining who have 5year option are based on highest 5 out of last 10 years. SCG members Final Average Pay based on highest 5 out of last 10 years. SCG members have benefit reduced by 1% of average Social Security covered earnings for all years included in computation of Social Security primary benefit.

^{*}Applies to October 1, 1997 active employees only who remain in the unit and retire therefrom.

^{**}Applies to December 1, 1998 active employees only who remain in the unit and retire therefrom.

POLICE OFFICERS AND FIREFIGHTERS

GENERAL GOVERNMENT **MEMBERS**

as Non-Bargaining.

Assistant Police Chief, Police Chief,

Assistant Fire Chief and Fire Chief: Same

Retirement Pensions:

Non-Sworn Police Officers: 2.5% of Final Average Pay for highest 3 of last 5 years times years of service, with maximum benefit of 80% of Final Average Pay.

Firefighters, Sworn Police Officers who are hired before July 2, 1999 and Non-Sworn Police Officers have a sick exchange provision which allows them to buy up to 4 years of pension credit of 2.5% of Final Average Pay per year purchased.

Sworn Police Officers have a maximum benefit of 70% of Final Average Pay. For Sworn Police Officers hired before July 2, 1999 increase maximum benefit to 80% of Final Average Pay with sick exchange provision. Firefighters have a maximum benefit of 80% of Final Average Pay. For firefighters hired before July 1, 2000 increase maximum benefit to 85% of Final Average Pay with sick exchange provision.

Firefighters hired before July 1, 1984 can elect current or new provisions prior to January 1, 2001.

Normal Form of Benefit:

For unmarried members: life annuity.

For married members: surviving spouse benefit of 25% of member's final year's earnings, if non-service connected death, and surviving spouse benefit of 50% of member's final year's earnings, if service connected death.

For married Non-Sworn Police Officers: life annuity with 50% to survivor.

For unmarried members: life annuity. For married members: life annuity with For married members: life annuity with 50% to survivor.

BOARD OF EDUCATION MEMBERS

For unmarried members: life annuity. 50% to survivor.

City of Hartford - 2003

POLICE OFFICERS AND FIREFIGHTERS

Normal Retirement Age and Service Requirement:

Sworn Police Officers hired before July 2, 1999: Full benefits after 20 years of continuous service. Sworn Police Officers hired after July 1, 1999: Full benefits after 25 years of service. Firefighters hired after June 30, 2000: 25 years of continuous service. Non-Sworn Police Officers: Full benefits after 20 years of service, or age 60 plus 10 years of continuous service, or after 15 years of continuous service, if contributions are left in the MERF for 5 more years before retirement.

BOARD OF EDUCATION MEMBERS

Firefighters hired before July 1, 2000 and Age 60 plus 10 years of continuous service. Members are also eligible at age 55 with 25 vears of service.

GENERAL GOVERNMENT **MEMBERS**

Age 60 plus 10 years of service (10 years of continuous service for SCG, Nonbargaining and Library members). SCG members are also eligible at age 55 with 25 years of continuous service. HMEA and CHPEA members are eligible after 25 years of service with no minimum age. October 1, 1997 active CHPEA members who remain in the unit and retire therefrom are eligible after 20 years of continuous service with no minimum age. December 1, 1998 active HMEA members who remain in the unit and retire therefrom are eligible after 20 years of continous service with no minimum age. Library members are eligible after 25 year of continuous service with no minimum age. MLA members are eligible after 20 years of continuous service with no minimum age. Non-bargaining (excluding Library) members are eligible after 20 years or after 15 years of service, if contributions are left in the MERF for 5 more years before retirement.

Optional Early Retirement: Firefighters and Sworn Police Officers: Age At age 55 with 10 years of service, reduced 50 with 10 years of continuous service, actuarially reduced or reduced at 2% per whole year and fractional year prior to Normal Retirement Age. Non-Sworn Police Officers: Age 55 with 10 years of service, reduced at 4% per whole year prior to age 60.

at 4% per whole year prior to age 60. Local 818 reduced by 2%.

At age 55 with 10 years of service reduced at 4% per whole year prior to age 60. For SCG members, at age 55 with 10 years of continuous service reduced at 2% per whole year and fraction year prior to age 60.

POLICE OFFICERS AND FIREFIGHTERS

BOARD OF EDUCATION MEMBERS

GENERAL GOVERNMENT **MEMBERS**

Vesting of Earned Deferred Pension:

Sworn Police Officers: After 10 years of After 10 years of service. Payments begin continuous service.

Non-Sworn Police Officers: After 10 years of service.

Firefighters: After 5 years of continuous service.

no earlier than age 55.

After 10 years of service. Payments begin no earlier than age 55. For SCG members, 10 years of continuous service. For CHPEA and HMEA, 5 years of service.

Benefits to Survivors: (Death of Active Member Prior to Retirement)

Surviving Spouse: earnings (50% if service connected death). payable until death or remarriage. Surviving Child: \$100 per month for first child, \$50 for remarriage. each additional child (10% of final year's earnings if service connected death, or 15% if no surviving spouse). Total benefit, including Worker's Compensation cannot exceed 100% of current pay rate for Member's rank. Non-Sworn Police Officers: Same as General Government members.

25% of final year's Member must meet qualifications for vesting. Surviving Spouse: 50% of pension which Member is receiving or would be entitled to when retired, payments beginning no earlier than date of Member's 55th birthday. Surviving Spouse benefits are payable until death or

Refund of Contributions upon Discontinuance of Employment or at Death (Non-Vested Members): (May be taken in lieu of earned deferred pension by vested members)

as General Government members.

Refund of total contributions, without Termination: Refund of total contributions, with 3% interest compounded annually. interest. Non-Sworn Police Officers: Same Death: Refund of total contributions without interest.

POLICE OFFICERS AND **FIREFIGHTERS**

GENERAL GOVERNMENT **MEMBERS**

Pensions for Permanent. Total Disability - Service Requirements:

5 years of continuous service, but no requirement if disability is service connected defined in Worker's Compensation Act. as defined in Worker's Compensation Act. Non-Sworn Police Officers: Same as General Government members.

10 years of continuous service, except no requirement if disability is service connected as

BOARD OF EDUCATION MEMBERS

Amount of Total Disability Pension:

(Payable so long as total disability continues.)

Retirement Pension with minimum of 25% of "final average pay." If disability is service connected, the pension equals 100% of the Member's final annual pay less Worker's Compensation benefits.

Non-Sworn Police Officers: Same as General Government members.

Pensions for Permanent Partial Disability:

(Where earnings capacity is reduced by at least 10%.)

Ten years of continuous service, but no service requirement if disability is service connected. Same as disability pension with reduction for less than 15 years of service. If service connected, pension equals 50% of final annual pay if 15 years of service, with reductions for less than 15 years of service. If at least 20 years of service, pension equals retirement pension.

Non-Sworn Police Officers: Same as General Government members.

Retirement Pension using Final Average Pay for last 10 years. If disability is service connected, amount not less than 50% of Member's final annual pay at time of disability, less Worker's Compensation Benefits.

Retirement Pension using Final Average Pay for last 10 years. Subject to a minimum pension of \$10 monthly, and maximum 1-2/3% of the reduction in income times years of service. If the disability is service connected, the minimum benefit is not to be less than 50% of the reduction in earnings.

POLICE OFFICERS AND FIREFIGHTERS

BOARD OF EDUCATION MEMBERS

GENERAL GOVERNMENT MEMBERS

Member's Contribution
Rate of Total Earnings:
(City pays full balance of costs to fund MERF benefits; also Members and City pay taxes for those covered by Social Security.)

Firefighters and Sworn Police Officers hired before July 2, 1999: 8%.
Sworn Police Officers hired after July 1, 1999: 6.5%.

Non-Sworn Police Officers: 4% on earnings taxed for Social Security and 7% on excess.

4% on earnings taxed for Social Security and 7% on excess.

4% on earnings taxed for Social Security and 7% on excess. SCG members contribute 3% and 6%. Non-bargaining members electing 2-year option contribute 5% and 8%. CHPEA members hired before October 1, 1997 contribute 6.5% and 9.5%. HMEA members hired before December 1, 1998 contribute 6% and 9%. CHPEA members hired after September 30, 1997, HMEA members hired after November 30, 1998, and MLA members contribute 5% and 8%.

Assistant Police Chief, Police Chief, Assistant Fire Chief and Fire Chief: Same as Non-Bargaining.

Note 1 Any Member (other than a Police Officer or Firefighter) who was a Member before January 1, 1958 is guaranteed a minimum total benefit, including Social Security based on earnings from the City, equal to the pension the Member would have received under the terms of the MERF plan in existence prior to the enactment of the 1957 Special Act No. 347. Also, several active Members who transferred to MERF on or after July 1, 1968 from the City's Retirement Allowance Fund are entitled to a pension determined by the RAF provisions if it is greater than that based on the MERF provisions.

Note 2 Section 2-166 of the Municipal Code provides a minimum benefit of \$155 monthly for all pensions granted by reason of service or for service-connected disability, and for joint annuitants under elected options, except members for whom Social Security taxes have been paid and anyone for whom more than half of the total pension is paid by the Metropolitan District.

Note 3 All members (other than SCG) may purchase up to 4 years of pension credit for military service. Pension credit is at the following rates of Final Average Pay per year purchased:

Sworn Police Officers, Firefighters, CHPEA members hired before October 1, 1997, HMEA members hired before December 1, 1998, Non-bargaining (including Assistant Police Chief, Police Chief, Assistant Fire Chief, and Fire Chief), Non-Sworn Police Officers, and MLA

2.50%

Other (including CHPEA members hired after September 30, 1997, HMEA members hired after November 30, 1998)

2.00%

Note 4 All members (other than Sworn Police Officers hired after July 1, 1999, all Board of Education members, CHPEA, HMEA, Library, and SCG) may exchange accumulated sick leave upon retirement for up to 4 years of pension service time. October 1, 1997 active CHPEA members who remain in the unit and retire therefrom by July 1, 2001, may exchange accumulated sick leave upon retirement for up to 4 years of pension service time. December 1, 1998 active HMEA members who remain in the unit and retire therefrom may exchange accumulated sick leave upon retirement for up to 4 years of pension service time. Additional pension service time may be purchased from accumulated sick leave at the rate of twenty days of accumulated sick leave for each year of pension service time.

Section VI

Actuarial Cost Method

The "Aggregate Actuarial Cost Method" (first adopted for the 1969 valuation) is used for determining the future rates of contributions needed for funding service retirements. This method is designed to produce stable "percentage-of-payroll" Normal Actuarial Costs over a period of years and this aim will be achieved so long as the emerging experience conforms with the actuarial assumptions.

Using this method, an actuarial valuation was made of the actuarial present value of all future normal retirement pensions for active members (including survivor benefits and refunds of employee contributions). The actuarial present value, needed for future payments to present pensioners and deferred vested pensioners and survivors was subtracted from the Valuation Assets (Adjusted Value) to determine the current Valuation Assets (Adjusted Value) available for future benefits for active members. The latter figure was subtracted from the actuarial present value of future benefits for active members in order to determine the remaining actuarial present value to be funded by future contributions. Finally, the net remainder was divided by the actuarial present value of all future salaries, and the total Normal Actuarial Costs for future contributions was determined as a level percentage of future annual payrolls.

Since the MERF fund includes several classifications of members who have different provisions for benefits and contributions, it was necessary to apply this method by separate actuarial valuations for Police, Firefighters, Board of Education, and General Government.

A provision is included for the Normal Actuarial Costs for disability pensions. On this basis the additional actuarial liabilities for such annuities will be set up from year to year as the benefits are approved, without advance funding of such actuarial costs. The "percentage-of-payroll" Normal Actuarial Costs for these benefits were based on a study of the actual past experience as explained in the actuarial assumptions. In view of the differing benefit provisions these estimates were made separately for Police Officers and Firefighters and for all other classifications combined.

Section VII

Actuarial Assumptions

The actuarial assumptions used in the 2003 MERF valuation are as follows:

Mortality Basis:

UP-94 Projected by Scale AA to Year of valuation plus 10 years (2013 for July 1, 2003 valuation), with separate male and female tables.

Termination:

Yearly Rates of Employee Termination

<u>Age</u>	Non-Uniformed	Uniformed
20	10.0%	5.0%
25	7.0%	2.0%
30	5.0%	2.0%
35	4.0%	2.0%
40+	0.0%	0.0%

Salary Scale:

3% for salary increases plus a percentage for promotion or merit increases except there are 0% increases for one year. For Police under age 45, overtime limited to less than or equal to 20% of base pay.

Yearly Rates of Increases for Promotion or Merit

Age	Police	<u>Firefighters</u>	Non-Uniformed
25 and		•	
under	6.0%	5.0%	. 4.0%
30	3.5%	2.5%	4.0%
35	2.2%	1.6%	2.1%
40	1.2%	1.1%	1.0%
Over 40	1.0%	1.0%	1.0%

Salaries are adjusted for groups in negotiations by 3% per year for the period of each open contract, and non-bargaining groups by 3% per year for one full fiscal year from the measurement date.

Investment Return:

8.00% per year, net of investment expenses.

Assumed Retirement Age:

Board of Education: Age 61 (was Age 62).

General Government: Earlier of age 53 (was age 58) with 25 years service and age 62 with 10 years service.

All Police: Age 48 (was age 50) with 20 years service. Maximum retirement age of 65.

<u>Firefighters</u>: Age 53 with 25 years service. **Maximum retirement age of 65**.

For both Uniformed and Non-Uniformed who have reached Assumed Retirement Age, retirement after one year.

Early Retirement:

Costed explicitly. (Was actuarial present value of future retirement benefits for active members has been increased by 5% to cover the additional actuarial cost due to early retirement factors which are more liberal than a straight actuarial reduction.)

Social Security:

Future tax wage bases are developed by projecting the 2003 base of \$87,000 forward at 4% per year.

Marital Status at Retirement:

Non-Uniformed:

Males - 82% married, spouse 3 years younger. Females - 40% married, spouse same age.

Uniformed:

All - 90% married, spouse 2 years younger.

Normal Actuarial Costs for Disability:

Based on study of actual experience. The amount considered is the cost of establishing a reserve for the temporary annuity payable until normal retirement date.

Normal Actuarial Costs for Survivors

Costed explicitly.

Refund of Employee Contribution:

Costed explicitly. (Was actuarial present value of future retirement benefits for active members has been increased by a percentage based on actual refunds made over the past 5 years.)

Expenses other than Investment Expenses:

All actuarial present values of future benefits have been increased by 2.50% to cover expenses other than investment expenses.

Valuation Assets (Adjusted Value):

In order to smooth the year-to-year fluctuations in asset values, the asset values are adjusted by phasing in recognition of gains and losses over a four-year period.* Gains and losses are defined as the difference between the actual and the expected return on assets. (Was in order to smooth the year-to-year fluctuations in asset values, the asset values are adjusted by phasing in recognition of capital appreciation, i.e., realized and unrealized gains and losses. Capital appreciation is recognized over a fouryear period at 25% per year.) The assets held by the insurance companies include the funds on deposit for future purchase of annuities, as well as the reserves and contingency reserves for annuities already purchased which are subject to experience rating.

Sick Exchange:

If provision available, four years are purchased by all actives.

Military and Prior Service Buy-backs:

When buy-back occurs, date of hire is adjusted accordingly.

^{*} Starting to be phased in July 1, 2003.

Section VIII

Membership Data - 2003

Table 1 - Active Members

	Number	Payroll*	Average Annual Pay*
Police	432	\$29,299,600	\$67,823
Firefighters	371	22,583,500	60,872
Board of Education	980	33,635,800	34,322
General Government	544	24,819,200	<u>45,624</u>
TOTAL	2,327	\$110,338,100	\$47,416

^{*}Basic salary plus overtime and private duty pay, if applicable. Salaries are adjusted for groups in negotiations 3% per year for the period of each open contract, and non-bargaining groups by 3% per year for one full fiscal year from the measurement date.

Table 2 - Terminated Non-Vested Members and Total Monthly Annuities

Number	Total Monthly Annuities
947	N/A (all Non-Vested, return of employee contributions pending)

Table 3 - Number of Pensioners** and Total Monthly Annuities

	Servi	ce Pensions		ability nsions		rvivor enefit		Total	
Police	387	\$1,229,320	65	\$133,544	45	\$35,435	497	\$1,398,299	
Firefighters	292	913,932	133	321,783	80	68,925	505	1,304,640	
Board of Education	645	697,624	24	12,371	83	24,485	752	734,480	
General Government	702	1,610,623	26	17,769	162	106,006	890	1,734,398	
Vested Deferred Pensions	81	82,427					81	82,427	
TOTAL***	1,862	\$4,533,926	248	\$485,467	370	\$234,851	2,725	\$5,254,244	

^{**} Sixteen pensioners receiving benefits as retirees and as survivors are included in both groups.

*** An additional monthly benefit for the July 1, 1987, July 1, 1990, July 1, 1997, July 1,1999, and July 1, 2001, COLA's for the unfunded plans (PBF, FRF, and RAF) is also included in the total liabilities for MERF.

Table 4 - Reconciliation

·					
			Lives		
	Police	Firefighters	Board of Education	General Government	Total Membership
Actives					
at 7/1/2002	425	361	1,097	636	2,519
Adds	53	22	62	60	97
Deletes	(46)	(12)	<u>(179)</u>	<u>(152)</u>	(389)
At 7/1/2003	432	371	980	544	2,327
Pensioners					
At 7/1/2002	453	496	657	765	2,371
Adds	48	23	113	158	342
Deletes	(4)	(14)	(18)	<u>(33)</u>	(69)
At 7/1/2003	497	505	752	890	2,644
Vested Deferred Pensioners					
At 7/1/2002	10	2	21	62	95
Adds	2	1	7	9	19
Deletes	<u>(8)</u>	(1)	<u>(6)</u>	(18)	(33)
At 7/1/2003	4	2	22	53	81
Total at 7/1/2002	888	859	1,775	1,463	4,985
Total at 7/1/2003	933	878	1,754	1,487	5,052
			Monthly Ann	uities	
	Police	Firefighters	Board of Education	General Government	Total Membership
Donalous	Tonce	Firengiters	Education	Government	istember sinp
Pensioners At 7/1/2002	1,230,616	1,278,884	E01 602	1,344,225	4,435,408
Adjustments	(19,125)	(5,746)	581,683 405	1,521	(22,945)
Adds	194,069	62,722	161,725	419,871	838,387
Deletes	(7,262)	(31,219)	(9,333)	(31,218)	<u>(79,032)</u>
At 7/1/2003	1,398,298	1,304,641	734,480	1,734,399	5,171,818
Vested Deferred Pensioners					
At 7/1/2002	32,050	1,627	24,600	78,817	137,094
Adds	2,693	1,239	6,498	11,847	22,277
Deletes	(29,873)	(880)	_(10,876)	(35,315)	(76,944)
At 7/1/2003	4,870	1,986	20,222	55,349	82,427

CITY OF HARTFOL MERF - POLICE

NUMBER OF PERSONS IN PROCESSING GROUP BY AGE AND YEARS OF SERVICE

October 1, 2003

	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 + 1	ALL YEARS
AGE	< 1	± 1	2	3	4	5-9	1 10-14	1 72-73] 20-24	45-49	30 +	ADD IDARS
< 20												
20-24	7	2	4	. 1								14
25-29	21	6	5	1	2	12						47
30-34	12	2	9	1	2	59	7					92
35-39	9	2	4		3	52	19	30	1	,	•	120
40-44	4	1				9	17	35	14			80
45-49				1		3	1	21	25			51
50-54						2	ı	. 7	9	1		20
55-59								1	2	ı		4
60-64								1	1			2
65-69											2	2
70-74												
> 74	•										·	
ALL AGES	53	13	22	4	7	137	45	95	. 52	2	2	432

CITY OF HARTFOR- MERF - POLICE

AVERAGE SALARY OF PERSONS IN PROCESSING GROUP BY AGE AND YEARS OF SERVICE October 1, 2003

											·····	
	< 1	1	2	3	4	5-9	[10-14 [15-19	20-24 [25-29	30 +	ALL YEARS
AGE												
< 20												
20-24	36043	37932	38502	40212								37313
25-29	36043	37932	40212	42199	56702	65849						45348
30-34	36200	37932	40212	42199	59542	74371	76950					64783
35-39	36462	37932	40212		54550	75489	81837	75713	78130			71320
40-44	36043	37932				77323	73070	82564	79632			76560
45-49				78130		77266	71490	75451	80809			78159
50-54						74810	78130	77744	69848	71490		73604
55~59								86118	74810	33752		67372
60-64								50246	74881			62563
65-69											74810	74810
70-74												
> 74								•				
ALL AGES	36150	37932	39901	50685	56591	74313	77453	78170	78199	52621	74810	67823

CITY OF HARTFORD M._F - FIREFIGHTERS

NUMBER OF PERSONS IN PROCESSING GROUP BY AGE AND YEARS OF SERVICE

October 1, 2003

										•	
ì	< 1 3	1 2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
AGE	·	·	,	·	·	•	·		•		
< 20											
20-24	5		:	1 .							б
25-29	8			6 7	, 9	2				·	32
30-34	6			6 4	30	3					49
35-39	2			6 3	31	9	10				61
40-44	1			2 1	. 29	9	32	25		•	99
45-49				1	. 9	2	18	38			68
50-54					3	1	6	21	1	3	35
55-59				•	1.	1	3	3	1	8	17
60-64										4	4
65-69								,			
70-74			•								•
> 74		•									
ALL AGES	22		. 2	1. 16	112	27	69	87	2	15	371

CITY OF HARTFORD Man F - FIREFIGHTERS

AVERAGE SALARY OF PERSONS IN PROCESSING GROUP BY AGE AND YEARS OF SERVICE October 1, 2003

							·					
	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
AGE		•										
< 20												
20-24	40615			45254								41389
25-29	40564			44266	47316	58366	47595					48181
30-34	39819			44763	47500	60391	63529					55098
35-39	41810			48398	47738	60143	62817	65015				58970
40-44	39819			44266	49418	60480	65291	66998	68367			64368
45-49					47405	60034	66117	63893	65924			64340
50-54					٠	60736	62265	66490	67498	61331	65946	66287
55-59						60780	69982	63701	60520	58898	.70052	66044
60-64											76483	76483
65-69												
70-74												
> 74												
ALL AGES	40452			45635	47578	60167	63083	65713	66819	60114	70946	60872

CITY OF HARTFORD MER:— BOARD OF EDUCATION

NUMBER OF PERSONS IN PROCESSING GROUP BY AGE AND YEARS OF SERVICE

October 1, 2003

COMPLETED YEARS OF CREDITED SERVICE

	< 1	1	2 [3	. 4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
<u>AGE</u>												
< 20												
20-24	7	2	1	2	3							15
25-29	15	3	4	13	8	14	1					58
30-34	10	3	9	19	22	49	9	2				123
35-39	9	4	10	15	24	67	16	6			,	151
40-44	7	6	9	10	18	77	18	14				159
45-49	5	6	12	7	23	53	27	17	13	3		166
50-54	7	4	6	9	16	40	32	23	10	7	3	157
55-59	1	3	3	6	3	23	15	19	11	7	11.	102
60-64	1	1	1	5	4	6	5	4	2	4	2	35 ·
65-69		1	1		I.	5	2					10
70-74		1			2			. 1				4
> 74												
ALL AGES	62	34	56	86	124	334	125	86	36	21	16	980

HOOKER & HOLCOMBE, INC.

CITY OF HARTFORD MER. - BOARD OF EDUCATION

AVERAGE SALARY OF PERSONS IN PROCESSING GROUP BY AGE AND YEARS OF SERVICE

October 1, 2003

	< 1	1 }	2	3	4 .	5~9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
AGE	'	•	,	ı	.,			'	'			
< 20									•			
20-24	23863	43578	17472	19897	26867							26137
25-29	27017	46011	34174	25146	23822	25862	21851		•			27265
30-34	21984	49911	38696	35884	29048	31802	29609	31059				31915
35-39	19936	29507	41653	32579	30455	32347	34945	29406	•			32029
40-44	30470	40743	29440	32816	30370	31819	34386	40874		·		32948
45-49	29768	52091	41161	31607	38316	30680	32273	36565	45982	52551		35 73 7
50-54	47299	33747	47757	36013	31035	31172	35093	43292	32689	41994	33864	36059
55-59	50627	53530	63720	35156	31092	39038	44599	37535	43164	43977	39864	41253
60-64	34493	47583	69791	30543	40428	38122	42407	46776	35521	35121	31940	39130
65-69		21369	37776		17472	46056	33571		•			37404
70-74		48258			19955			27994				29040
> 74												
ALL AGES	28224	43022	40413	32260	31274	32238	35271	39028	40847	42854	37749	34322

CITY OF HARTFORD MER- - GENERAL GOVERNMENT

NUMBER OF PERSONS IN PROCESSING GROUP BY AGE AND YEARS OF SERVICE

October 1, 2003

	< 1	ı	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +]	ALL YEARS
AGE												
< 20	3											3
20-24	14	1	1.		1							17
25-29	5	4	2	4	ı	2	1					19
30-34	8	7	1	4	3	7	3	3				36
35-39	5	10	5	4	2	б	13	16	1			62
40-44	10	8	4	4	1	14	15	23	10			89
45-49	5	6	8	4	4	13	9	28	11	3		91
50-54	6	4	5	7	3	22	17	18	16	5	1	104
55-59	2	2	4	2	2	18	10	16	9	2	1	68
60-64	1.	1		3	4	9	2	4	2	2	3	. 31
65-69	1		I.			3	4	3	1			13
70-74			ı			4	1	1				7
> 74						1		1	l		1	4
ALL AGES	60	43	32	32	21	99	75	113	51	12	6	544

CITY OF HARTFORD MER -- GENERAL GOVERNMENT

AVERAGE SALARY OF PERSONS IN PROCESSING GROUP BY AGE AND YEARS OF SERVICE October 1, 2003

COMPLETED YEARS OF CREDITED SERVICE

	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
AGE												
< 20	23677											23677
20-24	21754	34800	36624		28586	•						23798
25-29	23709	36722	25074	44533	35248	48995	32643					34715
30-34	36665	45319	34486	52192	54673	35551	58866	48764				44155
35-39	46156	32081	34972	43514	37213	41809	45087	44829	32643			41320
40-44	38257	27948	44415	51632	51690	29371	44772	47446	65790			43528
45-49	47794	42761	41428	21216	51974	51253	55793	56577	64239	61784		52355
50-54	61328	55360	47288	31460	47391	58128	43192	62490	55175	45640	45610	52719
55-59	20808	43550	61274	44309	37979	48889	45658	56623	63793	61621	46194	51831
60-64	39699	10521		34951	41295	25265	51749	46146	57376	60147	26678	37122
65-69	9572		11579			30448	44600	11579	72046			30590
70-74			11579			49812	10521	11579				33275
> 74						11579		11579	70743		11579	26370
ALL AGES	34977	37650	40934	39564	45008	44076	46031	51436	61013	54757	30569	45623

HOOKER & HOLCOMBE, INC.

Section IX

City of Hartford Section 415(m) Fund

The Section 415(m) Fund* is an unfunded "excess benefit plan" to provide that portion of certain retirees' pension benefits that exceed the limits permitted under Section 415 of the Federal Internal Revenue Code (IRC).

		<u>July 1, 2003</u>	<u>July 1, 2002</u>
1.	Number of retirees and beneficiaries receiving benefits	5	4
2.	Annual benefits payable	\$ 18,000	\$ 21,000
3.	Present value of benefits	\$ 46,000	\$ 66,000

The "actives" are funded through MERF. The City provides contributions for the retirees' benefits payable each year, as determined by the Pension Commission.

Actuarial Assumptions

The actuarial assumptions used in the 2003 Section 415(m) Fund valuation are as follows:

Mortality Basis:

UP-94 Projected by Scale AA to Year of valuation plus 10

years (2013 for July 1, 2003 valuation), with separate male and

female tables.

Termination:

N/A.

Salary Scale:

N/A.

Investment Return:

8.00% per year, net of investment expenses.

Assumed Retirement age:

Immediate as all are retired.

Increases in dollar limit on

benefits under IRC Section 415:

3% per year.

Benefits

Retiree pension amounts in excess of IRC Section 415 limits. Benefits which do not exceed such amounts are payable from the City's MERF Plan. IRC Section 415 limits are assumed to increase annually and thus decrease the benefits payable from this Plan and increase the portion of the benefits payable from the City's MERF Plan.

*Section 415(m) Fund adopted by the Court of Common Council on March 24, 1997.