CITY OF MANCHESTER
EMPLOYEES' CONTRIBUTORY RETIREMENT SYSTEM

ANNUAL ACTUARIAL VALUATION
DECEMBER 31, 2004

GABRIEL, ROEDER, SMITH & COMPANY

CONTENTS

GABRIEL, ROEDER, SMITH & COMPANY
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March 1, 2005

Board of Trustees
City of Manchester Employees'
Contributory Retirement System
Manchester, New Hampshire 03101-1829

Dear Board Members:

The results of the **Annual Actuarial Valuation of the City of Manchester Employees' Contributory Retirement System (MECRS)** are presented in this report. The purpose of the valuation was to measure the System's funding progress and to determine the contribution rate for the fiscal year beginning July 1, 2005.

The date of the valuation was December 31, 2004.

The valuation was based upon information, furnished by the Retirement System, concerning Retirement System benefits, financial transactions, and individual members, terminated members, retirees and beneficiaries. Data was checked for year-to-year consistency but was not otherwise audited.

To the best of our knowledge this report is complete and accurate and was made in accordance with the standards of practice prescribed by the Actuarial Standards Board. The actuarial assumptions used for this valuation were adopted by the Board pursuant to a review of methods and assumptions dated November, 2004.

This report was produced under the supervision of a Member of the American Academy of Actuaries with significant experience in valuing public employee retirement systems.

Respectfully submitted,

Kenneth G. Alberts Mark Buis, E.A., M.A.A.A.

KGA/MB/clb/lr

SECTION A

Valuation Results

FUNDING OBJECTIVE

The funding objective of the Retirement System is to establish and receive contributions which, when expressed as percents of active member payroll, will remain approximately level from year to year and will accumulate sufficient assets over each member's working lifetime to finance promised benefits throughout retirement.

CONTRIBUTION RATES

The Retirement System is supported by member contributions, City contributions and investment income from Retirement System assets.

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

- Cover the actuarial present value of benefits allocated to the current year by the actuarial cost method described in Section C (the normal cost); and
- Finance over a period of future years the actuarial present value of benefits not covered by valuation assets and anticipated future normal costs (unfunded actuarial accrued liability).

The computed City contribution rate for the fiscal year beginning July 1, 2005 is 8.72% of covered payroll. The details of this contribution rate are shown on page A-7.

The City contribution rate of 8.72% is sufficient to finance the employer normal cost and to amortize the unfunded actuarial accrued liability (full funding credit) as a level percent-of-payroll over a period of 29 years.

SUMMARY STATEMENT OF SYSTEM RESOURCES AND OBLIGATIONS
DECEMBER 31, 2004

Present Resources and Expected Future Resources

A. Actuarial value of System assets:	
1. Net assets from System financial statements	$ 106,242,325
2. Market Value Adjustment	(2,415,560)
3. Valuation assets	103,826,765
B. Present value of expected future employer contributions:	
1. For normal costs	28,536,574
2. For unfunded actuarial accrued liabilities	22,520,228
3. Totals	51,056,802
C. Present value of expected future member contributions:	17,710,009
D. Total Present and Expected Future Resources	**$172,593,576**

Actuarial Present Value of Expected Future Benefit Payments

A. To retirees and beneficiaries:	$ 47,134,925
B. To vested terminated members:	2,457,211
C. To present active members:	
1. Allocated to service rendered prior to valuation date	76,754,856
2. Allocated to service likely to be rendered after valuation date	46,246,584
3. Total	123,001,440
D. Total Actuarial Present Value of Expected Future Benefit Payments	**$172,593,576**

SUMMARY OF CURRENT ASSET INFORMATION FURNISHED FOR THE VALUATION

Balance Sheet

Reported Assets - Actuarial Value	
Cash & equivalents	$ 852,635
Investments	104,152,554
Contributions Receivable	1,684,300
Property, Plant, Equipment	171,929
Accrued Interest & Dividends	14,058
Receivable for Add'l Contribution Calculator	8,300
Payable for Investments Purchased	(35,735)
Accounts Payable	(164,516)
Pension Benefits Payable	(439,082)
Additional Contribution Account	(2,118)
Funding Value Adjustment	(2,415,560)
Total Valuation Assets	**$103,826,765**

Revenues and Expenditures

	2004
Funding Value - January 1, 2004	$ 95,632,745
Revenues	
Employees' contributions	1,657,219
Employer contributions	3,950,981
Recognized Investment income	8,973,758
Total	14,581,958
Expenditures	
Benefit payments	5,009,300
Refund of member contributions	200,559
Expenses and fees	1,178,079
Total	6,387,938
Funding Value - December 31, 2004	$103,826,765
Rate of return recognized	8.1%

DEVELOPMENT OF FUNDING VALUE OF ASSETS

Year Ended December 31:	2003	2004	2005	2006	2007	2008
A. Funding Value Beginning of Year	$89,755,853	$95,632,745				
B. Market Value End of Year	95,632,745	106,242,325				
C. Market Value Beginning of Year	74,796,544	95,632,745				
D. Non-Investment Net Cash Flow	(231,217)	402,577				
E. Investment Income						
E1. Market Total: B - C - D	21,067,418	10,207,003				
E2. Amount for Immediate Recognition (7.5%)	6,723,018	7,187,553				
E3. Amount for Phased-In Recognition E1-E2	14,344,400	3,019,450				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20 x E3	2,868,880	603,890				
F2. First Prior Year	(1,847,368)	0	$603,890			
F3. Second Prior Year	(2,399,176)	0	0	$603,890		
F4. Third Prior Year	(800,009)	0	0	0	$603,890	
F5. Fourth Prior Year	1,227,708	0	0	0	0	$603,890
F6. Total Recognized Investment Gain	(949,965)	603,890	603,890	603,890	603,890	603,890
G. Preliminary Funding Value End of Year: A + D + E2 + F6	95,297,689	103,826,765				
H. Actuarial Value after application of 20% corridor Limit	95,297,689	103,826,765				
H. Difference between Market & Funding Value	335,056	2,415,560	1,811,670	1,207,780	603,890	0
I. Recognized Rate of Return	6.4 %	8.1 %				
J. Market Rate of Return	28.2 %	10.7 %				
K. Ratio of Funding Value to Market Value	99.6 %	97.7 %				

The Funding Value of Assets recognizes assumed investment income (line E2) fully each year. Differences between actual and assumed investment income (line E3) are phased in over a closed 5-year period. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than Market Value. The Funding Value of Assets is unbiased with respect to Market Value. At any time it may be either greater or less than Market Value. If actual and assumed rates of retirement income are exactly equal for 4 consecutive years, the Funding Value will become equal to Market Value. For the December 31, 2004 valuation, the Funding Value of Assets was reset to the Market Value, as adopted by the Board pursuant to a review of methods and assumptions dated November, 2004.

DEVELOPMENT OF UNFUNDED ACTUARIAL ACCRUED LIABILITY

Present Value of Future Benefits - Retirees	$ 47,134,925
Present Value of Future Benefits - Deferreds	2,457,211
Present Value of Future Benefits - Actives	123,001,440
Total Present Value of Future Benefits	$172,593,576
Present Value of Future Normal Cost	46,246,584
Actuarial Accrued Liability	$126,346,993
Actuarial Value of Assets	103,826,765
Unfunded Actuarial Accrued Liability	$ 22,520,228
Fuded Ratio	82.2%

DERIVATION OF EXPERIENCE GAIN (LOSS)
YEAR ENDED DECEMBER 31, 2004

Actual experience will never (except by coincidence) match exactly with assumed experience. Gains and losses often cancel each other over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) is shown below, along with a year-by-year comparative schedule.

(1)	UAAL* at start of year	$20,954,959
(2)	Total normal cost from last valuation	4,241,817
(3)	Actual contributions (employer & employee)	5,610,318
(4)	Interest accrual: [(1) + 1/2 ((2) - (3))] x .075	1,520,303
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	21,106,761
(6)	Change from ad-hoc COLA increases	1,809,405
(7)	Change from revised actuarial methods and assumptions	231,803
(8)	Expected UAAL after changes: (5) + (6) + (7)	23,147,969
(9)	Actual UAAL at end of year	22,520,228
(10)	Gain (loss): (8) - (9)	627,741
(11)	Gain (loss) as percent of actuarial accrued liabilities at start of year ($116,252,648)	0.5 %

* *Unfunded actuarial accrued liabilities.*

Valuation Date December 31	Experience Gain (Loss) As % of Beginning Accrued Liability [#]
1998	Gain
1999	Gain
2000	Gain
2001	Loss
2002	Loss
2003	(4.0)%
2004	0.5 %

[#] *Magnitude of gain or loss to 2002 is not available.*

CITY'S COMPUTED CONTRIBUTIONS FOR THE FISCAL YEAR BEGINNING JULY 1, 2005

Contributions For	Contributions Expressed As % of Active Member Payroll
Total Normal Cost	9.84%
Member Contributions (weighted average)	3.75%
Employer Normal Cost	6.09%
Unfunded Actuarial Accrued Liabilities*	2.63%
Employer Pension Total	8.72%
Valuation Payroll	$45,027,930
Estimated Contribution Dollars	4,083,493

* *Unfunded actuarial accrued liabilities were financed as a level percent of payroll over a period of 29 years.*

Note**:** *If a 4.5% ad-hoc COLA is adopted this year, the employer contribution rate would increase to 8.97% of payroll. For each 1% ad-hoc COLA increase, the UAAL will increase by approximately $472,000 and the employer contribution rate will increase by approximately 0.055% (based on current payroll and a 29-year amortization period). In developing these costs for the ad-hoc COLA increase, it was assumed that the increase would be a one-time permanent increase to all members retired as of 12/31/2004 and the additional liability would be amortized over 29 years. It was also assumed that the increase would be effective on 1/1/2005.*

COMMENTS AND CONCLUSION

COMMENT A – RESULTS: The Retirement System is 82.2% funded as of December 31, 2004. The Unfunded Actuarial Accrued Liability of $22,520,228 is amortized over a *29*-year period.

COMMENT B – METHODS AND ASSUMPTIONS: The Board adopted new methods and assumptions pursuant to a review of methods and assumptions dated November, 2004, including:

- Updated decrement assumptions (rates of mortality, withdrawal, retirement and disability);
- Rates of future salary increases;
- Reducing the rate of wage inflation from 4.5% per annum to 4.0% per annum;
- Restarting the actuarial value of asset method (i.e., setting the funding value at the beginning of the year equal to the market value); and
- Phasing in recognition of a 2% compound, annual post-retirement increase over a four year period beginning with the December 31, 2004 valuation

COMMENT C – EXPERIENCE: Experience during the year ending December 31, 2004 was more favorable than assumed resulting in a small experience gain of ½ of 1% of beginning of year liabilities. The primary sources of the gain were investment income greater than assumed (a recognized rate of return of 8.1% compared to an assumed rate of 7.5%), less members retiring than assumed (20 versus 64.1), and more members terminating than assumed (114 versus 45.3). These gains were partially offset by losses due to mortality (less benefits were removed from the rolls than assumed), and new retirement benefits (members who retired during the year retired with larger benefits than projected).

COMMENT D – BENEFIT CHANGES: A 4.5% ad-hoc COLA was granted January 1, 2004 for all retirees and beneficiaries eligible for benefits as of December 31, 2003. This resulted in an increase in accrued liabilities of approximately $1.8 million.

CONCLUSION: The Fund is currently in excellent condition in accordance with the principles of level percent of payroll financing.

COMPARATIVE STATEMENT

Valuation Date December 31	Active Members					Retirees & Beneficiaries			Annual Contributions as a Percent of Payroll		
			Valuation Payroll				Annual Benefits				
	Number	Ratio to Retired	$	Average	% Increase	Number	$	% of Payroll	Member	Employer	Total
2003	1,316	2.59	$ 41,998,187	$ 31,914	1.0%	509	$ 4,981,710	11.9%	3.75%	8.76%	12.51%
2004#	1,344	2.59	45,027,930	33,503	5.0%	519	5,268,169	11.7%	3.75%	8.72%	12.47%

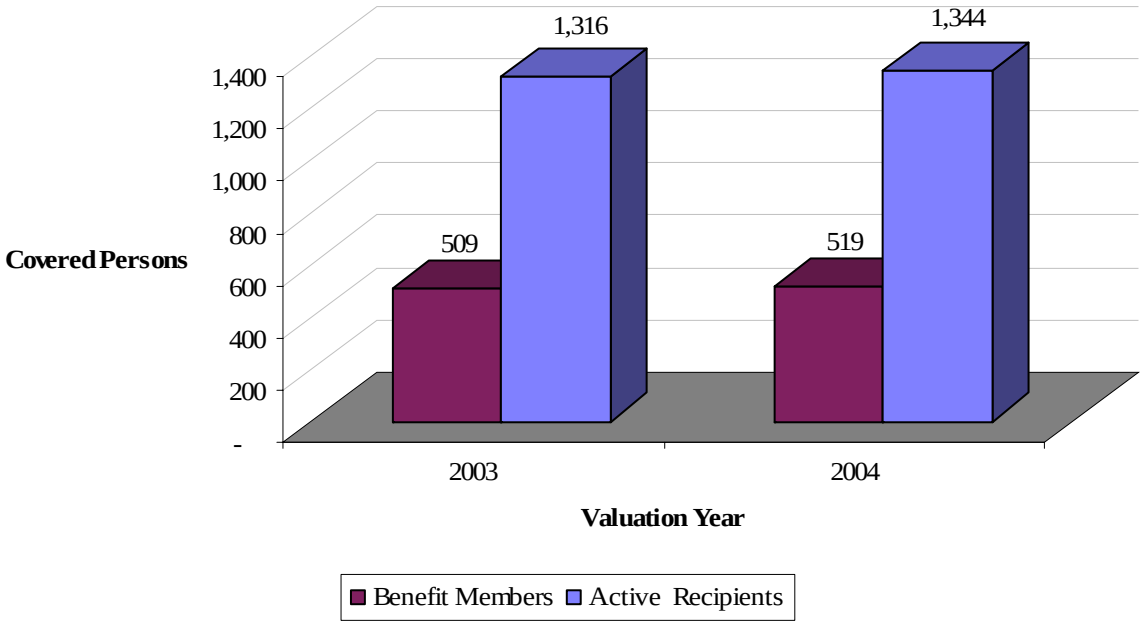
 # After changes in methods and/or assumptions.

ACTUARIAL ACCRUED LIABILITIES & VALUATION ASSETS
COMPARATIVE STATEMENT

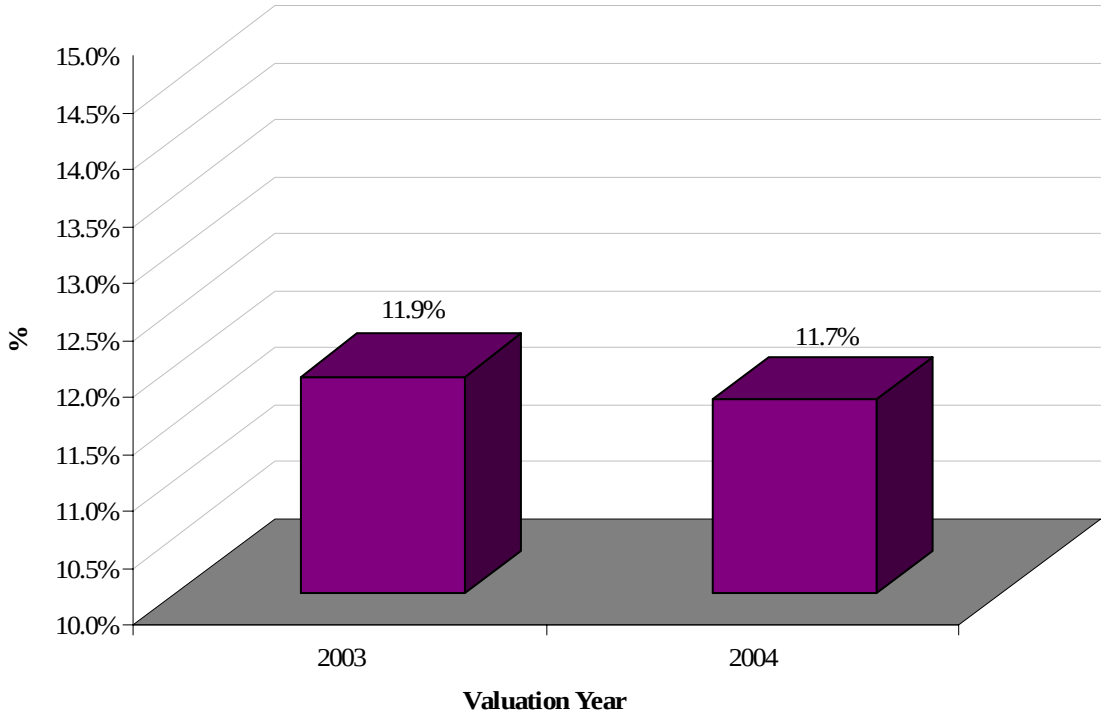
Valuation Date December 31	Actuarial Accrued Liability (AAL)	Valuation Assets	Unfunded Actuarial Accrued Liability (UAAL)	Ratio of Present Assets To AAL	Ratio of UAAL to Valuation Payroll
2003	$ 116,252,648	$ 95,297,689	$ 20,954,959	82.0 %	49.9 %
2004#	126,346,993	103,826,765	22,520,228	82.2 %	50.0 %

 # After changes in methods and/or assumptions.

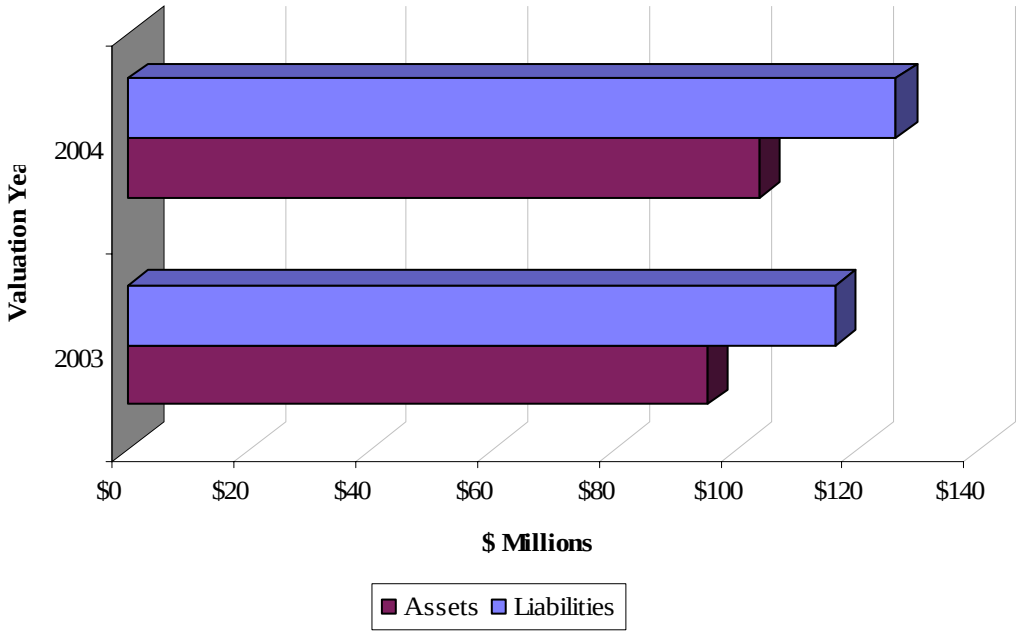
Active Members & Benefit Recipients



Benefits as a Percent of Payroll



Assets & Accrued Liabilities



SCHEDULE OF CHANGES IN UNFUNDED ACTUARIAL ACCRUED LIABILITY OTHER THAN ANNUAL GAINS/LOSSES

Date Established	Original Amount	Type of Base
01/01/1991	$ 2,656,461	Initial Unfunded
01/01/1997	32,202	Plan Amendment
01/01/1997	588,165	1996 COLA
01/01/1998	602,888	1997 COLA
01/01/1999	4,750,497	Plan Amendment
01/01/1999	62,532	Assumption Change
01/01/1999	866,215	1998 COLA
01/01/2000	847,614	1999 COLA
01/01/2001	958,172	2000 COLA
01/01/2002	1,047,075	2001 COLA
01/01/2003	1,214,958	2002 COLA
01/01/2003	(3,319,777)	Assumption Change
01/01/2003	6,317,683	Plan Amendment
01/01/2004	231,803	Assumption Change
01/01/2004	1,809,405	2004 COLA

SECTION B

Benefit Provisions and Valuation Data

SUMMARY OF BENEFIT PROVISIONS
AS OF DECEMBER 31, 2004

Eligibility	Amount
NORMAL RETIREMENT	
Members are eligible to retire at age 60 with at least 5 years of service.	Straight life pension equals 2.0% of 3-year final average earnings (FAE) times service on and after January 1, 1999 *plus* 1.5% of FAE times service before January 1, 1999.
Members with at least 20 years of service at retirement are eligible for a minimum benefit if employed on or before January 1, 1974.	Minimum benefit for eligible members is 50% of FAE.
EARLY RETIREMENT	
Members are eligible to retire early if the sum of age and service is at least 80, or at age 55 with at least 20 years of service.	Computed as a normal retirement pension. If the early retirement occurs prior to the member attaining age 60, the benefit is reduced by 1/6 of 1% for each month that the early retirement precedes age 60.
DEFERRED RETIREMENT	
Members are eligible to retire with a deferred benefit after attaining at least 5 years of service, provided they do not take a refund of member contributions.	Pension is computed as a normal retirement pension, based on service and FAE on date of termination. Commencement of benefits begins at age 60.
NON-DUTY DISABILITY	
Members are eligible upon attainment of 15 years of service.	Pension is computed as a normal retirement pension based on service and FAE as of date of disability.
DUTY DISABILITY	
No age or service requirement.	Pension is computed as a normal retirement pension based on service and FAE as of date of disability. Minimum duty disability benefit is 50% of FAE.

SUMMARY OF BENEFIT PROVISIONS
AS OF DECEMBER 31, 2004

Eligibility	Amount
ORDINARY DEATH-IN-SERVICE	
(1) Any age with less than 5 years of service.	(1) Beneficiary receives member's contributions and accumulated interest.
(2) Any age with 5 or more years of service.	(2) Beneficiary receives normal or early retirement benefit (depending on eligibility), actuarially reduced as if the member had elected the 100% Joint & Survivor benefit. The combined reduction for the Joint & Survivor reduction and early retirement reduction shall not be more than 50%.
DUTY DEATH-IN-SERVICE	
Death as a result of a work-related accident; not caused by willful neglect of the member.	50% of FAE payable to the unmarried surviving spouse, child, or children under age 18, or dependent parent. If none of the above-mentioned potential beneficiaries are alive at the time of the member's death, a lump sum is payable to the member's estate in the amount of 100% of base salary plus the member's accumulated contributions (including interest) plus accrued fringe benefits not paid at the time of death.
MEMBER CONTRIBUTIONS	
	3.75% of pay for service on and after January 1, 1999. 2.5% of pay for service prior to January 1, 1999. Contributions are credited with 5.0% interest per annum. Members may elect to contribute additional contributions which are accounted for separately. At retirement the additional contribution balance is annuitized to provide and additional benefit, within certain limits.

OPTIONAL FORMS OF PAYMENT

In lieu of the straight life benefit, a member may elect an actuarially reduced benefit in one of the following forms:

100% Joint & Survivor with pop-up
66 2/3 % Joint & Survivor with pop-up
50% Joint & Survivor with pop-up
10-year Certain & Life Option

The actuarial factors for optional forms of payment are based on the 1983 Group Annuity Mortality Table and 7.5% interest.

RETIREES AND BENEFICIARIES COMPARATIVE STATEMENT

Year Ended December 31	Added to Rolls		Removed from Rolls		Rolls End of Year		Average Pension
	No.	Annual Pensions*	No.	Annual Pensions	No.	Annual Pensions	
2003	36	$320,042	26	$210,619	509	$4,981,710	$ 9,787
2004	26	417,907	16	131,448	519	5,268,169	10,151

* *Includes adjustments due to COLA.*

RETIREES AND BENEFICIARIES DECEMBER 31, 2004
TABULATED BY TYPE OF PENSIONS BEING PAID

Type of Pensions Being Paid	Number	Annual Pensions
Age and Service Pensions		
Regular Pension - Benefit terminating at death of retiree	280	$ 2,355,711
For life of member, but not less than 10 years	49	459,354
100% Joint & Survivor	72	896,353
66 2/3% Joint & Survivor	22	343,338
50% Joint & Survivor	27	408,871
Survivor Beneficiary	29	245,952
Survivor of 10-year certain	9	84,562
Total age and service pensions	488	4,794,141
Casualty Pensions		
Duty Disability	25	406,510
Non-Duty Disability	6	67,518
Duty Death - Survivor Benefits	0	0
Non-Duty Death - Survivor Benefits	0	0
Total casualty pensions	31	474,028
Total Pensions Being Paid	**519**	**$5,268,169**

RETIREES AND BENEFICIARIES DECEMBER 31, 2004
TABULATED BY ATTAINED AGES

Attained Age	Age and Service		Casualty		Totals	
	Number	Annual Pensions	Number	Annual Pensions	Number	Annual Pensions
25-29	1	$ 19,046			1	$ 19,046
30-34						
35-39						
40-44	3	40,038	2	$ 30,489	5	70,527
45-49	2	22,024	8	142,455	10	164,479
50-54	6	126,843	2	20,904	8	147,747
55-59	11	196,490	6	109,877	17	306,367
60-64	61	629,080	5	68,843	66	697,923
65-69	88	1,038,645	3	30,847	91	1,069,492
70-74	91	893,090	2	28,125	93	921,215
75-79	96	877,753	2	25,146	98	902,899
80-84	79	587,575	1	17,342	80	604,917
85-89	42	300,455			42	300,455
90-94	8	63,102			8	63,102
95-100						
Totals	**488**	**$ 4,794,141**	**31**	**$ 474,028**	**519**	**$ 5,268,169**

Average Age at Retirement: 62.3 years
Average Age Now: 72.7 years

RETIREES AND BENEFICIARIES DECEMBER 31, 2004
TABULATED BY YEAR OF RETIREMENT

Year of Retirement	Number	Annual Pensions	
		Totals	Average
1974	1	$ 15,124	$ 15,124
1976	2	18,903	9,452
1977	2	17,610	8,805
1978	7	56,356	8,051
1979	4	17,199	4,300
1980	4	28,781	7,195
1981	15	138,626	9,242
1982	11	34,051	3,096
1983	11	77,984	7,089
1984	9	50,127	5,570
1985	10	60,997	6,100
1986	12	80,983	6,749
1987	15	178,818	11,921
1988	15	88,013	5,868
1989	19	194,611	10,243
1990	21	271,434	12,925
1991	24	187,686	7,820
1992	18	233,006	12,945
1993	25	290,886	11,635
1994	38	337,310	8,877
1995	31	300,279	9,686
1996	29	335,090	11,555
1997	21	236,228	11,249
1998	16	162,113	10,132
1999	34	499,502	14,691
2000	29	398,343	13,736
2001	23	269,599	11,722
2002	34	314,817	9,259
2003	18	208,178	11,565
2004	21	165,515	7,882
Totals	**519**	**$5,268,169**	**$ 10,151**

Average Age at Retirement: 62.3 years
Average Age Now: 72.7 years

INACTIVE VESTED MEMBERS DECEMBER 31, 2004
TABULATED BY ATTAINED AGE

Attained Age	Number	Estimated Annual Pensions
30-34	3	$ 14,764
35-39	5	38,910
40-44	4	36,036
45-49	17	94,917
50-54	22	131,509
55-59	23	101,147
Totals	**74**	**$417,283**

Average Age at Termination: 47.2 years
Average Age Now: 50.7 years

ACTIVE MEMBERS ADDED TO AND REMOVED FROM ROLLS

Valuation Date	Number Added During Year		Terminations During Year										Active Members End of Year
			Normal Retirement		Disability Retirement		Died-in Service		Withdrawals				
									Vested	Other	Totals		
	A	E	A	E	A	E	A	E	A	A	A	E	
2003	166	265	24	N/A	1	N/A	0	N/A	68	172	240	N/A	1,316
2004	162	134	20	64.1	0	0.7	0	2.0	9	105	114	45.3	1,344
5-Year Totals*	328	399	44	64	1	1	0	2	77	277	354	45.3	

A = Actual
E = Expected
** As of December 31, 2004, only two years of information available.*

ACTIVE MEMBERS DECEMBER 31, 2004
BY ATTAINED AGE AND YEARS OF SERVICE

Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals Number	Totals Valuation Payroll
20-24	44	2						46	$ 1,170,207
25-29	76	9						85	2,117,963
30-34	60	19	9					88	3,003,031
35-39	59	31	18	9				117	3,902,900
40-44	102	42	19	36	16			215	7,138,883
45-49	79	70	37	28	15	21		250	8,179,575
50-54	66	43	40	40	17	28	17	251	9,222,174
55-59	33	34	19	30	24	14	11	165	6,058,148
60-64	9	11	8	16	13	9	10	76	3,044,570
65-69	7	2	1	6	5	5	2	28	850,096
70-74	4	3	3	1	2	2	1	16	228,534
75-79		2	1	1	1	2		7	111,849
Totals	**539**	**268**	**155**	**167**	**93**	**81**	**41**	**1,344**	**$45,027,930**

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

Age:	46.2 years
Service:	10.0 years
Annual Pay:	$33,503

SECTION C

Valuation Methods and Assumptions

ACTUARIAL COST METHOD

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

- the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, are sufficient to accumulate the value of the member's benefit at the time of retirement;

- each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

MECRS currently has a tiered benefit structure with the ultimate tier being more costly than the initial tier. The normal cost is computed based on this tiered structure. As a result, the normal cost rate is expected to increase as the members affected by the initial tier are replaced by new members.

Financing of Unfunded Actuarial Accrued Liabilities. Unfunded actuarial accrued liabilities were amortized by level (principal and interest combined) percent of payroll contributions over 29 future years.

Asset Valuation Method. Last year's valuation assets are increased by contributions and reduced by refunds, benefit payments and expenses. An amount equal to the assumed investment return for the year is then added. Differences between actual return on a market value basis and an assumed return are phased in over a five-year period. For the December 31, 2004 valuation, the Funding Value of assets was reset to the Market Value as of January 1, 2004.

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

The contribution requirements and benefit values of the System are calculated by applying actuarial assumptions to the benefit provisions and member information furnished, using the actuarial cost method described on the previous page.

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

- long-term rates of investment return to be generated by the assets of the System,
- patterns of pay increases to members,
- rates of mortality among members, retirees and beneficiaries,
- rates of withdrawal of active members,
- rates of disability among members,
- the age patterns of actual retirement.

In a valuation, the monetary effect of each assumption is calculated for as long as a present covered person survives - - - a period of time which can be as long as a century.

Actual experience of the System will not coincide exactly with assumed experience, regardless of the accuracy of the assumptions, or the skill of the actuary and the precision of the many calculations made. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate.

From time to time it becomes appropriate to modify one or more of the assumptions, to reflect experience trends (but not random year-to-year fluctuations). New assumptions are reflected in this report pursuant to the January 1, 1999 – December 31, 2003 experience study of the MECRS.

VALUATION ASSUMPTIONS

The rate of investment return was 7.5 percent per year, compounded annually (net of administrative and investment expenses). This assumption is used to make money payable at one point in time equal in value to a different amount of money payable at another point in time. The assumed real rate of return (the net return in excess of the wage inflation rate) is 3.5%. Experience over the last 5 years has been as follows:

	Year Ended December 31					5-Year*
	2004	2003	2002	2001	2000	Average
1) Nominal rate of return#	8.1 %	6.4 %	N/A	N/A	N/A	N/A
2) Increase in CPI	3.3 %	1.9 %	2.4 %	1.6 %	3.4 %	2.5 %
3) Average salary increase (ASI)	5.0 %	1.0 %	N/A	N/A	N/A	N/A
4) Real Return						
- Total: CPI (1) - (2)						N/A
- Total: ASI (1) - (3)						N/A
- Assumption						3.5 %

 # The nominal rate of return was computed using the approximate formula: i = I divided by 1/2 (A+B-I), where I is realized investment income net after expenses, A is the beginning of year asset value and B is the end of year asset value.

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefit amounts will be based.

	Salary Increase Assumptions For an Individual Member		
Service	Merit & Seniority	Base (Economic)	Increase Next Year
1	10.00%	4.00%	14.00%
2	8.50%	4.00%	12.50%
3	7.00%	4.00%	11.00%
4	5.50%	4.00%	9.50%
5	4.00%	4.00%	8.00%
6	3.00%	4.00%	7.00%
7	2.50%	4.00%	6.50%
8	2.00%	4.00%	6.00%
9	1.50%	4.00%	5.50%
10	1.00%	4.00%	5.00%
15	0.00%	4.00%	4.00%
20	0.00%	4.00%	4.00%
25	0.00%	4.00%	4.00%
30	0.00%	4.00%	4.00%
35	0.00%	4.00%	4.00%
40	0.00%	4.00%	4.00%
Ref:	105		

If the number of active members remains constant, then the total active member payroll will increase 4.0% annually, the base portion of the individual salary increase assumptions. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities.

VALUATION ASSUMPTIONS

The mortality table was the 1994 Group Annuity Mortality Table (100% of male rates, 95% of female rates), set back 1 year for men and 0 years for women.

Sample Attained Ages	Single Life Retirement Values			
	Present Value of $1 Monthly for Life		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	$139.43	$147.83	29.77	35.35
55	130.75	141.34	25.26	30.63
60	120.14	132.91	21.00	26.03
65	108.03	122.75	17.10	21.69
70	94.89	111.01	13.63	17.69
75	80.51	96.97	10.53	13.95
80	65.77	81.46	7.89	10.62
Ref:	261 x 1.00 sb 1	262 x 0.95 sb 0		

This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement.

The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows:

Active Members Retiring Next Year	
Ages	% Retiring
50	5%
51	5%
52	5%
53	5%
54	10%
55	10%
56	10%
57	10%
58	10%
59	10%
60	10%
61	10%
62	35%
63	10%
64	10%
65	35%
66	15%
67	15%
68	15%
69	15%
70	100%
Ref.	730

A member was assumed to be eligible for normal retirement after attaining age 60 with 5 or more years of service. A member was assumed to be eligible for early retirement after attaining age 55 with at least 20 years of service or if the sum of age and service is at least 80.

Rates of separation from active membership are shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

Sample Ages	Service	% of Active Members Separating Within Next Year	
		Men	Women
	0-1	10.00%	14.00%
	1-2	17.00%	14.00%
	2-3	12.00%	14.00%
	3-4	5.00%	7.00%
	4-5	5.00%	7.00%
30	5 & Up	2.34%	8.00%
35		2.00%	6.40%
40		1.49%	4.40%
45		1.00%	2.30%
50		1.00%	1.90%
Ref.		231 83	345 465

Rates of disability were divided equally between duty and non-duty disability, and are as follows:

Sample Ages	% of Active Members Becoming Disabled Within Next Year	
	Male	Female
20	0.007%	0.020%
25	0.007%	0.025%
30	0.007%	0.030%
35	0.037%	0.040%
40	0.142%	0.050%
45	0.292%	0.075%
50	0.480%	0.130%
55	0.712%	0.245%
60	1.060%	0.605%
Ref.	37 x 1.00	238 x 0.50

Expense Load. None.

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS
DECEMBER 31, 2004

Marriage Assumption:	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses.
Pay Increase Timing:	Beginning of the year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and exact fractional service on the date the decrement is assumed to occur.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability and withdrawal decrements do not operate after member reaches retirement eligibility.
Normal Form of Benefit:	The assumed normal form of benefit is the straight life form.
Miscellaneous Adjustments:	None.
Benefit Service:	Exact fractional service as of the valuation date is used to determine the amount of benefit payable.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the actual payroll payable at the time contributions are made.

SECTION D

GASB STATEMENT NO. 25

GASB STATEMENT NO. 25
REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Funding Progress

Actuarial Valuation Date	(a) Actuarial Value of Assets $Millions	(b) Actuarial Accrued Liability (AAL) Entry Age $Millions	(b) - (a) Unfunded AAL (UAAL) $Millions	Funded Ratio (a)/(b)	Covered Payroll ($ millions) (c)	UAAL as a Percent of Covered Payroll [(b) - (a)] / (c)
12/31/1995	$ 55.6	$ 52.6	$ (3.0)	105.7 %	$23.3	-
12/31/1996	59.8	56.7	(3.1)	105.5 %	24.4	-
12/31/1997	65.8	61.5	(4.3)	107.0 %	27.0	-
12/31/1998	72.6	71.1	(1.5)	102.1 %	28.4	-
12/31/1999	82.6	79.3	(3.3)	104.1 %	29.6	-
12/31/2000	90.1	87.1	(3.0)	103.4 %	35.4	-
12/31/2001	94.8	96.3	1.5	98.4 %	38.7	3.8 %
12/31/2002	89.7	106.1	16.4	84.5 %	38.9	42.0 %
12/31/2003	95.3	116.3	21.0	81.9 %	42.0	50.0 %
12/31/2004	103.8	126.3	22.5	82.2 %	45.0	50.0 %

Schedule of Employer Contributions

Valuation Year Ended December 31	Fiscal Year Ended June 30	Contribution Rate as a Percent of Valuation Payroll	Annual Recommended Contribution	Actual Contributions	Percent Contributed
1996	1998	N/A	$ 543,835	$ 543,835	100%
1997	1999	N/A	514,216	514,216	100%
1998	2000	N/A	796,552	796,552	100%
1999	2001	N/A	713,685	713,685	100%
2000	2002	N/A	1,117,163	1,117,163	100%
2001	2003	N/A	1,794,576	1,794,576	100%
2002	2004	N/A	3,323,023	3,323,023	100%
2003	2005	8.76%	3,844,598	N/A	N/A
2004	2006	8.72%	4,083,493	N/A	N/A

GASB STATEMENT NO. 25
REQUIRED SUPPLEMENTARY INFORMATION

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

Valuation date	December 31, 2004
Actuarial cost method	Entry Age Normal
Amortization method	Level percent of payroll
Remaining amortization period	29 years
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment net rate of return*	7.5%
Projected salary increases*	4.0%-14.4%
Cost-of-living adjustments	0.5%
*Includes inflation at	4.0%

Membership of the plan consisted of the following at December 31, 2004, the date of the latest actuarial valuation:

Retirees and Beneficiaries receiving benefits	519
Terminated plan members entitled to but not yet receiving benefits	74
Active plan members	1,344
Total	1,937

SECTION E

OPERATION OF THE RETIREMENT SYSTEM

BASIC FINANCIAL OBJECTIVE AND OPERATION OF THE RETIREMENT SYSTEM

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

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

This Retirement System meets the requirement of funding future benefits during the year by having the following ***Financial Objective: To establish and receive contributions, expressed as percents of active member payroll, which will remain approximately level from year to year*** and will not have to be increased for future generations of taxpayers.

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

> ***Normal Cost*** (the current value of benefits likely to be paid on account of members' service being rendered in the current year)
>
> ... plus ...
>
> ***Interest on the Unfunded Actuarial Accrued Liability*** (the difference between the actuarial accrued liability and current system assets).

If contributions to the Retirement System are less than the preceding amount, the difference, plus investment earnings not realized thereon, will have to be contributed at some later time, or, benefits will have to be reduced, to satisfy the fundamental fiscal equation under which all retirement systems must operate; that is:

B = C + I - E

***B*enefit** payments to any group of members and their beneficiaries cannot exceed the sum of:

***C*ontributions** received on behalf of the group

... plus ...

***I*nvestment** earnings on contributions received

... minus ...

***E*xpenses** incurred in the operation of the system.

There are retirement systems designed to defer the bulk of contributions far into the future. They are lured by artificially low present contributions, but the inevitable consequence is a relentlessly increasing contribution rate to a level greatly in excess of the level percent-of-payroll rate.

A by-product of the level percent-of-payroll contribution objective is the accumulation of invested assets for varying periods of time. Investment income becomes a major contributor to the Retirement System, and the amount is directly related to the amount of contributions and investment performance.

Computed Contribution Rate Needed to Finance Benefits. From a given schedule of benefits and from the data furnished, the contribution rate is calculated ***by means of an actuarial valuation*** - the technique of assigning monetary values to the risks assumed in operating a retirement system.

GLOSSARY

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

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

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

Actuarial Equivalent. A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Experience Gain (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liabilities. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."

Valuation Assets. The value of current plan assets recognized for valuation purposes.

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March 1, 2005

Mr. Gerald Fleury, Executive Director
City of Manchester Employees'
Contributory Retirement System
1045 Elm Street, Suite 403
Manchester, New Hampshire 03101-1829

Dear Mr. Fleury:

Please find enclosed 15 copies of the report of the Actuarial Valuation of the City of Manchester Employees' Contributory Retirement System.

Sincerely,

Kenneth G. Alberts

KGA/lr
Enclosures

cc: Mark Buis