City of Grand Rapids
General Retirement System

38th Annual Actuarial Valuation

June 30, 2005

GRS

Gabriel, Roeder, Smith & Company
Actuaries ● Consultants

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October 25, 2005

The Board of Trustees
City of Grand Rapids General
Retirement System
Grand Rapids, Michigan

Dear Board Members:

The results of the ***38th Annual Actuarial Valuation*** of the City of Grand Rapids General Retirement System are presented in this report. The purpose of the annual valuation is to measure the System's funding progress and to determine the City's contribution rate for the ensuing fiscal year in accordance with the established funding policy.

The date of the valuation was ***June 30, 2005***.

The valuation was based upon statistical data furnished by your Executive Director concerning Retirement System benefits, financial transactions, individual members, terminated members and retirants and beneficiaries. Data was checked for internal and year-to-year consistency but was not otherwise audited. This information is summarized in Section B.

To the best of our knowledge this report is complete and accurate and was made in accordance with standards of practice prescribed by the Actuarial Standards Board and in compliance with the Retirement System Ordinance.

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY

Norman L. Jones David L. Hoffman

DLH:sew:bd

Section A

Valuation Results

CONTRIBUTIONS TO PROVIDE BENEFITS FOR FISCAL YEAR BEGINNING JULY 1, 2006

Contributions for	% of Active Payroll
Normal cost of benefits:	
Age & service pensions	14.83 %
Disability pensions (CRF)	0.49 %
Death-in-service pensions	0.29 %
Refunds of member contributions	0.25 %
Totals	15.86 %
Member contributions (weighted average) #	3.95 %
Employer Normal Cost	11.91 %
Unfunded actuarial accrued liabilities*	4.50 %
COMPUTED EMPLOYER RATE @	**16.41 %**

* *Amortized as a level percent of payroll over a period of 15 years.*

\# *Weighted average of member contribution rates described on pages B-5 and B-6.*

@ *In addition to this percent-of-payroll contribution, the City contributes for (i) certain Supplemental Benefits for a small, closed group of retirants and beneficiaries in accordance with the provisions of Ordinance Section 1.290, and (ii) 0.5% of payroll to provide a Medicare Supplement for members retiring after December 31, 1989.*

DETERMINING EMPLOYER DOLLAR CONTRIBUTIONS

For any period of time, the percent-of-payroll contribution rate needs to be converted to dollars – and then contributed to the Retirement System in a timely manner.

The recommended procedure is: (1) ***at the end of each payroll period, multiply the active member payroll for the period by the employer contribution percent***; and (2) ***promptly contribute the dollar amount so determined***.

Valuation payroll is $53,451,352.

ALLOCATION OF VALUATION ASSETS
YEAR ENDED JUNE 30, 2005

In financing the actuarial accrued liabilities, valuation assets of $305,533,088 were distributed as follows:

	Present Valuation Assets Applied to			
Reserves for	**Non-Retired Member Actuarial Accrued Liabilities**	**Retired Life Actuarial Liabilities**	**Contingency Reserve**	**Totals**
Member Contributions (MDF)	$ 24,424,393			$ 24,424,393
Employer Contributions (EAF)	135,982,690			135,982,690
Retired Benefit Payments				
(BRF)	125,803	$150,637,824		150,763,627
(CRF)	(410,533)	4,767,192		4,356,659
Undistributed Income (IEF)	(9,994,281)			(9,994,281)
Totals	$150,128,072	$155,405,016	$0	$305,533,088

Assets were applied against actuarial accrued liabilities in determining unfunded actuarial accrued liabilities as follows:

	Retired Lives	**Non-Retired Members**	**Total**
Computed Actuarial Accrued Liabilities and Reserves	$155,405,016	$179,149,215	$334,554,231
Applied Assets	155,405,016	150,128,072	305,533,088
Unfunded Actuarial Accrued Liabilities (Full Funding Credit)	$ 0	$ 29,021,143	$ 29,021,143

DERIVATION OF EXPERIENCE GAIN (LOSS)
YEAR ENDED JUNE 30, 2005

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

		2004-05	2003-04
(1)	UAAL* at start of year	$25,601,702	$26,930,316
(2)	Employer normal cost from last valuation	6,029,121	5,957,337
(3)	Actual employer contributions	8,632,941	5,916,496
(4)	Interest accrual:		
	[(1) + ½ [(2) – (3)]] x .075	1,822,484	2,021,305
(5)	Expected UAAL before changes:		
	(1) + (2) – (3) + (4)	24,820,366	28,992,462
(6)	Increase from benefit changes	10,519,866	none
(7)	Change from revised actuarial assumptions or valuation methods	none	none
(8)	Change in SPDR (13th Check Reserve)	none	none
(9)	Expected UAAL after changes:		
	(5) + (6) + (7) + (8)	35,340,232	28,992,462
(10)	Actual UAAL at end of year	29,021,143	25,601,702
(11)	Gain (loss): (9) - (10)	$ 6,319,089	$ 3,390,760
(12)	Gain (loss) as percent of actuarial accrued liabilities at start of year ($307,762,043)	2.1%	1.1%

* *Unfunded Actuarial Accrued Liabilities.*

Valuation Date June 30	Experience Gain (Loss) As % of Beginning Accrued Liability
2000	1.8 %
2001	(4.2)%
2002	(6.9)%
2003	(7.1)%
2004	1.1 %
2005	2.1 %

SUMMARY STATEMENT OF SYSTEM RESOURCES AND OBLIGATIONS
YEAR ENDED JUNE 30, 2005

Present Resources and Expected Future Resources

A.	Present Valuation assets:	
	1. Net assets from system financial statements	$329,002,497
	2. Market value adjustment	(23,469,409)
	3. Valuation assets	305,533,088
B.	Actuarial present value of expected future employer contributions:	
	1. For normal costs	62,430,791
	2. For unfunded actuarial accrued liability	29,021,143
	3. Total	91,451,934
C.	Actuarial present value of expected future member contributions	21,888,708
D.	Total Present and Expected Future Resources	$418,873,730

Actuarial Present Value of Expected Future Benefit Payments

A.	To retirants and beneficiaries:	
	1. Annual pensions - BRF	$150,637,824
	- CRF	4,767,192
	2. Reserve	0
	3. Total	155,405,016
B.	To vested terminated members:	4,122,036
C.	To present active members:	
	1. Allocated to service rendered prior to valuation date - actuarial accrued liability	175,027,179
	2. Allocated to service likely to be rendered after valuation date	84,319,499
	3. Total	259,346,678
D.	Total Actuarial Present Value of Expected Future Benefit Payments	$418,873,730

COMMENT A: The Retirement System realized an experience gain for the year ending June 30, 2005 equal to 2.1% of the beginning of the year actuarial accrued liability (see page A-3). The experience gain was primarily the result of favorable financial experience (see page B-8). The unrecognized portion of this year's market gain will be phased in over the next two plan years.

COMMENT B: The June 30, 2005 actuarial valuation reflects the impact of negotiated benefit and member contribution rate increases. The effects of these increases are shown on pages A-8 and A-9. Benefit multipliers and member contribution rates are shown on pages B-2, B-3, B-5 and B-6.

COMMENT C: The City set the amortization period at 15 years for the June 30, 2005 actuarial valuation. Previously, the remaining period was 12 years. This change decreased the employer contribution rate by 0.88%.

RECOMMENDATION FOR REGULAR RESERVE TRANSFER: In accordance with established practice, we recommend that the June 30, 2005 closing balance in the Income-Expense Fund be transferred as of July 1, 2005 to the Employer Accumulation Fund. In this manner the EAF will benefit when investment income is greater than assumed while at the same time the EAF is responsible for losses incurred when other experience is less favorable than assumed. This transfer was assumed to have been made for purposes of the June 30, 2005 valuation. The recommended transfer is summarized below:

Transfer From	To	Amount
IEF	EAF	$(9,994,281)
EAF	CRF	410,533
BRF	EAF	125,803

Ending balances, on a cost basis, in each reserve fund as of June 30, 2005, were assumed to be as follows:

MDF	EAF	BRF	CRF	IEF
$24,424,393	$125,703,679	$150,637,824	$4,767,192	$0

CONCLUSION: The City's contribution rate for the fiscal year beginning July 1, 2006 has been computed to be 16.41% of active member payroll based on the funding policy specified in the retirement ordinance. **The Retirement System continues to be in excellent financial condition with valuation assets equaling 91.3% of computed accrued liabilities**.

BENEFIT RESERVE FUND
COMPARATIVE STATEMENT

Valuation Date	Pensions Being Paid No.	Pensions Being Paid $/Month	BRF Assets	Actuarial Accrued Liabilities		Assets/ Liabilities
9/30/82	593	$ 154,603	$ 17,591,530	$ 17,108,460		102.8%
9/30/83	601	168,256	19,016,088	18,560,700		102.5%
9/30/84	619	186,436	20,979,011	20,605,790		101.8%
9/30/85	629	207,275	24,239,762	23,341,044		103.9%
9/30/86	647	237,439	27,797,199	26,983,272		103.0%
6/30/87	633	247,460	29,505,741	28,091,664		105.0%
6/30/88	651	279,244	32,674,436	32,424,564		100.8%
6/30/89	651	312,958	36,776,104	36,479,100		100.8%
6/30/90	663	343,281	40,073,257	40,093,944		99.9%
6/30/91	678	369,579	41,562,455	42,761,376		97.2%
6/30/92	665	389,614	43,117,326	46,723,992		92.3%
6/30/93	672	427,573	50,569,023	50,970,952		99.2%
6/30/94	691	493,395	58,667,587	59,146,993		99.2%
6/30/95	708	550,795	66,024,913	66,238,128		99.7%
6/30/96 @	694	566,986	66,130,823	65,059,236		101.6%
6/30/97	723	655,088	78,180,552	75,499,536		103.6%
6/30/98	744	733,413	86,953,541	85,337,556		101.9%
6/30/99	738	767,331	89,129,126	89,023,224		100.1%
6/30/00	760	842,336	95,495,173	97,823,364		97.6%
6/30/01 @	776	912,560	103,845,535	108,962,016		95.3%
6/30/02	844	1,177,287	111,628,579	115,595,412	*	96.6%
6/30/03	823	1,196,319	143,899,020	142,984,548	#	100.6%
6/30/04	810	1,201,433	145,869,450	145,138,248		100.5%
6/30/05	818	1,254,783	150,763,627	150,637,824		100.1%

@ *Revised actuarial assumptions*

* *Not including July 1, 2002 retirements. Total liability including July window retirements was $145,321,248.*

\# *Not including July 1, 2003 retirements. Total liability including July window retirements was $146,183,328.*

CASUALTY RESERVE FUND
COMPARATIVE STATEMENT

Valuation Date	Disabilities Being Paid No.	Disabilities Being Paid $/Month	CRF Assets	Liabilities For Present Disabilities	Contingency Reserve*
9/30/82	22	$10,177	$1,381,658	$1,296,372	$ 85,286
9/30/83	25	11,842	1,509,405	1,518,396	(8,991)
9/30/84	26	12,263	1,638,468	1,652,532	(14,064)
9/30/85	28	13,207	1,818,208	1,769,352	48,856
9/30/86	32	16,241	1,966,972	2,171,856	(204,884)
6/30/87	30	15,522	2,095,985	2,042,028	53,957
6/30/88	31	16,529	2,262,923	2,192,592	70,331
6/30/89	32	17,006	2,444,130	2,285,292	158,838
6/30/90	33	18,946	2,648,324	2,458,992	189,332
6/30/91	37	21,878	2,846,753	2,806,092	40,661
6/30/92	37	21,861	2,955,426	2,847,432	107,988
6/30/93	35	20,389	3,125,197	2,618,868	506,329
6/30/94	34	20,012	3,394,462	2,517,767	876,695
6/30/95	33	18,952	3,716,251	2,327,256	1,388,995
6/30/96 @	34	21,084	4,088,821	2,408,004	1,680,817
6/30/97	37	25,370	4,524,646	2,896,728	1,627,918
6/30/98	38	29,023	4,952,402	3,369,024	1,583,378
6/30/99	36	27,590	5,259,793	3,029,544	2,230,249
6/30/00	35	27,240	3,790,662	2,915,748	874,914
6/30/01 @	35	29,042	3,783,851	3,204,348	579,503
6/30/02	35	26,471	3,766,314	2,853,444	912,870
6/30/03	36	31,132	3,698,081	3,675,756	22,325
6/30/04	37	36,334	3,644,731	4,447,596	(802,865)
6/30/05	39	39,059	4,356,659	4,767,192	(410,533)

* *A positive amount indicates less costly disability experience than assumed, while a (negative) amount indicates more costly disability experience than assumed.*

@ *Revised actuarial assumptions.*

ACTUARIAL ACCRUED LIABILITIES & ASSETS
HISTORICAL COMPARATIVE SCHEDULE
($ AMOUNTS IN MILLIONS)

Valuation Date	Valuation Assets	Actuarial Accrued Liability Dollar Amount	Actuarial Accrued Liability Funded Ratio[1]	Unfunded Actuarial Accrued Liability Dollar Amount	Unfunded Actuarial Accrued Liability Ratio to Payroll [2]	Unfunded Actuarial Accrued Liability Financing Period
9/30/80 *	$32.4	$51.4	63.0 %	$19.0	88.5 %	24
9/30/81 @	36.9	56.3	65.5 %	19.4	81.5 %	23
9/30/82 *	42.6	63.9	66.7 %	21.3	91.1 %	22
9/30/83	48.8	65.8	74.2 %	17.0	77.0 %	21
9/30/84	55.6	71.0	78.3 %	15.4	66.6 %	20
9/30/85	62.6	78.4	79.9 %	15.8	63.7 %	19
9/30/86	71.5	85.6	83.5 %	14.1	53.3 %	18
6/30/87	82.9	95.9	86.5 %	13.0	47.2 %	30
6/30/88	91.3	104.8	87.1 %	13.5	45.9 %	29
6/30/89	100.7	111.8	90.1 %	11.1	37.6 %	28
6/30/90 *	111.1	124.5	89.2 %	13.4	43.8 %	27
6/30/91	119.9	134.4	89.2 %	14.4	42.5 %	26
6/30/92 @	126.1	153.0	82.4 %	27.0	71.7 %	25
6/30/93	139.6	165.8	84.2 %	26.2	67.3 %	24
6/30/94	151.8	180.2	84.2 %	28.4	71.4 %	23
6/30/95 *	161.1	192.5	83.7 %	31.4	76.6 %	22
6/30/96 *@	198.4	205.5	96.6 %	7.1	16.4 %	21
6/30/97	220.9	217.8	101.4 %	(3.1)	-	20
6/30/98	244.0	231.9	105.2 %	(12.0)	-	19
6/30/99	269.1	245.4	109.6 %	(23.7)	-	18
6/30/00	286.1	257.1	111.3 %	(29.0)	-	17
6/30/01 *@	290.5	269.5	107.8 %	(21.0)	-	16
6/30/02	282.8	285.3	99.1 %	2.5	5.1 %	15
6/30/03 *	270.6	297.6	90.9 %	26.9	52.7 %	14
6/30/04	282.2	307.8	91.7 %	25.6	49.4 %	13
6/30/05	305.5	324.0	94.3 %	18.5	34.6 %	15
6/30/05 *	305.5	334.6	91.3 %	29.0	54.3 %	15

* *Retirement System amended.*
@ *Revised actuarial assumptions.*

[1] ***Valuation Assets as a Percent of AAL*** is a traditional measure of a system's funding progress. Except in years when the system is amended or actuarial assumptions are revised, this percent can be expected to move gradually toward 100%.

[2] ***UAAL as a Percent of Valuation Payroll*** is another relative index of condition. Unfunded actuarial accrued liabilities represent debt, while active member payroll represents the system's capacity to collect contributions to pay toward debt. The lower the percent, the greater the financial strength and vice-versa.

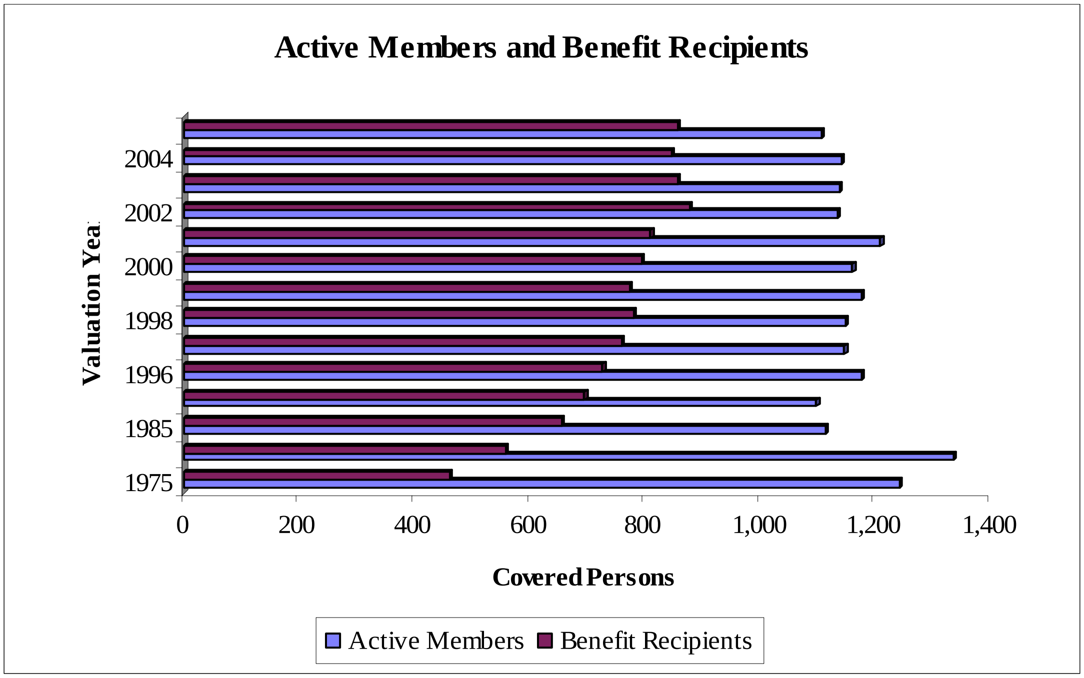
City and Member Contributions
Historical Comparison

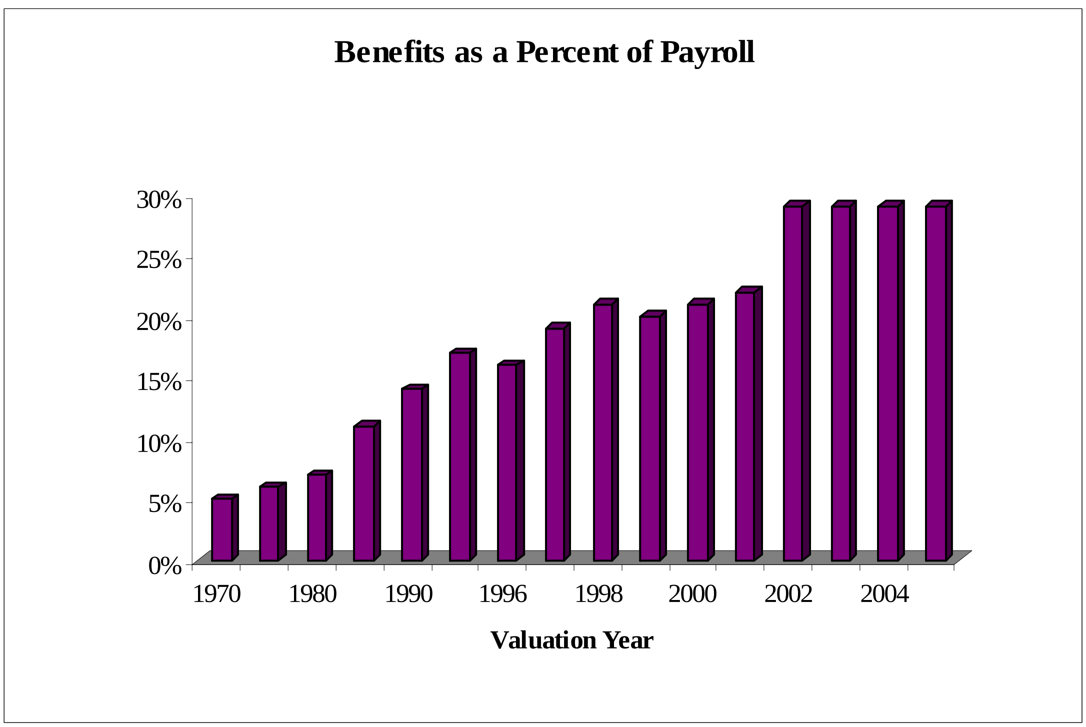
Valuation Date	Fiscal Year	Computed Contributions as %'s of Active Member Payroll		
		Member	Employer	Total
9/30/75	76/77	3.00%	13.28%	16.28%
9/30/76*	77/78	3.00%	14.60%	17.60%
9/30/77*	78/79	4.00%	15.30%	19.30%
9/30/78	79/80	4.00%	14.94%	18.94%
9/30/79	80/81	4.00%	14.13%	18.13%
9/30/80*	81/82	4.00%	14.01%	18.01%
9/30/81@	82/83	4.00%	12.87%	16.87%
9/30/82*	83/84	4.00%	14.82%	18.82%
9/30/83	84/85	4.00%	14.07%	18.07%
9/30/84	85/86	4.00%	13.62%	17.62%
9/30/85	86/87	4.00%	13.61%	17.61%
9/30/86	87/88	4.00%	13.13%	17.13%
6/30/87	88/89	4.00%	13.05%	17.05%
6/30/88	89/90	4.05%	12.63%	16.68%
6/30/89	90/91	4.02%	12.30%	16.32%
6/30/90*	91/92	3.28%	13.85%	17.13%
6/30/91	92/93	3.28%	13.91%	17.19%
6/30/92@	93/94	3.28%	16.42%	19.70%
6/30/93	94/95	3.30%	16.34%	19.64%
6/30/94	95/96	3.21%	16.85%	20.06%
6/30/95*	96/97	3.24%	16.91%	20.15%
6/30/96@	97/98	3.25%	11.75%	15.00%
6/30/97	98/99	3.25%	10.33%	13.58%
6/30/98@	99/00	3.25%	5.20%	8.45%
6/30/99	00/01	3.25%	0.43%	3.68%
6/30/00	01/02	3.25%	0.00%	3.25%
6/30/01*@	02/03	3.18%	2.55%	5.73%
6/30/02	03/04	3.17%	12.05%	15.22%
6/30/03*	04/05	3.17%	16.30%	19.47%
6/30/04	05/06	3.24%	16.24%	19.48%
6/30/05	06/07	3.24%	14.52%	17.76%
6/30/05*	06/07	3.95%	16.41%	20.36%

* *Retirement System amended.*
@ *Revised actuarial assumptions.*

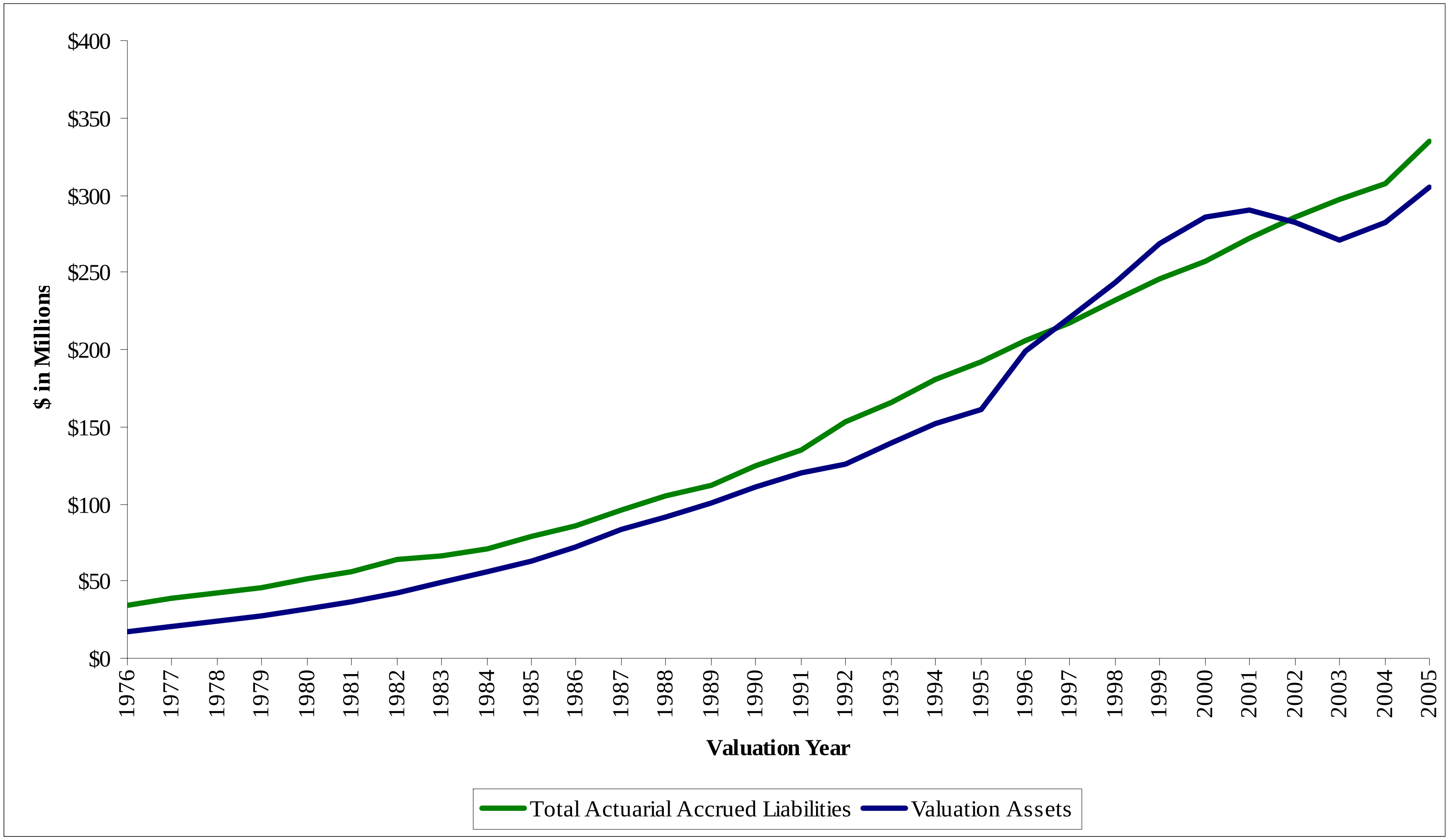
Active Members and Retired Lives
Historic Comparative Schedule

	Active Members				Retired Lives			
		Valuation Payroll				Active	Annual Benefits	
Valuation Date	No.	$ Millions	Average	% Incr.	No.	per Retired	$ Millions	As a % of Pay
9/30/76	1,203	16.0	13,274	6.9%	477	2.5	0.9	5.6%
9/30/77	1,228	17.0	13,843	4.3%	510	2.4	1.1	6.3%
9/30/78	1,265	18.2	14,371	3.8%	528	2.4	1.2	6.4%
9/30/79	1,288	19.3	14,979	4.2%	554	2.3	1.3	6.9%
9/30/80	1,337	21.5	16,065	7.3%	560	2.4	1.4	6.6%
9/30/81	1,239	23.8	19,242	19.8%	593	2.1	1.8	7.4%
9/30/82	1,191	23.3	19,585	1.8%	615	1.9	2.0	8.5%
9/30/83	1,122	22.0	19,627	0.2%	626	1.8	2.2	9.8%
9/30/84	1,127	23.2	20,553	4.7%	645	1.7	2.4	10.3%
9/30/85	1,115	24.7	22,175	7.9%	657	1.7	2.6	10.7%
9/30/86	1,137	26.5	23,315	5.1%	679	1.7	3.0	11.5%
6/30/87	1,164	27.4	23,550	1.0%	663	1.8	3.2	11.5%
6/30/88	1,161	29.4	25,337	7.7%	682	1.7	3.5	11.9%
6/30/89	1,115	29.5	26,499	4.6%	683	1.6	4.0	13.4%
6/30/90	1,099	30.6	27,804	4.9%	696	1.6	4.3	14.1%
6/30/91	1,168	33.9	29,031	4.4%	715	1.6	4.7	13.9%
6/30/92	1,208	37.7	31,208	7.5%	702	1.7	4.9	13.1%
6/30/93	1,171	38.9	33,214	6.4%	707	1.7	5.4	13.8%
6/30/94	1,137	39.8	34,977	5.3%	725	1.6	6.2	15.5%
6/30/95	1,153	41.0	35,573	1.7%	741	1.6	6.8	16.6%
6/30/96	1,176	43.3	36,790	3.4%	728	1.6	7.1	16.4%
6/30/97	1,148	43.2	37,597	2.2%	760	1.5	8.2	18.9%
6/30/98	1,150	43.9	38,145	1.5%	782	1.5	9.1	20.7%
6/30/99	1,177	47.6	40,479	6.1%	774	1.5	9.5	20.0%
6/30/00	1,162	48.9	42,051	3.9%	795	1.5	10.4	21.3%
6/30/01	1,210	52.3	43,259	2.9%	811	1.5	11.3	21.6%
6/30/02	1,135	49.2	43,357	0.2%	879	1.3	14.5	29.4%
6/30/03	1,139	51.0	44,781	3.3%	859	1.3	14.7	28.9%
6/30/04	1,142	51.8	45,317	1.2%	847	1.3	14.9	28.7%
6/30/05	1,108	53.5	48,241	6.5%	857	1.3	15.5	29.0%
20-Year Average				4.0%				


Active Members and Benefit Recipients
Valuation Yea
2004
2002
2000
1998
1996
1985
1975
0
200
400
600
800
1,000
1,200
1,400
Covered Persons
Active Members
Benefit Recipients


Benefits as a Percent of Payroll
30%
25%
20%
15%
10%
5%
0%
1970
1980
1990
1996
1998
2000
2002
2004
Valuation Year

ACTUARIAL ACCRUED LIABILITIES & ASSETS



Section B

Valuation Data

SUMMARY OF BENEFIT PROVISIONS EVALUATED (JUNE 30, 2005)

Voluntary Retirement. A member may retire after 30 years of service regardless of age, or after attaining age 62 and completing 8 years of service. Effective January 1, 2001, members covered by the Emergency Communications Operators Bargaining Unit, after attaining age 55 and completing 8 years of service.

Final Average Salary (FAS). The average of member's highest annual salary rates, all before completion of the calendar year in which the employee attains 40 years of service or reach their benefit cap, during the 3 calendar years of credited service when such salary rates were the highest.

Members of the Crime Scene Technicians group shall have an additional sum added to their FAS, effective July 1, 2000. The sum is calculated based on an average of the group's additional compensation items during the previous three calendar years and the average of the group's valuation payroll as of June 30 for the five year period immediately preceding the valuation.

Emergency Communication Operators I and II shall also have an additional sum added to their FAS, effective July 1, 2005. The sum is calculated based on an average of the group's additional compensation items during the previous five calendar years and the average of the group's valuation payroll as of June 30 for the five year period immediately preceding the valuation.

Full Age and Service Allowance. The members' benefit multipliers, used to compute full age and service allowance, are shown in the tables on the following page:

In lieu of this single life-level amount form of payment, a retiring member may elect from several optional forms of payment, each of which is the actuarial equivalent of this single life-level payment form.

SUMMARY OF BENEFIT PROVISIONS EVALUATED
(JUNE 30, 2005)

Covered Employee Group	Date of Termination	Benefit Multiplier	Allowance Cap
Non – Represented Supervisors, Administrative, Clerical and Executive Classifications, Appointed, Elected officials, and Judges only	**January 1, 2005 -**	**2.7%**	**36 years and 1 month for employees hired prior to January 1, 2005 35 years for employees hired on or after January 1, 2005**
G.R. Museum full-time Supervisory and Administrative staff	**January 1, 2005 -**	**2.7%**	**36 years and 1 month for employees hired prior to January 1, 2005 35 years for employees hired on or after January 1, 2005**
G.R. Public Museum Non-Supervisory staff (not covered by Management Compensation & Fringe Benefits Handbook)	**January 1, 2005 -**	**2.7%**	**36 years and 1 month for employees hired prior to January 1, 2005 35 years for employees hired on or after January 1, 2005**
Emergency Communications Operators I and II represented by POLC	**January 1, 2002**	**2.7%**	**40 years for employees hired prior to May 6, 2002 33 years and 4 months applicable to for all employees entering this unit after May 7, 2002**
Emergency Communication Supervisors	**January 1, 2006 -**	**2.7%**	**40 years for employees hired prior to June 30, 2004 33 years and 4 months applicable to for all employees entering this unit after July 1, 2004**

SUMMARY OF BENEFIT PROVISIONS EVALUATED
(JUNE 30, 2005)

Covered Employee Group	Date of Termination	Benefit Multiplier	Allowance Cap
Crime Scene Techs/Latent Print Examiners represented by the GRPOLC	**July 1, 2002**	**2.7%**	**40 years for employees hired prior to January 1, 2002 33 years and 4 months applicable to for all employees entering this unit after January 1, 2002**
GREIU	**January 1, 2005 -**	**2.7%**	**36 years and 1 month for employees hired prior to January 1, 2005 35 years for employees hired on or after January 1, 2005**
Library Rank and File & Supervisory Employees	**January 1, 1997**	**2.5%**	**40 years**
Library Management and Confidential Employees	**January 1, 2005**	**2.7%**	**40 years**
GREIU-61st District Court	**January 1, 2005 -**	**2.7%**	**36 years and 1 month for employees hired prior to January 1, 2005 35 years for employees hired on or after January 1, 2005**
61st District Court Management Non-represented and APAGR 61st District Court Management	**January 1, 2005 -**	**2.7%**	**36 years and 1 month for employees hired prior to January 1, 2005 35 years for employees hired on or after January 1, 2005**
Association of Public Administrators (APA)	**January 1, 2005 -**	**2.7%**	**36 years and 1 month for employees hired prior to January 1, 2005 35 years for employees hired on or after January 1, 2005**

Early Allowance. If a member leaves covered employment after either (i) completing 20 years of credited service, or (ii) both attaining age 55 and completing 10 years or more of credited service, he can receive an immediate early allowance, computed in the same manner as an age and service allowance based upon salary and service to time of termination but actuarially reduced to reflect the fact that the age when payments begin is younger than age 62.

Deferred Retirement. A member with 8 or more years of credited service who terminates employment before voluntary retirement age and does not withdraw accumulated contributions will be eligible for a deferred allowance beginning at age 62, based upon service and final average salary at time of termination.

Death Benefit. If the member's termination of employment is because of death, a benefit equal to the termination benefit is payable to a beneficiary or estate, as follows:

A refund of accumulated contributions. In addition, a "termination bonus" equivalent to a certain percent of member contributions without interest may be payable. Such percent is 25%, plus 7.5% for each whole year of credited service in excess of 10 years, to a maximum of 100% for 20 or more years service, times an age-based Termination Bonus Percent.

If the member was eligible for normal or early retirement at the time of death, in lieu of the lump sum death benefit an eligible beneficiary will begin receiving a B-100 joint and survivor pension computed in the same manner as a service retirement pension as if the member had retired the last day of his life.

Or, if the member was not represented by any collective bargaining unit or was represented by the Association of Public Administrators, the Grand Rapids Employees Independent Union or the 61st District Court Employee's Association, and the primary beneficiary was the surviving spouse, the benefit will be computed in the manner described in the preceding paragraph, except that the member will have been assumed to have reached the age for minimum service retirement as the date of his death.

The total amount of death benefit payable cannot exceed 90% of the member's annual rate of compensation at the time of death reduced by any worker's compensation or social security payments.

Disability Benefit. If a member has 10 or more years of credited service before attaining the minimum service retirement age and becomes totally and permanently disabled, a benefit computed in the same manner as a full age and service benefit is payable. If disablement is a result of performance of duty, the 10-year minimum credited service requirement is waived and the benefit is computed as above with a minimum benefit of 50% (62% for those represented by police bargaining units) of final average salary.

The total amount of benefit payable due to disablement cannot exceed 90% of the member's annual rate of compensation at the time of disablement reduced by any worker's compensation payments, Social Security benefits, (disability benefits), and remuneration from any gainful employment.

Member Contributions. The contribution rates used are defined in the following table:

Member Classification	Period	Contribution Rate *
Non – Represented Supervisors, Administrative, Clerical and Executive Classifications, Appointed, elected officials, and judges only	**January 1, 1997 to December 31, 2004** **On and after January 1, 2005**	**3.28%** **4.93%**
G.R. Museum full-time Supervisory and Administrative staff	**January 1, 1997 to December 31, 2004** **On and after January 1, 2005**	**3.28%** **4.93%**
G.R. Public Museum Non-Supervisory staff (not covered by Management Compensation & Fringe Benefits Handbook)	**January 1, 1997 to December 31, 2004** **On and after January 1, 2005**	**3.28%** **4.93%**
Emergency Communications Operators I and II represented by POLC	**January 1, 1997 to June 30, 2005** **On and after July 1, 2005**	**2.28%** **5.36%**
Emergency Communication Supervisors	**On or before December 31, 2005** **On or after January 1, 2006**	**3.28%** **6.27%**
Crime Scene Techs/Latent Print Examiners represented by the GRPOLC #	**After July 1, 1990**	**2.00%**

** 0.00% in the year following the calendar year in which the employee attains 40 years of service, 39 years for APA members.*
 # The member contribution rate drops by 1.00% of pay if the City makes no contribution.

Member Classification	Period	Contribution Rate *
GREIU	**On or after January 1, 1997** **On or after January 1, 2005**	**3.28%** **3.89%**
Library Rank and File & Supervisory Employees	**On or after January 1, 1997**	**3.28%**
Library Management and Confidential Employees	**January 1, 1997 to December 31, 2004** **On or after January 1, 2005**	**3.28%** **4.93%**
GREIU-61st District Court	**On or after January 1, 1997**	**3.28%**
61st District Court Management Non-represented and APAGR 61st District Court Management	**January 1, 1997 to December 31, 2004** **On or after January 1, 2005**	**3.28%** **4.00%**
Association of Public Administrators (APA)	**January 1, 1997 to December 31, 2004** **On or after January 1, 2005**	**3.28%** **3.99%**

** 0.00% in the year following the calendar year in which the employee attains 40 years of service, 39 years for APA members*.

If a member terminates employment before any allowance is payable, accumulated contributions (contributions plus regular interest) are refunded.

Employer Contributions. The City contributes the remainder amounts necessary to maintain the Retirement System in sound financial condition in accordance with its funding objectives.

13th Check. One-half of net investment income over 8% which is attributable to retired life assets is distributed annually (in January) to retired members and beneficiaries who have been on the retirement rolls for 5 years in the form of a 13th check. Net investment income is based on a book value rate of return averaged over the preceding 5 plan years. The distribution is in proportion to points. An individual's points are determined by multiplying (i) the number of full years of retirement, to a maximum of 15, by (ii) the number of years, and fractions thereof, of service at retirement.

Compensation. Compensation recognized for retirement system purposes includes base pay and longevity pay.

SUMMARY OF CURRENT ASSET INFORMATION FROM AUDIT REPORT FURNISHED FOR VALUATION – COST VALUE *

Balance Sheet

Reserves for	
Member contributions (MDF)	$ 24,424,393
Employer contributions (EAF)	106,900,679
Retired benefit payments	
- (BRF)	150,763,627
- (CRF)	4,356,659
Undistributed Income (IEF)	(9,994,281)
Total Reserves	$276,451,077

* *Market value of assets was reported to be $329,002,497.*

Revenues and Expenditures

	2004-05	2003-04	2002-03
1. Balance - Beginning of Year	$272,241,531	$268,975,421	$275,935,414
2. Revenues			
a. Employees' contributions	2,369,661	2,200,457	2,550,236
b. Employer contributions	8,632,941	5,916,496	1,600,534
c. Investment income	10,160,232	11,527,356	5,580,525
d. Other	0	0	0
e. Total revenues	21,162,834	19,644,309	9,731,295
3. Expenditures			
a. Benefit payments	15,205,999	14,819,132	14,414,120
b. Supplemental pension distribution	0	0	541,354
c. Refund of member contributions	173,721	105,495	152,629
d. Expenses	1,573,568	1,453,572	1,583,185
e. Total expenditures	16,953,288	16,378,199	16,691,288
4. Balance - End of Year (1) + (2e) - (3e)	$276,451,077	$272,241,531	$268,975,421
Net Investment Income divided by mean assets	3.18%	3.79%	1.48%

The derivation of valuation assets can be found on page B-5.

DERIVATION OF SECTION 1.192(28) VALUATION ASSETS*

	Year Ending June 30 :	2003	2004	2005	2006	2007
(1)	Beginning of Year Value:					
	a. Book Value	$275,935,414	$268,975,421	$272,241,531		
	b. Market Value	271,015,944	269,149,743	306,761,823		
	c. Funding Value	282,764,403	270,637,794	282,160,341		
(2)	External Cash Flow:					
	a. Contributions(member & employer)	4,150,770	8,116,953	11,002,602		
	b. Benefit Payments	15,108,103	14,924,627	15,379,720		
	c. Net External Cash Flow	(10,957,333)	(6,807,674)	(4,377,118)		
(3)	Investment Activity:					
	a. Ordinary Income - Gross	5,561,813	11,527,356	10,160,232		
	b. - Expenses	1,583,185	1,453,572	1,573,568		
	c. - Net	3,978,628	10,073,784	8,586,664		
	Capital Value Changes:					
	d. This Year	5,112,504	34,345,970	18,031,128		
	e. Prior Year	(14,689,164)	5,112,504	34,345,970	$ 18,031,128	
	f. Two Years Ago	(5,867,051)	(14,689,164)	5,112,504	34,345,970	$18,031,128
	g. Net Recognized :1/3 x [(3d)+(3e)+(3f)]	(5,147,904)	8,256,437	19,163,201	17,459,033	6,010,376
(4)	Net Recognized Investment Income:					
	(3c) + (3g)	(1,169,276)	18,330,221	27,749,865		
(5)	End of Year Values:					
	a. Book Value	268,975,421	272,241,531	276,451,077		
	b. Market Value	269,149,743	306,761,823	329,002,497		
	c. Funding Value	270,637,794	282,160,341	305,533,088		
(6)	**Recognized Rate of Return**	**(0.42%)**	**6.56%**	**9.51%**		
(7)	Market Value Rate of Return	3.42%	16.72%	8.74%		

* ***Valuation assets*** *means the value of current plan assets recognized for the purpose of determining required contributions to the plan. For purposes of determining the City contribution requirement valuation assets are determined using a market related (smoothed) asset value method which recognizes 33% of the capital value change in a fiscal year immediately and recognizes the deferred amount of the capital value change in the 2 subsequent fiscal years.*

RETIRANTS AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS
HISTORICAL COMPARISON

	Added		Removed		End of Year			Expected Removals	
Year Ended	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions	Average Pension	No.	Annual Pensions
9/30/82	42	$277,533	20	$ 53,772	615	$1,977,353	$ 3,215	25.5	$ 53,232
9/30/83	42	261,561	31	77,737	626	2,161,177	3,452	27.3	60,240
9/30/84	46	293,891	27	70,675	645	2,384,393	3,697	28.0	66,336
9/30/85	40	350,674	28	89,288	657	2,645,779	4,027	29.4	73,320
9/30/86	42	439,648	20	41,268	679	3,044,159	4,483	29.9	80,412
6/30/87	32	251,875	48	140,244	663	3,155,790	4,760	31.2	91,080
6/30/88	47	450,961	28	57,478	682	3,549,273	5,204	31.0	94,704
6/30/89	46	523,674	45	113,383	683	3,959,564	5,797	29.7	96,216
6/30/90	36	478,476	23	91,316	696	4,346,724	6,245	29.0	104,160
6/30/91	47	448,851	28	98,091	715	4,697,484	6,570	30.3	115,320
6/30/92	27	395,824	40	155,608	702	4,937,700	7,034	31.8	126,600
6/30/93	37	535,622	32	97,778	707	5,375,544	7,603	27.4	112,404
6/30/94	60	944,667	42	159,327	725	6,160,884	8,498	28.3	124,500
6/30/95	47	827,242	31	150,977	741	6,836,960	9,227	27.7	141,312
6/30/96	20	377,498	33	157,618	728	7,056,840	9,693	27.6	156,864
6/30/97	63	1,338,277	31	229,628	760	8,165,489	10,744	30.7	193,368
6/30/98	57	1,181,896	35	198,155	782	9,149,230	11,700	31.6	213,648
6/30/99	36	676,928	44	287,106	774	9,539,052	12,324	30.7	206,712
6/30/00	54	1,141,359	33	245,499	795	10,434,912	13,126	31.9	228,360
6/30/01	55	1,135,541	39	271,229	811	11,299,224	13,932	32.3	249,564
6/30/02@	110	3,475,394	42	329,522	879	14,445,096	16,434	33.0	273,432
6/30/03#	26	617,049	46	332,733	859	14,729,412	17,147	29.0	258,660
6/30/04	31	500,033	43	376,241	847	14,853,204	17,536	28.0	271,956
6/30/05	46	1,035,362	36	362,462	857	15,526,104	18,117	28.0	286,716

@ *Includes participants in early retirement window who retired July 1, 2002.*

Includes participants in early retirement window who retired July 1, 2003.

RETIRANTS AND BENEFICIARY DATA AS OF JUNE 30, 2005
TABULATED BY TYPE OF PENSIONS BEING PAID

Type of Pensions Being Paid	No.	Annual Pension	Annual Liability
AGE AND SERVICE PENSIONS			
Regular pension - benefit terminating at death of retirant	332	$ 5,974,260	$ 54,763,752
Option B-100 - 100% joint & survivor (including pop-ups)	150	3,384,816	38,867,268
Option B- 75 - 75% joint & survivor (including pop-ups)	35	669,216	5,938,296
Option B- 50 - 50% joint & survivor (including pop-ups)	157	3,761,088	39,461,220
Survivor beneficiary of deceased retirant	111	888,924	7,499,424
Total age and service pensions	785	14,678,304	146,529,960
DISABILITY PENSIONS			
Regular pension - benefit terminating at death of retirant	13	208,260	1,992,012
Option B-100 - 100% joint & survivor (including pop-ups)	6	89,400	1,109,844
Option B- 75 - 75% joint & survivor (including pop-ups)	1	4,092	22,704
Option B- 50 - 50% joint & survivor (including pop-ups)	7	96,108	1,078,692
Survivor beneficiary of deceased retirant	12	70,848	563,940
Total disability pensions	39	468,708	4,767,192
DEATH IN SERVICE PENSIONS	33	379,092	4,107,864
Total Pensions Being Paid	**857**	**$15,526,104**	**$155,405,016**

PENSIONS BEING PAID - JUNE 30, 2005
TABULATED BY ATTAINED AGES

Attained Ages	Age & Service * No.	Age & Service * Annual Pensions	Disability @ No.	Disability @ Annual Pensions	Death-in-Service No.	Death-in-Service Annual Pensions
Under 40					4	$ 63,432
40-44			1	$ 9,336	1	7,368
45-49	3	$ 29,100	1	18,072	2	34,836
50-54	33	968,628	5	47,856	2	25,464
55-59	85	2,784,000	4	97,608	7	106,356
60-64	120	3,199,428	5	105,876	2	47,376
65-69	118	2,570,352	5	68,136	1	28,680
70-74	135	2,447,316	5	38,136	1	9,024
75-79	108	1,542,372	4	27,096	6	40,500
80-84	93	740,280	6	37,560	2	7,032
85-89	58	311,892	2	15,264	2	2,700
90-94	24	72,660	1	3,768	2	4,800
95-99	6	10,104			1	1,524
Over 100	2	2,172				
Totals	**785**	**$14,678,304**	**39**	**$468,708**	**33**	**$379,092**

* *Includes survivor beneficiaries of age and service retirees.*
@ *Includes survivor beneficiaries of disability retirees.*

	Service	Disability	Total
Averages			
Retirement Age	59.3 years	53.9 years	59.1 years
Current Age	71.5 years	68.3 years	71.3 years

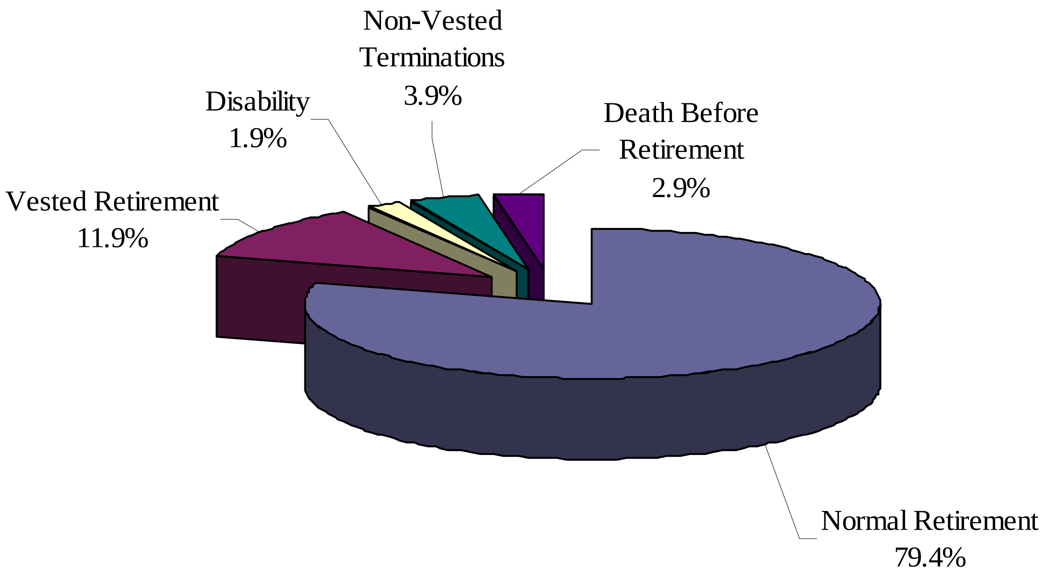
INACTIVE VESTED MEMBERS - JUNE 30, 2005
ELIGIBLE FOR DEFERRED PENSIONS
TABULATED BY ATTAINED AGES

Attained Ages	No.	Estimated Annual Pensions
35-39	2	$ 21,116
40-44	12	188,091
45-49	17	220,537
50-54	20	204,882
55-59	14	150,225
60-64	3	58,006
Total	**68**	**$842,857**

ACTIVE MEMBERS INCLUDED IN VALUATIONS
HISTORICAL SCHEDULE

Year Ended	No.	Annual Payroll $ Millions	Group Averages: Annual Pay $	Annual Pay Change	Age Now	Service Years
9/30/81	1,239	23.8	19,242	19.8 %	40.9	10.3
9/30/82	1,191	23.3	19,585	1.8 %	41.4	11.0
9/30/83	1,122	22.0	19,627	0.2 %	42.1	11.8
9/30/84	1,127	23.2	20,553	4.7 %	42.3	11.9
9/30/85	1,115	24.7	22,175	7.9 %	42.4	12.0
9/30/86	1,137	26.5	23,315	5.1 %	42.3	11.9
6/30/87	1,164	27.4	23,550	1.0 %	42.3	11.9
6/30/88	1,161	29.4	25,337	7.7 %	42.6	12.1
6/30/89	1,115	29.5	26,499	4.6 %	43.1	12.7
6/30/90	1,099	30.6	27,804	4.9 %	43.5	12.9
6/30/91	1,168	33.9	29,031	4.4 %	43.4	12.5
6/30/92	1,208	37.7	31,208	7.5 %	43.7	12.5
6/30/93	1,171	38.9	33,214	6.4 %	44.1	13.0
6/30/94	1,137	39.8	34,977	5.3 %	44.5	13.4
6/30/95	1,153	41.0	35,573	1.7 %	44.3	13.1
6/30/96	1,176	43.3	36,790	3.4 %	44.9	13.5
6/30/97	1,148	43.2	37,597	2.2 %	45.0	13.4
6/30/98	1,150	43.9	38,145	1.5 %	44.8	13.0
6/30/99	1,177	47.6	40,479	6.1 %	44.8	13.0
6/30/00	1,162	48.9	42,051	3.9 %	45.0	13.3
6/30/01	1,210	52.3	43,259	2.9 %	44.9	12.8
6/30/02	1,135	49.2	43,357	0.2 %	44.8	12.1
6/30/03	1,139	51.0	44,781	3.3 %	45.4	12.5
6/30/04	1,142	51.8	45,317	1.2 %	46.1	13.1
6/30/05	1,108	53.5	48,241	6.5 %	46.7	13.7
20-Year Average				4.0 %		

ULTIMATE DISPOSITION OF CURRENT ACTIVE MEMBERS AS OF JUNE 30, 2005



Additions to and Removals from Active Membership
Actual and Expected Numbers

Year Ended	Added During Year A	Added During Year E	Normal Retirement A	Normal Retirement E	Disability Retirement A	Disability Retirement E	Death-In Service A	Death-In Service E	Vested & Other Withdrawals A	Vested & Other Withdrawals E	End of Year
9/30/86	89	67	34	19.8	4	4.2	1	3.8	28	54.5	1,137
6/30/87	65	38	15	18.2	0	4.2	2	3.8	21	56.5	1,164
6/30/88	53	56	28	17.2	1	4.3	1	3.9	26	58.0	1,161
6/30/89	32	78	29	20.1	1	4.3	3	3.3	45	67.0	1,115
6/30/90	51	67	34	18.4	1	4.4	2	3.3	30	59.7	1,099
6/30/91	127	58	25	19.2	3	4.3	2	3.3	28	58.8	1,168
6/30/92	83	43	18	20.7	1	4.6	0	3.3	24	70.3	1,208
6/30/93	31	68	26	27.9	0	2.3	2	2.7	40	56.3	1,171
6/30/94	27	61	36	24.1	0	2.4	1	2.6	24	50.3	1,137
6/30/95	88	72	37	24.6	0	2.4	3	2.5	32	45.1	1,153
6/30/96	61	38	12	25.2	1	2.1	1	2.8	24	48.7	1,176
6/30/97	50	78	49	25.2	3	2.2	0	2.8	26	48.8	1,148
6/30/98	80	78	42	22.5	0	2.2	4	2.6	32	47.3	1,150
6/30/99	81	54	26	19.8	0	2.2	4	2.5	24	50.8	1,177
6/30/00	66	81	33	19.8	1	2.2	5	2.5	42	50.8	1,162
6/30/01	129	81	37	20.0	2	2.3	3	2.7	39	47.5	1,210
6/30/02	48	123	94	23.0	2	1.4	0	1.3	27	35.9	1,135
6/30/03	56	52	17	14.4	3	1.3	1	1.1	31	32.2	1,139
6/30/04	53	50	11	16.2	1	1.4	0	1.2	38	30.9	1,142
6/30/05	27	61	27	23.5	2	1.4	3	1.4	29	29.3	1,108
5 Year Totals	**313**	**367**	**186**	**97.1**	**10**	**7.8**	**7**	**7.7**	**164**	**175.8**	
10 Year Totals	**651**	**696**	**348**	**209.6**	**15**	**18.7**	**21**	**20.9**	**312**	**422.2**	

A = Actual

E = Expected

ACTIVE MEMBERS - JUNE 30, 2005
BY ATTAINED AGE AND YEARS OF SERVICE

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
15-19									
20-24	7	1						8	$ 285,940
25-29	26	15	1					42	1,638,160
30-34	36	46	8					90	4,008,896
35-39	27	51	37	4				119	5,491,522
40-44	36	40	35	36	3	1		151	7,221,436
45-49	29	37	27	49	35	31		208	10,433,630
50-54	28	31	52	35	27	71	17	261	12,973,586
55-59	16	28	23	23	15	41	14	160	7,906,312
60	2	2	3	1	1	6	3	18	898,886
61			2	2	3	5	1	13	679,341
62		3	2	4	1	1	4	15	749,286
63	1	4				2		7	303,457
64		1	2	2		2		7	361,752
65			1					1	46,211
66			1	1				2	133,066
67		1						1	72,614
68		1	1					2	84,380
70						1		1	48,134
72							1	1	73,094
79						1		1	41,649
Totals	**208**	**261**	**195**	**157**	**85**	**162**	**40**	**1,108**	**$53,451,352**

	Average Age	Average Service	Average Pay	Number
Non-vested:	40.2 years	4.5 years	$42,701	371
Vested:	50.0 years	18.4 years	51,030	737
Totals:	46.7 years	13.7 years	48,241	1,108

Section C

Summary of valuation Methods and Assumptions

VALUATION METHODS

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

(i) The annual normal costs for each individual active member, payable from the date of employment to the date of retirement, are sufficient to accumulate the value of the member's benefit at the time of retirement;

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

Financing of Unfunded Actuarial Accrued Liabilities. Unfunded actuarial accrued liabilities were amortized by level (principal & interest combined) percent-of-payroll contributions over a period of 15 years.

According to City Code Section 1.221, "The pension reserves so determined less the applicable balance in the employer accumulation fund shall be amortized over a period of years, as determined by the employer, to determine the employer's accrued service contribution."

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION ADOPTED BY THE BOARD OF TRUSTEES

The actuary calculates the contribution requirements and benefit values of the System by applying financial assumptions to the benefit provisions and people information furnished, using the valuation methods described on the previous page.

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

(i) Long-term rates of investment return to be generated by the assets of the System,
(ii) patterns of pay increases to members,
(iii) rates of mortality among members, retirants and beneficiaries,
(iv) rates of withdrawal of active members (without entitlement to a retirement benefit),
(v) rates of disability among members,
(vi) the age patterns of actual retirement.

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

Actual experience of the System will not coincide exactly with assumed experience, regardless of the wisdom 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).

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		
Sample Ages	**Merit & Seniority**	**Base (Economic)**	**Increase Next Year**
20	4.0%	4.0%	8.0%
25	3.2	4.0	7.2
30	2.8	4.0	6.8
35	2.5	4.0	6.5
40	2.2	4.0	6.2
45	1.7	4.0	5.7
50	1.2	4.0	5.2
55	0.7	4.0	4.7
60	0.2	4.0	4.2
65	--	4.0	4.0

In addition, service related salary increases are assumed to occur during the first five years of employment, 4% in the first year grading down to 1.75% in the fifth year.

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. Increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities. This assumption was first used for the June 30, 2002 valuation.

The rate of investment return was 7.5% a year compounded yearly (net after 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. This assumption was first used for the June 30, 1996 valuation.

The mortality tables were the 1983 Group Annuity Male and Female Mortality Tables setback 2 years for males and 1 year for females. (These tables were first used for the June 30, 2001 valuation and benefit computations.)

Sample Ages	**Value at Retirement of $1 Monthly for Life**		**Future Life Expectancy (Years)**	
	Men	**Women**	**Men**	**Women**
50	$141.02	$148.49	30.98	35.86
55	133.35	142.43	26.55	31.16
60	123.85	134.50	22.29	26.57
65	112.02	124.43	18.23	22.15
70	98.44	111.91	14.52	17.94
75	84.17	97.29	11.31	14.08
80	69.51	82.07	8.57	10.79

This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement. For purposes of the pre-retirement death benefit, it was assumed that 100% of members were married at the time of death and the probability of death-in-service at any age, that results in a benefit payment, is one half that of the mortality assumption for retirees.

The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows: These rates were first used for the June 30, 2001 valuation.

A member is eligible for retirement after completing 30 or more years of service or after both attaining age 62 and completing 8 or more years of service.

Retirement Ages	**Percent Retiring**	**Retirement Ages**	**Percent Retiring**
50	30%	60	30%
51	30	61	30
52	30	62	35
53	30	63	20
54	30	64	20
55	30	65	20
56	30	66	20
57	30	67	20
58	30	68	20
59	30	69	20
		70-79	20
		80	100

Rates of separation from active membership were as follows:

(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. These rates were first used for the June 30, 2001 valuation.

Sample Ages	Years of Service	% of Active Members Separating Within Next Year	
		Men	**Women**
ALL	0	10.00%	10.00%
	1	7.00	7.00
	2	5.00	5.00
	3	4.00	4.00
	4	3.50	3.50
20	5 & Over	3.81	5.56
25		3.70	5.41
30		3.55	5.06
35		3.29	4.39
40		2.93	3.61
45		2.48	2.78
50		1.73	1.79
55		0.66	0.66
60		0.06	0.06

The rates of disability were as follows:

Sample Ages	% of Active Members Becoming Disabled Within Next Year
20	0.01%
25	0.01
30	0.01
35	0.03
40	0.05
45	0.13
50	0.24
55	0.36
60	0.47

		Duty-related	Non-duty Related
Cause of Disability:	Male	30%	70%
	Female	30%	70%

SUMMARY OF ASSUMPTIONS USED
JUNE 30, 2005
MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Marriage Assumption:	100% of males and females are assumed to be married for purposes of death-in-service benefits.
Pay Increase Timing:	Beginning of (Fiscal) 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 at the beginning of year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Benefit Service:	Exact fractional service is used to determine the amount of benefit payable.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability and mortality decrements do not operate during the first 5 years of service. Disability and withdrawal do not operate during retirement eligibility.
Normal Form of Benefit:	The assumed normal form of benefit is the straight life form.
Loads:	Actuarial accrued liabilities were increased by $3,000,000 as a load for future contingent events. Retirement present values were loaded for Crime Scene Technicians and ECO to reflect the “gross up factor”.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.

SECTION D

BASIC FINANCIAL OBJECTIVE
AND
OPERATION OF THE RETIREMENT SYSTEM

BASIC FINANCIAL OBJECTIVE AND OPERATION OF THE RETIREMENT SYSTEM

Benefit Promises Made Which Must Be Paid For. A retirement program 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 General 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?

The constitution of the State of Michigan is directed to the question:

> "Financial benefits arising on account of service rendered in each fiscal year shall be funded during that year and such funding shall not be used for financing unfunded accrued liabilities."

This Retirement System meets the constitutional requirement 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 which 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 programs must operate; that is:

B = C + I - E

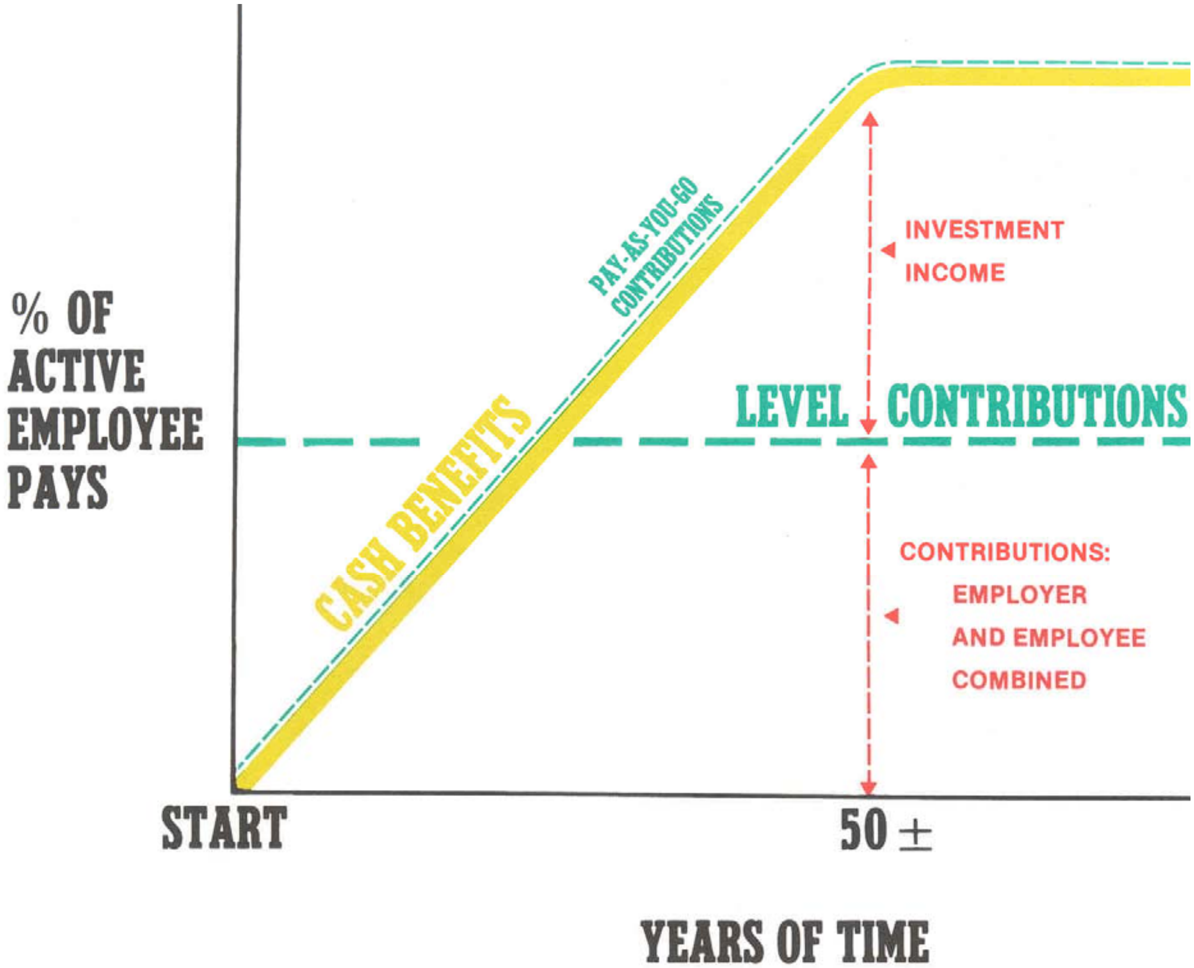
Benefit payments to any group of members and their beneficiaries cannot exceed the sum of:

Contributions received on behalf of the group from members and the City
. . . plus . . .
Investment earnings on plan assets
. . . minus . . .
Expenses incurred in operating the program.

There are retirement programs designed to defer the bulk of contributions far into the future. Lured by artificially low present contributions, the inevitable consequence of a relentlessly increasing contribution rate -- to a level which may be greatly in excess of the level percent of payroll rate -- is ignored. ***This method of financing is prohibited in Michigan by the state constitution***.

A by-product of a level percent-of-payroll contribution objective is the accumulation of invested assets for varying periods of time. Invested assets are a by-product of level percent-of-payroll contributions, not the objective. Investment income becomes the 3rd major contributor to the retirement program.

Computed Contribution Rate Needed To Finance Benefits. From a given schedule of benefits and from the data furnished him/her, the actuary calculates the contribution rate ***by means of an actuarial valuation*** - the technique of assigning monetary values to the risks assumed in operating a retirement program.



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

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

- Economic Risk Areas
  - Rates of investment return
  - Rates of pay increase
  - Changes in active member group size
- Non-Economic Risk Areas
  - Ages at actual retirement
  - Rates of mortality
  - Rates of withdrawal of active members (turnover)
  - Rates of disability

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.

Plan Termination Liability. The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for the future service and salary. The termination liability will generally be less than the liabilities computed on a "going-concern" basis and is not normally determined in a routine actuarial valuation.

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 Liability. 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. Generally based on book value plus a portion of unrealized appreciation or depreciation.

Section E

Actuarial and Supplemental Information Required by Statements No. 25 and No. 27 of the Governmental Accounting Standards Board

GASB Statements No. 25 and No. 27
Required Actuarial Information
Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Entry Age Actuarial Accrued Liability (b)	Unfunded Accrued Liability (UAL) (b)-(a)	Funded Ratio (a)/(b)	Annual Covered Payroll (c)	UAL as a Percentage of Covered Payroll [(b-a)/(c)]
6/30/96	$198,396,734	$205,493,363	$ 7,096,629	97 %	$43,264,682	16 %
6/30/97	220,859,041	217,750,801	(3,108,240)	101 %	43,161,848	-
6/30/98	243,994,040	231,946,020	(12,048,020)	105 %	43,866,714	-
6/30/99	269,088,767	245,445,754	(23,643,013)	110 %	47,643,767	-
6/30/00	286,055,331	257,094,254	(28,961,077)	111 %	48,863,073	-
6/30/01 @	290,531,573	269,527,426	(21,004,147)	108 %	52,313,712	-
6/30/02	282,764,403	285,261,608	2,497,205	99 %	49,209,733	5 %
6/30/03	270,637,794	297,252,524	26,614,730	92 %	51,005,278	44 %
6/30/03 *	270,637,794	297,568,110	26,930,316	91 %	51,005,278	53 %
6/30/04	282,160,341	307,762,043	25,601,702	92 %	51,752,109	50 %
6/30/05	305,533,088	324,034,365	18,501,277	94 %	53,451,352	35 %
6/30/05 *	305,533,088	334,554,231	29,021,143	91 %	53,451,352	54 %

* *Retirement System amended.*
@ *Revised actuarial assumptions.*

GASB STATEMENTS NO. 25 AND NO. 27
REQUIRED ACTUARIAL INFORMATION
SCHEDULE OF EMPLOYER CONTRIBUTIONS

Year Ended June 30	Annual Required Contribution	Percent Contributed
1992	$4,582,390	100%
1993	5,347,729	100%
1994	6,139,001	100%
1995	6,503,313	100%
1996	6,940,924	100%
1997	7,321,258	100%
1998	5,958,012	100%
1999	4,601,277	100%
2000	3,180,232	100%
2001	815,441	100%
2002	485,854	100%
2003	1,600,534	100%
2004	5,916,496	100%
2005	8,632,941	100%

GASB STATEMENTS NO. 25 AND NO. 27
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 valuation date follows:

Valuation Date	June 30, 2005
Actuarial Cost Method	Individual Entry Age
Amortization Method	Level percent, closed
Remaining Amortization Period	15 years
Asset Valuation Method	3-year smoothed market
Actuarial Assumptions:	
Investment Rate of Return	7.5%
Projected Salary Increases	8.0% - 4.0%
Including wage inflation at	4.0%
Cost-of-living adjustments	Ad hoc “13th check” tied to plan investments

Membership of the plan consisted of the following at June 30, 2005, the date of the latest actuarial valuation:

Retirees and beneficiaries receiving benefits	857
Terminated plan members entitled to but not yet receiving benefits	68
Active plan members	1,108
Total	2,033

October 25, 2005

Ms. Peggy Korzen, Executive Director
Grand Rapids General Retirement System
233 East Fulton, Suite 216
Grand Rapids, Michigan 49503

Re: 38th Annual Actuarial Valuation

Dear Peggy:

Enclosed are 30 copies of this report.

As always, your questions and comments are welcome.

Sincerely,

David L. Hoffman

DLH:bd

CC: BDO Seidman, LLC (one report copy)