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

Actuarial Survey

July 1, 2001

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Section I

Actuarial Costs for Maintaining MERF

	Police	Firefighters	Board of Education	General Government	Total Membership
Active Membership					
Number of Employees	454	373	1,123	695	2,645
Annual Payroll (000)	(1) \$31,385	\$21,849	\$34,258	\$32,117	\$119,609
Normal Actuarial Costs					
A. Actuarial Present Value of Future Benefits (000)					
Active Members	\$160,302	\$126,549	\$106,854	\$155,533	\$549,238
Terminated Non-Vested Members	266	221	176	243	906
Terminated Vested Members	627	97	1,543	3,751	6,018
Retired Members	147,414	158,174	64,431	147,383	517,402
Old Plans COLA 1987/1990/1997/1999/2001	<u>2,043</u>	<u>1,837</u>	<u>2,655</u>	<u>469</u>	<u>7,004</u>
Total	<u>\$310,652</u>	<u>\$286,878</u>	<u>\$175,659</u>	<u>\$307,379</u>	<u>\$1,080,568</u>
B. Valuation Assets (Adjusted Value) (000)					
	\$307,048	\$280,617	\$119,993	\$274,226	\$981,884*
C. Actuarial Present Value of Future Normal Costs (A) - (B) (000)					
	\$3,604	\$6,261	\$55,666	\$33,153	\$98,684
D. Actuarial Present Value of Future Salaries (000)					
	\$252,212	\$224,711	\$407,295	\$303,065	\$1,187,283
E. Normal Actuarial Costs as Percentage of Payroll					
Service Pension (C)/(D)	(2) 1.43%	2.79%	13.67%	10.94%	
Disability Pension	(3) <u>3.00%</u>	<u>3.00%</u>	<u>1.00%</u>	<u>1.00%</u>	
Total Normal Cost Percent	4.43%	5.79%	14.67%	11.94%	
F. Employee Contributions					
	<u>7.88%</u>	<u>8.00%</u>	<u>4.02%</u>	<u>5.42%</u>	
G. Net Normal Actuarial Costs Payable by City (E) - (F)					
	(4) (3.45%)	(2.21%)	10.65%	6.52%	

* Includes \$3.0 (was \$1.4) million receivable from CMERS.

- (1) Salaries have been adjusted for groups in negotiations by 3.3% per year for the period of each open contract, and non-bargaining groups by 3.3% 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 2001 and 7.65% for 2002 and is applied to earnings below the wage base. For 2001 the wage base is \$80,400, increasing to \$84,900 for 2002. 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, 2001

Valuation Assets on July 1, 2001 (Adjusted Value)

Investments held by City Treasurer (includes Cash and Accounts Payable)	\$ 14,172,000
Assets held by Banks as Investment Managers and Custodians at Adjusted Value (1)	960,794,000
Estimated Experience Assets of One Insurance Company (including Reserves for Purchased Annuities)	3,918,000
Receivable from CMERS*	<u>3,000,000</u>
Total Valuation Assets (Adjusted Value) July 1, 2001	\$981,884,000

Actuarial Liabilities on July 1, 2001

Actuarial Liability for Inactive Members (2)

Regular Retirement Annuities	\$442,914,000 (3)	
Disability Retirement Annuities	56,161,000	
Survivor-Only Annuities	25,331,000	
Deferred Benefits for Terminated Non-Vested Members	906,000	
Deferred Benefits for Terminated Vested Members	<u>6,018,000</u>	531,330,000

Actuarial Liability for Future Retirement Benefits for Currently Active Members (4)	<u>450,554,000</u>
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Total Actuarial Liabilities	\$981,884,000
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- (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 \$3,849,000 for 1987 COLA, \$1,011,000 for 1990 COLA, \$1,667,000 for 1997 COLA, \$328,000 for 1999 COLA, and \$149,000 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 \$549,238,000. 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, 2001 (was \$1.4 million).

Assets as of July 1, 2001

Investment Managers	Cost Basis	Market Value
Treasurer's Account (includes Cash and Accounts Payable)	\$ 19,393,000	\$ 15,194,000
State Street Bank - Advisory Accounts	834,078,000	853,761,000
State Street Bank & Trust Company	112,989,000	118,749,000
Insurance Carrier*	<u>6,388,000</u>	<u>4,164,000</u>
Total	\$972,848,000	\$991,868,000
Receivable from CMERS**	<u>3,000,000</u>	<u>3,000,000</u>
Grand Total	\$975,848,000	\$994,868,000

* *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, 2001 (was \$1.4 million).*

Section III

Comments on Valuation Results

The recommended contribution rates are Normal Actuarial Costs of (3.45%) for Police, (2.21%) for Firefighters, 10.65% for Board of Education and 6.52% 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 as compared to last year primarily due to the 2001 COLA and for General Government actuarial losses due to early retirements and change in the assumed retirement age from age 60 to the earlier of (age 58 plus 25 years) and (age 62 plus 10 years). Please note that the salaries used were adjusted for groups which are currently in negotiations by 3.3% per year for the period of each open contract and non-bargaining groups by 3.3% 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 2001 is not expected to continue.

Adjusted Value of Assets

The adjusted value of assets includes \$3 (was \$1.4) million in funds assumed owed the MERF from the State of Connecticut Municipal Employees' Retirement System (CMERS). The \$3 (was \$1.4) 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, 2001.

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, 1996	14.9%
December 31, 1990	1.6%	December 31, 1996	13.1%*
June 30, 1991	8.3%	June 30, 1997	20.7%**
December 31, 1991	19.4%	December 31, 1997	21.6%**
June 30, 1992	10.1%	June 30, 1998	18.0%**
December 31, 1992	9.4%	December 31, 1998	13.7%**
June 30, 1993	12.1%	June 30, 1999	10.4%**
December 31, 1993	9.3%	December 31, 1999	12.1%**
June 30, 1994	2.9%	June 30, 2000	8.8%**
December 31, 1994	0.9%	December 31, 2000	3.2%**
June 30, 1995	15.1%	June 30, 2001	-2.1%***
December 31, 1995	21.0%	December 31, 2001	-2.7%***

* 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.

It should be noted that if the last three fiscal year's (1998-1999, 1999-2000, and 2000-2001) gross rates of return on market value are compounded, the average rate was 5.6%. For the three previous fiscal years (1997-1998, 1998-1999, and 1999-2000), the gross average rate was 12.3%. On a calendar year basis, the 1999, 2000, and 2001, and the 1998, 1999, and 2000 gross average rates were 4.0% and 9.6%, respectively (15.7% for average of 1997, 1998, and 1999).

The net return on adjusted assets for 1998-1999, 1999-2000, and 2000-2001 were estimated to be, 14.8%, 13.6% and 8.1% respectively. Investment expenses for 1998-1999, 1999-2000, and 2000-2001 have been estimated to be 0.31%, 0.32%, and 0.34% 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 2004 in order to update the actuarial assumptions at that time.

Membership

The active membership of MERF as of October 1, 2001, was 2,645, an increase of 81 from the total of 2,564 last year. Police membership increased by 4, Firefighters decreased by 13, Board of Education increased by 74, and General Government increased by 16.

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, 2001. 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, 2001 and have considered the compensation over the appropriate averaging period ending on July 1, 2001. 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 greater than the adjusted asset figure used in the valuation. The adjusted asset figure is found in Section II, Actuarial Balance Sheet.

Actuarial Present Value of Accumulated Plan Benefits as of July 1, 2001

Vested (including employee contributions for non-vested members)	\$771,652,000
Non-Vested	<u>8,552,000</u>
Total	\$780,204,000
Net Assets at Market Value Available for Benefits as of July 1, 2001	\$991,868,000*

* Excludes \$3 (was \$1.4) 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, 2001. Significant actuarial assumptions used include (a) rate of return on the investment of present and future assets of 8.00 percent per year compounded annually, (b) projected salary increase of 3.3 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, 2001 the excess of assets (Cost Basis) over Pension Benefit Obligation was \$107,278,000 as follows:

Pension Benefit Obligation:

Retirees and beneficiaries currently receiving benefits (1)	\$524,406,000
Terminated employees not yet receiving benefits	6,924,000
Current employees:	
Accumulated employee contributions including allocated investments earnings	60,264,000
Employer-Financed Vested Employees (2)	248,027,000
Employer-Financed Non-Vested Employees	<u>25,949,000</u>
Total Pension Benefit Obligation	\$865,570,000
Net assets available for benefits, Cost Basis (Market Value \$991,868,000)**	\$972,848,000**
Excess of assets over Pension Benefit Obligation	\$107,278,000

(1) Includes \$3,849,000 for Old Plans COLA effective 7/1/1987, \$1,011,000 for Old Plans COLA effective 7/1/1990, \$1,667,000 for Old Plans COLA effective 7/1/1997, \$328,000 for Old Plans COLA effective 7/1/1999, and \$149,000 for Old Plans COLA effective 7/1/2001.

(2) Includes \$15,234,000 for Locals 1716 and 566 now in CMERS.

* For Police, overtime for those under age 45 was limited to 20% of base pay.

** Excludes \$3 (was \$1.4) 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

Year Ended June 30	Annual Required Contribution	Percentage Contributed	Net Annual Required Contribution *	Miscellaneous **	Net Percentage Contributed
1996	\$9,791,441	100%	\$9,791,441	0	100%
1997	9,028,651	100%	8,558,150	470,501	100%
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%

* City's cash contribution to MERF.

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

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets *	Actuarial Accrued Liability (AAL) #	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a÷b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)÷c)
7/1/1996	\$629,111,000	\$612,129,000	\$(16,982,000)	102.8%	\$98,279,000	-17.3%
7/1/1997	688,311,000	665,478,000	(22,833,000)	103.4%	99,812,000	-22.9%
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%

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, 2001 was prepared based upon the previous year's actuarial valuation (2000 Actuarial Survey) and additional information for fiscal year 2000-2001. It was contained in a separate report which was sent to the City's auditors, Scully & Wolf, LLP on November 6, 2001.

The information required for completion of GASB No. 25 and No. 27 for the fiscal year ending June 30, 2002 will be prepared based upon the current year's actuarial valuation (2001 Actuarial Survey) and additional information for fiscal year 2001-2002. It will be contained in a separate report and submitted to the City's auditors.

* Excludes receivable from CMERS, and for July 1, 1997 excludes 1/4 of realized gain from the Webber/Mitchell-Hutchins litigation and 1/4 of unrealized loss due to reappraisal of 10 Prospect Street.

Liability shown is on a PBO basis.

Section V

Hartford MERF - Summary of Principal Provisions of Pension Plan July 1, 2001

PROVISIONS FOR:

Retirement Pensions:

POLICE OFFICERS AND FIREFIGHTERS

Firefighters hired before July 1, 2000: 2.65% 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 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 Pay. 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 5-year 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.*

PROVISIONS FOR:

**POLICE OFFICERS AND
FIREFIGHTERS**

BOARD OF EDUCATION MEMBERS

**GENERAL GOVERNMENT
MEMBERS**

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.

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

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 July 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 50% to survivor.

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

PROVISIONS FOR:

**POLICE OFFICERS AND
FIREFIGHTERS**

**Normal Retirement Age
and Service Requirement:**

Firefighters hired before July 1, 2000 and 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.

Optional Early Retirement:

Firefighters and Sworn Police Officers: Age 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.

BOARD OF EDUCATION MEMBERS

Age 60 plus 10 years of continuous service. Members are also eligible at age 55 with 25 years of service.

At age 55 with 10 years of service, reduced at 4% per whole year prior to age 60. Local 3534 and Local 818 reduced by 2%.

**GENERAL GOVERNMENT
MEMBERS**

Age 60 plus 10 years of service (10 years of continuous service for SCG, Non-bargaining 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 continuous 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.

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.

PROVISIONS FOR:

**POLICE OFFICERS AND
FIREFIGHTERS**

BOARD OF EDUCATION MEMBERS

**GENERAL GOVERNMENT
MEMBERS**

**Vesting of Earned Deferred
Pension:**

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

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

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

Surviving Spouse: 25% of final year's earnings (50% if service connected death), payable until death or remarriage. Surviving Child: \$100 per month for first child, \$50 for 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.

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 remarriage.

**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)**

Refund of total contributions, without interest. Non-Sworn Police Officers: Same as General Government members.

Termination: Refund of total contributions, with 3% interest compounded annually.
Death: Refund of total contributions without interest.

PROVISIONS FOR:

**POLICE OFFICERS AND
FIREFIGHTERS**

BOARD OF EDUCATION MEMBERS

**GENERAL GOVERNMENT
MEMBERS**

**Pensions for Permanent,
Total Disability - Service
Requirements:**

5 years of continuous service, but no requirement if disability is service connected 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 defined in Worker's Compensation Act.

**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.

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.

**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. 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.

PROVISIONS FOR:

**POLICE OFFICERS AND
FIREFIGHTERS**

**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.

BOARD OF EDUCATION MEMBERS

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

**GENERAL GOVERNMENT
MEMBERS**

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 2001 MERF valuation are as follows:

Mortality Basis: UP-94 Projected by Scale AA to Year of valuation plus 10 (2011 for July 1, 2001 valuation), with separate male and female tables.

Termination: Yearly Rates of Employee Termination

<u>Age</u>	<u>Non-Uniformed</u>	<u>Uniformed</u>
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: 3.3% for salary increases plus a percentage for promotion or merit increases. 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

<u>Age</u>	<u>Police</u>	<u>Firefighters</u>	<u>Non-Uniformed</u>
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 3.3% per year for the period of each open contract, and non-bargaining groups by 3.3% 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 62.

General Government: Earlier of age 58 with 25 years service and age 62 with 10 years service (was age 60).

All Police: Age 50 with 20 years service. **Maximum retirement age of 65.**

Firefighters: 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:

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 2001 base of \$80,400 forward at 4.3% 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: 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 capital appreciation, i.e., realized and unrealized gains and losses. Capital appreciation is recognized over a four-year 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.

Section VIII

Membership Data - 2001

Table 1 - Active Members

	Number	Payroll*	Average Annual Pay*
Police	454	\$ 31,385,500	\$69,131
Firefighters	373	21,848,600	58,575
Board of Education	1,123	34,258,400	30,506
General Government	<u>695</u>	<u>32,116,800</u>	<u>46,211</u>
TOTAL	2,645	\$119,609,300	\$45,221

** Basic salary plus overtime and private duty pay, if applicable. Salaries are adjusted for groups in negotiations 3.3% per year for the period of each open contract, and non-bargaining groups by 3.3% 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
977	N/A (all Non-Vested, return of employee contributions pending)

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

	Service Pensions		Disability Pensions		Survivor Benefit		Total	
Police	333	\$980,273	56	\$95,956	44	\$34,009	433	\$1,110,238
Firefighters	281	875,720	135	308,600	77	66,407	493	1,250,727
Board of Education	552	536,504	25	10,409	91	23,264	668	570,177
General Government	552	1,130,899	27	16,826	163	99,817	742	1,247,542
Vested Deferred Pensions	<u>73</u>	<u>77,015</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>73</u>	<u>77,015</u>
TOTAL***	1,791	\$3,600,411	243	\$431,791	375	\$223,497	2,409	\$4,255,699

** Sixteen pensioners receiving benefits as retiree and as survivor 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.

CITY OF HARTFORD MERF - POLICE

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

October 1, 2001

COMPLETED YEARS OF CREDITED SERVICE

AGE	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
< 20												
20-24	4	2		3	1	1						11
25-29	6		3	13		10						32
30-34	10		3	8		68	26					115
35-39	2		2	4		29	38	24	1			100
40-44				1		5	28	55	23			112
45-49		1				4	3	35	10	1		54
50-54							2	11	7		1	21
55-59								1	1			2
60-64							1	1		1	1	4
65-69											3	3
70-74												
> 74												
ALL AGES	22	3	8	29	1	117	98	127	42	2	5	454

CITY OF HARTFORD MERF - POLICE

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

October 1, 2001

COMPLETED YEARS OF CREDITED SERVICE

AGE	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
< 20												
20-24	32343	34579		49767	50092	49348						40661
25-29	32215		41980	46106		68232						50029
30-34	32220		45336	50249		67381	78323					65030
35-39	32228		39772	52004		66475	76227	85642	73509			73054
40-44				50904		73029	70147	75916	73212			73566
45-49		92475				58591	60676	79575	80090	86409		77431
50-54							68469	75989	65411		122809	73976
55-59								83798	54990			69394
60-64							42999	96779		28665	79339	61945
65-69											64156	64156
70-74												
> 74												
ALL AGES	32242	53878	42686	48606	50092	67016	74072	78995	73123	57537	78923	69131

CITY OF HARTFORD MERF - FIREFIGHTERS

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

October 1, 2001

COMPLETED YEARS OF CREDITED SERVICE

AGE	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
< 20												
20-24		2	2									4
25-29		7	7	8	3	14						39
30-34		8	3	4	4	25	7					51
35-39		4	2	4	2	28	25	11	1			77
40-44		1	2	2	3	13	28	35	19			103
45-49				1		4	3	17	17			42
50-54						1	2	6	17	3	10	39
55-59							1	1	1		11	14
60-64										1	3	4
65-69												
70-74												
> 74												
ALL AGES		22	16	19	12	85	66	70	55	4	24	373

CITY OF HARTFORD MERF - FIREFIGHTERS

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

October 1, 2001

COMPLETED YEARS OF CREDITED SERVICE

AGE	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
< 20												
20-24		39980	41568									40774
25-29		39053	40270	43978	44079	58113						47511
30-34		42648	41255	45179	44570	60275	57664					53617
35-39		36526	42051	43263	45618	59787	63167	66774	59994			58990
40-44		36881	43628	44529	47370	57354	62011	60341	65595			60150
45-49				46992		60931	67575	64105	65910			64374
50-54						56818	61633	64922	60653	58918	64962	62233
55-59							60707	74399	52791		68954	67599
60-64										58415	74913	70789
65-69												
70-74												
> 74												
ALL AGES		39886	41259	44297	45322	59302	62210	62859	63830	58793	68035	58575

CITY OF HARTFORD MERF - BOARD OF EDUCATION

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

October 1, 2001

COMPLETED YEARS OF CREDITED SERVICE

AGE	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
< 20	2											2
20-24	5	10	11	3	2							31
25-29	13	19	12	10	13	17	1					85
30-34	10	20	27	14	18	35	11					135
35-39	11	19	28	11	22	46	24	5	1			167
40-44	13	10	30	22	23	57	20	16	5			196
45-49	12	11	22	9	12	36	32	30	8	6		178
50-54	5	11	12	4	7	29	23	40	18	15	8	172
55-59	2	6	8	1	6	15	14	17	16	14	9	108
60-64	1	3	5		2	7	9	8	1	4	1	41
65-69			1	1	2		1		2			7
70-74								1				1
> 74												
ALL AGES	74	109	156	75	107	242	135	117	51	39	18	1123

CITY OF HARTFORD MERF - BOARD OF EDUCATION

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

October 1, 2001

COMPLETED YEARS OF CREDITED SERVICE

AGE	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
< 20	21809											21809
20-24	21412	16652	18756	16264	20025							18346
25-29	30777	23648	23348	30854	24271	24542	21662					25794
30-34	34034	29609	26412	31875	20274	28533	24718					27610
35-39	27140	33999	24674	19458	25155	30555	37210	41243	129320			30161
40-44	31515	27307	30672	27116	22547	29630	31956	25960	51034			29166
45-49	36507	23229	31986	25205	20160	34776	32018	33123	43200	46374		32360
50-54	45731	44055	26020	30806	27882	28111	34119	32423	33878	41600	35299	33471
55-59	47715	22344	27166	33945	40023	42623	38563	40816	31793	29175	31087	35101
60-64	24685	22517	38154		22306	41206	33873	31953	34043	39051	31449	34103
65-69			14873	20030	55732		25912		33576			34204
70-74								23830				23830
> 74												
ALL AGES	32246	28154	27241	26909	24540	31013	33375	33209	38231	37613	32979	30503

CITY OF HARTFORD MERF - GENERAL GOVERNMENT

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

October 1, 2001

COMPLETED YEARS OF CREDITED SERVICE

AGE	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
< 20												
20-24	6	1	2		1							10
25-29	3	5	1	2	1	2	1					15
30-34	4	5	9	2	1	6	9	2				38
35-39	11	5	2	1	6	13	26	11	1			76
40-44	3	5	1	3	5	12	26	24	12			91
45-49	13	9	4	2	2	20	34	37	26	10	2	159
50-54	9	4	2	3	3	19	24	26	37	13		140
55-59	5	4	5	5	2	16	17	13	12	6	5	90
60-64	1	2	2	1	1	9	10	3	9	2	5	45
65-69	1		1		1	6	8	3			2	22
70-74	1					1		2				4
> 74						2	1		1		1	5
ALL AGES	57	40	29	19	23	106	156	121	98	31	15	695

CITY OF HARTFORD MERF - GENERAL GOVERNMENT

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

October 1, 2001.

COMPLETED YEARS OF CREDITED SERVICE

AGE	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
< 20												
20-24	26759	31937	28126		42080							29082
25-29	16272	41487	42080	38193	40507	31719	31774					34029
30-34	41944	42120	40469	38455	11159	57018	38361	33878				41731
35-39	29973	33559	40067	39675	24758	41679	37356	41645	54156			36726
40-44	39427	38858	35249	11159	38541	48199	43979	54405	50421			46227
45-49	37667	25569	50137	54999	51161	47801	52271	56212	58188	57970	48676	51168
50-54	52008	31172	41408	37244	38292	60469	49634	55638	52928	49127		52042
55-59	65085	35606	58521	38812	31404	42511	47637	58798	52856	55649	64485	50692
60-64	33386	33480	10420	89272	11159	25985	26869	57431	49116	29042	48832	36461
65-69	9682		15621		29184	45089	43512	55513			23049	40262
70-74	9682					37643		28481				26072
> 74						11221	11334		71622		11509	23381
ALL AGES	37913	34406	41047	38501	32841	45994	44219	53869	53861	51946	48103	46211

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, 2001</u>	<u>July 1, 2000</u>
1. Number of retirees and beneficiaries receiving benefits	10	10
2. Annual benefits payable	\$ 69,000	\$ 84,000
3. Present value of benefits	\$129,000	\$319,000

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 2001 Section 415(m) Fund valuation are as follows:

Mortality Basis:	UP-94 Projected by Scale AA to Year of valuation plus 10 (2011 for July 1, 2001 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:	3.0% 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.*