City of Birmingham Retirement and Relief System

Actuarial Valuation and Review as of July 1, 2006

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June 8, 2007

Board of Managers City of Birmingham Retirement and Relief System 710 North 20th Street, GA 100 City Hall Birmingham, Alabama 35203

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of July 1, 2006. It summarizes the actuarial data used in the valuation, establishes the funding requirements for the upcoming fiscal year and analyzes the preceding year's experience.

The census information on which our calculations were based was prepared by the Plan and the financial information was provided by the City's Finance Department. That assistance is gratefully acknowledged. The actuarial calculations were completed under the supervision of K. Eric Fredén, FSA, MAAA, EA.

This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board of Managers are reasonably related to the experience of and the expectations for the Plan.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

THE SEGAL COMPANY

By:

Leon F. (Rocky) Joyner, Jr., FCA, ASA, MAAA, EA Vice President and Actuary

& Erie Freden

K. Eric Fredén, FSA, MAAA, EA Vice President and Actuary

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Purpose

This report has been prepared by The Segal Company to present a valuation of the City of Birmingham Retirement and Relief System as of July 1, 2006. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- > The benefit provisions of the Pension Plan, as administered by the Board;
- > The characteristics of covered active participants, inactive vested participants, and retired participants and beneficiaries as of July 1, 2006, provided by the Board;
- > The assets of the Plan as of June 30, 2006, provided by the Administrative Office;
- > Economic assumptions regarding future salary increases and investment earnings; and
- > Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

- The recommended contribution for the upcoming year is \$28,346,705, or 17.41% of payroll. This is an increase of 0.11% of pay over the 17.30% recommended amount last year. City and employee contributions are 13.00% of payroll, producing a deficit of 4.41%. As of June 30, 2006, due to contributions in prior years being greater than the recommended amounts, the System has accumulated a net pension asset of \$12,203,031 (see Exhibit V in Section 4). Therefore, if the total contributions remain at 13.00% of payroll, the System's funding obligation will be met for the upcoming year. Nevertheless, the Board should be aware that statutory contributions are out of balance with actuarial recommendations. This imbalance could lead to the exhaustion of the net pension asset within five to six years. The Board should take action soon to bring contributions and benefits back into actuarial balance.
- > The contribution rate includes a normal cost portion, for benefits allocated to the current year, and an amortization of the unfunded actuarial accrued liability. The Entry Age Normal Cost Method, which is used for the funding of this Plan, strives to maintain a level normal cost. This year's normal cost percentage is 14.57% as compared to 13.83% last year. The increase in the contribution rate is due to an increase in the unfunded actuarial accrued liability, which primarily resulted from an actuarial investment loss and assumption changes, offset somewhat by a change in asset method.

- For the year ended June 30, 2006, the plan had an investment return of 4.57% on an actuarial basis compared to the assumption of 7.50%. Since the return was lower than expected, there was an investment loss of \$23,625,236. The market value rate of return was 4.64%. As a result of the change in asset method discussed below, the actuarial value of assets is equal to the market value of assets for this valuation.
- ➤ For the past six years, the actuarial rates of return have been below the assumed rate of 7.50%. During that time, the funded ratio under GASB 27 has fallen from 106.34% to 94.94%. It should be noted that the funded ratio increased this year from last year's ratio of 93.53%. This increase is primarily due to the assumption changes listed below.
- A comprehensive experience review for the period July 1, 2000 through June 30, 2005 has recently been completed and presented to the Board. As a result of the Board adopting the changes recommended in the experience review, the following assumption and method changes have been incorporated into this report:
 - The investment return assumption has been lowered from 7.50% to 7.00%
 - The inflation component was lowered from 4.00% to 3.50%. In conjunction with the decrease in the inflation assumption, salary rates decreased by 0.50% as well. For employees in their mid-20's through mid-30's, this was coupled with a modest increase.
 - Healthy mortality was changed to the 1983 Group Annuity Mortality Table for all dates of hire.
 - Retirement rates were changed to those shown in Section 4, Exhibit VI.
 - Termination rates for firemen and policemen were increased by 50% for the first five years and decreased by 50% thereafter.
 - The asset valuation method was changed to the method described as Approval 16 in Revenue Procedure 2000-40. This method recognizes gains and losses on a market value basis over a five-year period.
- > Note that the audited financial information received rounds all results to the nearest thousand. The results in this valuation report are shown to the dollar. Therefore, occasionally rounded numbers are combined with unrounded ones.

Summary of Key Valuation Results

	2006	2005
Contributions for plan year beginning July 1:		
Recommended	\$28,346,705	\$27,485,086
Recommended contribution as a percentage of payroll	17.41%	17.30%
Actual contributions (employer and employee)		21,921,318
Funding elements for plan year beginning July 1:		
Normal cost, including administrative expenses	\$23,723,246	\$21,974,898
Market value of assets	898,671,013	883,759,000
Actuarial value of assets	898,671,013	819,166,736
Actuarial accrued liability	946,584,547	875,792,038
Unfunded actuarial accrued liability	47,913,534	56,625,302
GASB 25/27 for plan year beginning July 1:		
Annual required employer contributions	\$14,173,353	\$13,742,543
Actual contributions		11,398,732
Percentage contributed		82.94%
Funded ratio	94.94%	93.53%
Covered payroll	\$162,849,137	\$158,898,488
Demographic data for plan year beginning July 1:		
Number of retired participants and beneficiaries	2,255	2,239
Number of vested former participants*	204	231
Number of active participants	3,782	3,802
Total payroll	\$162,849,137	\$158,898,488
Average payroll	43,059	41,793

* Includes future pensioners now receiving benefits from the Supplemental System.

A. PARTICIPANT DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered participants, including active participants, vested terminated participants, retired participants and beneficiaries. This section presents a summary of significant statistical data on these participant groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A, B, and C.

1

A historical perspective of how the participant population has changed over the past ten valuations can be seen in this chart.

CHART 1

Participant Population: June 30, 1997 – June 30, 2006

Year Ended June 30	Active Participants	Vested Terminated Participants*	Retired Participants and Beneficiaries	Ratio of Non-Actives to Actives
1997	3,797	298	1,638	0.51
1998	3,762	266	1,757	0.54
1999	3,942	266	1,784	0.52
2000	3,933	264	1,857	0.54
2001	4,081	244	1,906	0.53
2002	3,878	212	2,017	0.57
2003	3,867	196	2,095	0.59
2004	3,915	177	2,158	0.60
2005	3,802	231	2,239	0.65
2006	3,782	204	2,255	0.65

* Includes future pensioners receiving benefits from the Supplemental System

Active Participants

Plan costs are affected by the age, years of service and payroll of active participants. In this year's valuation, there were 3,782 active participants with an average age of 44.5, average years of service of 12.5 years and average payroll of \$43,059. The 3,802 active participants in the prior valuation had an average age of 44.4, average service of 12.3 years and average payroll of \$41,793.

Among the active participants, there were 3 participants with unknown age. The actuarial calculations were adjusted for the missing information by assuming that it was the same as information provided for other active participants with similar known characteristics.

Inactive Participants

In this year's valuation, there were 204 participants with a vested right to a deferred or immediate vested benefit. This includes 170 possible future pensioners now receiving benefits from the Fireman's and Policeman's Supplemental Pension System.

CHART 2

Distribution of Active Participants by Age as of participants by age and by June 30, 2006

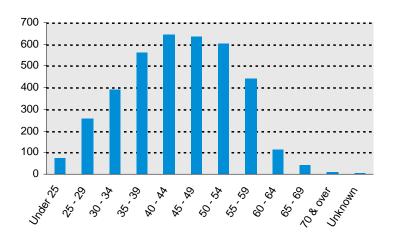
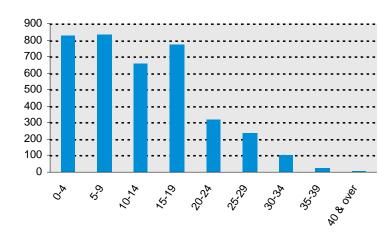


CHART 3

Distribution of Active Participants by Years of Service as of June 30, 2006



These graphs show a distribution of active

years of service.

Retired Participants and Beneficiaries

As of June 30, 2006, 1,822 retired participants and 433 beneficiaries were receiving total monthly benefits of \$3,724,803. For comparison, in the previous valuation, there were 1,810 retired participants and 429 beneficiaries receiving monthly benefits of \$3,615,865.

These graphs show a distribution of the current retired participants and beneficiaries based on their monthly amount and age, by type of pension.

- MinorSpouse
- Extraordinary Disability
- Disability
- Normal/Early

CHART 4

Distribution of Retired Participants and Beneficiaries by Type and by Monthly Amount as of June 30, 2006

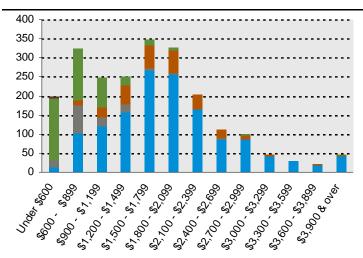
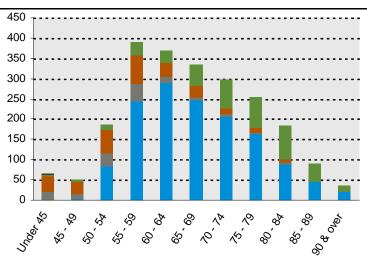


CHART 5

Distribution of Retired Participants and Beneficiaries by Type and by Age as of June 30, 2006



B. FINANCIAL INFORMATION

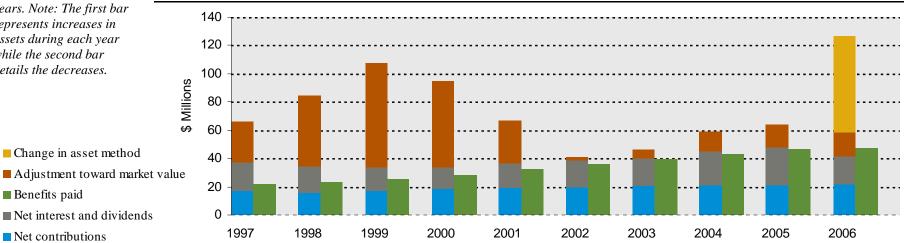
Retirement plan funding anticipates that, over the long term, both net contributions (less administrative expenses) and net investment earnings (less investment fees) will be needed to cover benefit payments.

Retirement plan assets change as a result of the net impact of these income and expense components. Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits D, E and F.

CHART 6

The chart depicts the components of changes in the actuarial value of assets over the last ten years. Note: The first bar represents increases in assets during each year while the second bar details the decreases.

Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended June 30, 1997 - 2006



Benefits paid

Net contributions

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

In this first year of the newly adopted asset method, the actuarial value of assets is equal to the Market Value of assets.

The chart shows the determination of the actuarial value of assets as of the valuation date.

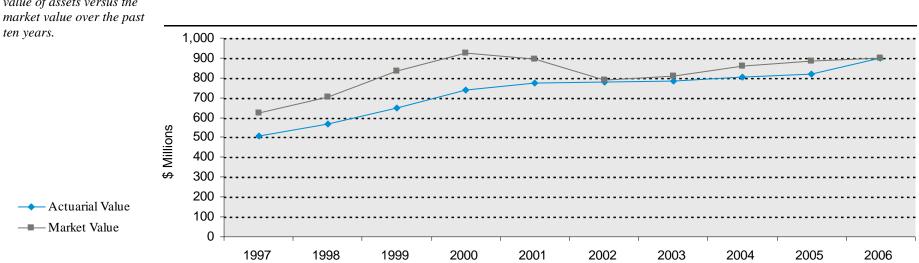
CHART 7

Determination of Actuarial Value of Assets for Year Ended June 30, 2006

1. Actuarial value of assets = Market value of assets

\$898,671,013

Both the actuarial value and market value of assets are representations of the Plan's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the Plan's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.



Actuarial Value of Assets vs. Market Value of Assets as of June 30, 1997 - 2006

CHART 8

This chart shows the change in the actuarial value of assets versus the ten years.

C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total loss is \$22,670,026, a loss of \$23,625,236 from investments offset somewhat by a gain of \$955,210 from all other sources. The net experience variation from individual sources other than investments was 0.1% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

CHART 9

This chart provides a summary of the actuarial experience during the past year.

Actuarial Experience for Year Ended June 30, 2006

1.	Net loss from investments*	-\$23,625,236
2.	Net loss from administrative expenses	-10,339
3.	Net gain from other experience	<u>965,549</u>
4.	Net experience loss: $(1) + (2) + (3)$	-\$22,670,026

* Details in Chart 10

Investment Rate of Return

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the Plan's investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets for year ending June 30, 2006 was 7.50%. The actual rate of return on an actuarial basis for the 2005-2006 plan year was 4.57%.

Since the actual return for the year was less than the assumed return, the Plan experienced an actuarial loss during the year ended June 30, 2006 with regard to its investments.

This chart shows the loss due to investment experience. CHART 10

Actuarial Value Investment Experience for Year Ended June 30, 2006

1. Actual return	\$36,933,762
2. Average value of assets	807,453,308
3. Actual rate of return: $(1) \div (2)$	4.57%
4. Assumed rate of return	7.50%
5. Expected return: $(2) \times (4)$	\$60,558,998
6. Actuarial loss: (1) – (5)	<u>-\$23,625,236</u>

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial basis compared to the market value investment return for the last ten years, including five-year and ten-year averages. Based upon this experience and future expectations, we have changed the assumed rate of return to 7.00%.

This chart shows a history of actuarial and market value investment returns.

CHART 11

Investment Return – Actuarial Value vs. Market Value: 1997 - 2006

	Net Intere Dividend		Recognition Apprec		Chang Asset Me		Actuaria Investmen		Market Market	
Year Ended June 30	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
1997	\$20,242,005	4.41%	\$29,151,554	6.35%			\$49,393,559	10.76%	\$96,263,877	18.21%
1998	18,932,743	3.77	50,068,683	9.97			69,001,426	13.74	94,100,441	15.21
1999	16,363,537	2.91	73,796,640	13.11			90,160,177	16.02	110,592,177	15.69
2000	15,703,307	2.35	61,285,291	9.19			76,988,598	11.54	99,628,658	12.01
2001	17,874,740	2.44	29,849,535	4.07			47,724,275	6.51	-17,602,046	-1.92
2002	18,574,794	2.42	2,263,863	0.30			20,838,657	2.72	-89,504,028	-10.11
2003	19,852,229	2.58	6,370,511	0.83			26,222,740	3.41	42,649,330	5.48
2004	23,403,588	3.02	14,220,308	1.83			37,623,896	4.85	69,023,086	8.61
2005	27,114,712	3.43	16,148,066	2.04			43,262,778	5.48	50,973,808	6.02
2006	<u>19,901,991</u>	2.46	<u>17,031,771</u>	2.11	\$68,127,085	8.44%	105,060,847	13.01	40,468,583	4.64
Total	\$197,963,646		\$300,186,222		\$68,127,085		\$566,276,953		\$496,593,886	
						Five-year	average return	5.96%		2.72%
						Ten-year	average return	8.29%		6.38%

Note: Each year's yield is weighted by the average asset value in that year.

Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

Administrative Expenses

Administrative expenses for the year ended June 30, 2006 totaled \$160,000 compared to the assumption of \$150,000, payable monthly. This resulted in a loss of \$10,339 for the year. We have maintained the same assumption for the current year.

CHART 12 this leveling effect has Market and Actuarial Rates of Return for Years Ended June 30, 1997 - 2006 actually worked over the years 1997 - 2006. 20% 15% 10% 5% 0% -5% -10%

2000

2001

2002

2003

2004

2005

This chart illustrates how

Actuarial Value

-15%

1997

1998

1999

*SEGAL

----- Series 2

2006

Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- > the extent of turnover among the participants,
- > retirement experience (earlier or later than expected),
- > mortality (more or fewer deaths than expected),
- > the number of disability retirements, and
- > salary increases different than assumed.

The net gain from this other experience for the year ended June 30, 2006 amounted to \$965,549 which is 0.1% of the actuarial accrued liability. This gain is not considered significant.

D. RECOMMENDED CONTRIBUTION

The amount of annual contribution required to fund the Plan is comprised of a normal cost payment and a payment on the unfunded actuarial accrued liability. This total amount is then divided by the payroll for active members to determine the funding rate of 17.41% of payroll. The unfunded actuarial accrued liability is amortized on a level dollar basis over a rolling 30-year period.

Expected contributions for the year are \$21,170,388, or 13% of payroll, which leaves a deficit of 4.41% of payroll.

The chart compares this valuation's recommended contribution with the prior valuation.

CHART 13

Recommended Contribution

	Year Beginning July 1			
	2006	5	2005	i
	Amount	% of Payroll	Amount	% of Payroll
1. Normal cost*	\$23,578,977	14.48%	\$21,830,629	13.74%
2. Administrative expenses	144,269	0.09%	144,269	<u>0.09%</u>
3. Total normal cost: $(1) + (2)$	\$23,723,246	14.57%	\$21,974,898	13.83%
4. Actuarial accrued liability	946,584,547		875,792,038	
5. Actuarial value of assets	898,671,013		<u>819,166,736</u>	
6. Unfunded actuarial accrued liability: (4) - (5)	\$47,913,534		\$56,625,302	
7. Payment on unfunded actuarial accrued liability	3,608,579	2.22%	4,460,032	2.81%
8. Total recommended contribution: $(3) + (7)$, adjusted for timing**	<u>\$28,346,705</u>	<u>17.41%</u>	<u>\$27,485,086</u>	17.30%
9. Total payroll	\$162,849,137		\$158,898,488	

* Recommended contributions are assumed to be paid at the beginning of every month.

** Including net obligations from the Supplemental System of -\$1,009,881 for July 1, 2006 and -\$947,557 for July 1, 2005 (-\$1,047,380 and -\$985,240 adjusted for timing).

The contribution rates as of July 1, 2006 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

Reconciliation of Recommended Contribution

The chart below details the changes in the recommended contribution from the prior valuation to the current year's valuation.

The chart reconciles the contribution from the prior valuation to the amount determined in this valuation.

CHART 14

Reconciliation of Recommended Contribution from July 1, 2005 to July 1, 2006

Recommended Contribution as of July 1, 2005	\$27,485,086
Effect of assumption changes	3,761,328
Effect of change in asset method	-5,321,472
Effect of rolling 30-year amortization period	-67,402
Effect of contributions less than recommended contribution	474,878
Effect of investment loss	1,953,634
Effect of other gains and losses on accrued liability	-439,565
Effect of net other changes	<u>500,218</u>
Total change	<u>\$861,619</u>
Recommended Contribution as of July 1, 2006	\$28,346,705

E. INFORMATION REQUIRED BY THE GASB

Governmental Accounting Standards Board (GASB) reporting information provides standardized information for comparative purposes of governmental pension plans. This information allows a reader of the financial statements to compare the funding status of one governmental plan to another on relatively equal terms.

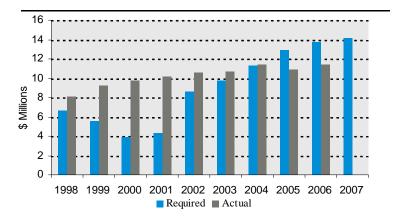
Critical information to GASB is the historical comparison of the GASB required contribution to the actual contributions. This comparison demonstrates whether a plan is being funded within the range of the GASB reporting requirements. Chart 15 below presents a graphical representation of this information for the Plan.

The other critical piece of information regarding the Plan's financial status is the funded ratio. This ratio compares the

These graphs show key GASB factors.

CHART 15





actuarial value of assets to the actuarial accrued liabilities of the plan as calculated under GASB. High ratios indicate a well-funded plan with assets sufficient to pay most benefits. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors.

Although GASB requires that the actuarial value of assets be used to determine the funded ratio, Chart 16 shows the funded ratio calculated using both the actuarial value of assets and the market value of assets.

The details regarding the calculations of these values and other GASB numbers may be found in Section 4, Exhibits II, III, and IV.

CHART 16 Funded Ratio

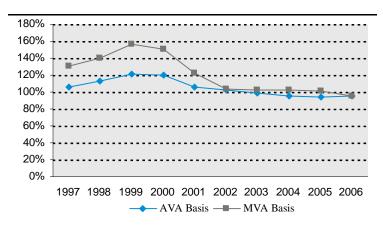


EXHIBIT A

Table of Plan Coverage

	Year End	Year Ended June 30			
Category	2006	2005	Change From Prior Year		
Active participants in valuation:					
Number	3,782	3,802	-0.5%		
Average age	44.5	44.4	N/A		
Average service	12.5	12.3	N/A		
Total payroll	\$162,849,137	\$158,898,488	2.5%		
Average payroll	43,059	41,793	3.0%		
Number with unknown age information	3	0	N/A		
Total active vested participants	2,952	2,893	2.0%		
Vested terminated participants*	204	231	-11.7%		
Retired participants:					
Number in pay status	1,387	1,382	0.4%		
Average age	67.7	67.2	N/A		
Average monthly benefit	\$1,945	\$1,899	2.4%		
Disabled participants:					
Number in pay status	435	428	1.6%		
Average age	56.8	56.6	N/A		
Average monthly benefit	\$1,555	\$1,524	2.0%		
Beneficiaries in pay status	433	429	0.9%		

* Including future pensioners currently receiving benefits from the Supplemental System.

EXHIBIT B

Participants in Active Service as of June 30, 2006 By Age, Years of Service, and Average Payroll

	Years of Service										
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over	
Under 25	74	72	2								
	\$29,061	\$29,165	\$25,311								
25 - 29	259	181	76	2							
	32,410	31,079	35,708	\$27,542							
30 - 34	390	171	170	48	1						
	36,768	31,846	40,254	42,130	\$28,499						
35 - 39	561	130	184	180	66	1					
	41,394	32,982	41,350	45,413	47,226	\$34,803					
40 - 44	646	96	143	152	223	31	1				
	43,191	32,319	39,477	44,188	48,211	53,132	\$38,604				
45 - 49	635	78	90	123	213	91	39	1			
	44,978	32,508	41,438	42,676	46,541	53,932	55,991	\$42,401			
50 - 54	604	59	88	90	145	100	85	35	2		
	46,225	33,460	41,021	42,342	46,128	52,823	55,501	49,407	\$53,720		
55 - 59	444	30	55	44	97	73	83	52	9	1	
	50,125	39,251	38,891	42,492	44,729	50,998	60,524	66,613	54,886	\$26,511	
60 - 64	117	9	15	13	22	19	22	7	8	2	
	49,932	36,507	40,356	52,952	49,800	45,128	54,358	57,868	73,112	40,450	
65 - 69	41		8	8	6	2	4	5	5	3	
	45,681		37,363	45,371	34,860	32,407	42,407	60,715	65,391	45,640	
70 & over	8	1		1	2	1	1		1	1	
	38,816	23,234		25,611	51,875	38,304	26,511		46,560	46,560	
Unknown	3	3									
	26,364	26,364									
Total	3,782	830	831	661	775	318	235	100	25	7	
	\$43,059	\$32,144	\$40,005	\$43,835	\$46,768	\$52,061	\$56,831	\$59,441	\$62,393	\$41,556	

EXHIBIT C

Reconciliation of Participant Data

	Active Participants	Vested Former Participants	Fire and Police Retirees	Disableds	Retired Participants	Beneficiaries	Total
Number as of July 1, 2005	3,802	80	151	428	1,382	429	6,272
New participants	212	N/A	0	N/A	N/A	N/A	212
Terminations – with vested rights	-45	16	0	0	0	0	-29
Terminations – without vested rights	-58	N/A	0	N/A	N/A	N/A	-58
Retirements	-57	0	0	N/A	57	N/A	0
New disabilities	-20	0	0	20	N/A	N/A	0
Return to work	0	0	0	0	0	N/A	0
Deaths	-8	0	0	-13	-48	-33	-102
New beneficiaries	0	0	0	0	0	37	37
Lump sum payoffs	-59	-60	0	0	0	0	-119
Rehired	15	12	0	-1	-2	N/A	24
Certain period expired	N/A	N/A	0	0	0	0	0
Data adjustments	0	-14	0	1	-2	0	-15
Active participants no longer accruing benefits	0	0	0	N/A	N/A	N/A	0
Retirees transferring from supplemental plan	<u>0</u>	<u>0</u>	<u>19</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>19</u>
Number as of July 1, 2006	3,782	34	170	435	1,387	433	6,241

EXHIBIT D

Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended Ju	ine 30, 2006	Year Ended J	une 30, 2005
Contribution income:				
Employer contributions	\$11,398,732		\$10,881,632	
Employee contributions	10,522,586		10,210,996	
Less administrative expenses	-160,000		-211,000	
Net contribution income		\$21,761,318		\$20,881,628
Other income		36,000		79,000
Investment income:				
Interest and dividends	\$23,269,581		\$30,561,898	
Adjustment toward market value	17,031,771		16,148,066	
Less investment fees	<u>-3,367,590</u>		-3,447,186	
Net investment income		<u>36,933,762</u>		43,262,778
Total income available for benefits		\$58,731,080		\$64,223,406
Less benefit payments:				
Benefits	-\$46,349,528		-\$45,715,936	
Refunds	<u>-1,004,360</u>		-953,000	
Net benefit payments		-\$47,353,888		-\$46,668,936
Change in actuarial asset method		\$68,127,085		\$0
Change in reserve for future benefits		\$79,504,277		\$17,554,470

Note: A portion of the Retirement and Relief System's assets is allocated to the Health Department. The above summary excludes the Health Department portion.

EXHIBIT E

Table of Financial Information

	Year Ended J	une 30, 2006	Year Ended J	une 30, 2005
Cash equivalents		\$45,956,720		\$99,985,596
Accounts receivable:				
Employee loans	\$10,708,696		\$10,216,749	
Accrued interest and dividends	5,641,338		11,120,572	
Employee contributions	1,770,179		1,345,890	
Other funds	572,010		<u>518,862</u>	
Total accounts receivable		18,692,223		23,202,073
Investments:				
Debt securities	\$421,853,922		\$357,006,306	
Corporate stock	413,805,416		405,045,799	
Total investments at market value		835,659,338		762,052,105
Total assets		\$900,308,281		\$885,239,774
Less accounts payable		-\$1,637,268		-\$1,480,774
Net assets at market value		<u>\$898,671,013</u>		<u>\$883,759,000</u>
Net assets at actuarial value		\$898,671,013		<u>\$819,166,736</u>

EXHIBIT F

Development of the Fund Through June 30, 2006

Year Ended June 30	Employer Contributions	Employee Contributions	Other Income	Net Investment Return*	Administrative Expenses	Benefit Payments	Actuarial Value of Assets at End of Year
1997	\$9,275,641	\$7,713,859	\$46,000	\$49,393,559	\$72,001	\$21,977,258	\$505,696,400
1998	8,111,773	7,490,379	41,000	69,001,426	48,400	23,461,978	566,830,600
1999	9,215,729	8,026,104	0	90,160,177	56,400	25,617,710	648,558,500
2000	9,784,949	8,542,670	23,380,200**	76,988,598	46,100	28,310,977	738,897,840
2001	10,151,206	8,999,970	26,000	47,724,275	102,900	32,242,930	773,453,461
2002	10,537,461	9,521,128	31,000	20,838,657	92,000	35,684,461	778,605,246
2003	10,697,621	9,845,626	59,000	26,222,740	105,000	39,678,777	785,646,456
2004	11,347,715	10,373,268	24,000	37,623,896	292,000	43,111,069	801,612,266
2005	10,881,632	10,210,996	79,000	43,262,778	211,000	46,668,936	819,166,736
2006	11,398,732	10,522,586	36,000	105,060,847**	* 160,000	47,353,888	898,671,013

* Net of investment fees

** Includes \$23,338,200 transferred from Library Board Employees' System

*** Includes change in asset method.

EXHIBIT G

Development of Unfunded Actuarial Accrued Liability for Year Ended June 30, 2006

1. Unfunded actuarial accrued liability at beginning of year		\$56,625,302
2. Normal cost at beginning of year		21,974,898
3. Total contributions		-21,921,318
4. Interest		
(a) For whole year on $(1) + (2)$	\$5,895,015	
(b) Monthly on (3)	<u>-753,545</u>	
(c) Total interest		<u>5,141,470</u>
5. Expected unfunded actuarial accrued liability		\$61,820,352
6. Changes due to:		
(a) Experience loss	\$22,670,026	
(b) Asset method	-68,127,085	
(c) Assumptions	<u>31,550,241</u>	
(d) Total changes		<u>-13,906,818</u>
7. Unfunded actuarial accrued liability at end of year		\$47,913,534

EXHIBIT H

Definitions of Pension Terms

The following list defines certain technical terms for the convenience of the reader: **Assumptions or Actuarial Assumptions:** The estimates on which the cost of the Plan is calculated including: Investment return — the rate of investment yield that the Plan will earn over (a) the long-term future; Mortality rates — the death rates of employees and pensioners; life (b) expectancy is based on these rates; <u>Retirement rates</u> — the rate or probability of retirement at a given age; (c) (d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement. Normal Cost: The amount of contributions required to fund the benefit allocated to the current year of service. **Actuarial Accrued Liability** For Actives: The equivalent of the accumulated normal costs allocated to the years before the valuation date. **Actuarial Accrued Liability** The single sum value of lifetime benefits to existing pensioners. This sum takes For Pensioners: account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits. **Unfunded Actuarial Accrued** Liability: The extent to which the actuarial accrued liability of the Plan exceeds the assets of the Plan. There is a wide range of approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period

of time.

Amortization of the Unfunded Actuarial Accrued Liability:	Payments made over a period of years equal in value to the Plan's unfunded actuarial accrued liability.
Investment Return:	The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.

EXHIBIT I

Comparative Summary of Principal Valuation Results

	Year Ended June 30, 2006	Year Ended June 30, 2005
Participant data		
Active members	3,782	3,802
Total annual payroll	\$162,849,137	\$158,898,488
Retired members and beneficiaries	2,255	2,239
Total annualized benefit	\$44,697,636	\$48,145,080
Terminated vested members	34	80
Total annualized benefit	\$672,114	\$562,920
Future pensioners currently receiving benefits from Supplemental System	170	151
Total annualized benefit	\$5,498,190	\$4,754,695
Actuarial value of assets	\$898,671,013	\$819,166,736
Actuarial accrued liability:		
Active members:	\$440,535,022	\$419,404,575
Terminated vested members	5,966,275	3,136,252
Retired members and beneficiaries	448,158,314	411,312,050
Future pensioners currently receiving benefits from Supplemental System	51,924,936	41,939,161
Total	\$946,584,547	\$875,792,038
Unfunded actuarial accrued liability	\$47,913,534	56,625,302

EXHIBIT I

Summary of Actuarial Valuation Results as of July 1, 2006

	e valuation was made with respect to the following data supplied to us:		
l.	Retired participants as of the valuation date (including 433 beneficiaries in pay status)		2,255
2.	Participants inactive during year ended June 30, 2006 with vested rights (including 170 future pensioners currently receiving benefits from the Supplemental System)		204
3.	Participants active during the year ended June 30, 2006 (including 3 participants with unknown age)		3,782
	Fully vested	2,952	
	Not vested	830	
Гh	e actuarial factors as of the valuation date are as follows: Normal cost, including administrative expenses		\$23.723.246
•	e actuarial factors as of the valuation date are as follows: Normal cost, including administrative expenses Actuarial accrued liability		
l .	Normal cost, including administrative expenses	\$448,158,314	\$23,723,246 964,584,547
l.	Normal cost, including administrative expenses Actuarial accrued liability	\$448,158,314 57,891,211	
l .	Normal cost, including administrative expenses Actuarial accrued liability Retired participants and beneficiaries	. , , ,	
Гh 1. 2.	Normal cost, including administrative expenses Actuarial accrued liability Retired participants and beneficiaries Inactive participants with vested rights	57,891,211	

EXHIBIT I (continued)

Summary of Actuarial Valuation Results as of July 1, 2006

The determination of the recommended contribution is as follows:

1.	Normal cost	\$23,578,977
2.	Administrative expenses	<u>144,269</u>
3.	Total normal cost: $(1) + (2)$	\$23,723,246
4.	Payment on unfunded actuarial accrued liability	3,608,579
5.	Total recommended contribution: $(3) + (4)$, adjusted for timing	<u>\$28,346,705</u>
6.	Projected payroll	\$162,849,137
7.	Total recommended contribution as a percentage of projected payroll: $(5) \div (6)$	17.41%

EXHIBIT II

Supplementary Information Required by the GASB – Schedule of Employer Contributions

Plan Year Ended June 30	Annual Required Contributions	Actual Contributions	Percentage Contributed
2000	\$3,885,100	\$9,784,949	251.9%
2001	4,347,350	10,151,206	233.5%
2002	8,580,579	10,537,461	122.8%
2003	9,756,787	10,697,621	109.6%
2004	11,290,871	11,347,715	100.5%
2005	12,875,198	10,881,632	84.5%
2006	13,742,543	11,398,732	82.9%
2007	14,173,353		

EXHIBIT III

Supplementary Information Required by the GASB – Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll* [(b) - (a)] / (c)
07/01/2000	\$738,897,800	\$615,475,900	-\$123,421,900	120.05%	\$135,974,600	0.00%
07/01/2001	773,453,461	727,360,834	-46,092,627	106.34%	149,422,297	0.00%
07/01/2002	778,605,246	758,085,228	-20,520,018	102.71%	151,180,057	0.00%
07/01/2003	785,646,456	796,083,861	10,437,405	98.69%	152,242,441	6.86%
07/01/2004	801,612,266	838,485,603	36,873,337	95.60%	158,062,119	23.33%
07/01/2005	819,166,736	875,792,038	56,625,302	93.53%	158,898,488	35.64%
07/01/2006	898,671,013	946,584,547	47,913,534	94.94%	162,849,137	29.42%

* Not less than zero

EXHIBIT IV

Supplementary Information Required by the GASB

Valuation date	July 1, 2006		
Actuarial cost method	Entry Age Normal Cost Method		
Amortization method	Level dollar		
Remaining amortization period	Rolling, 30 years		
Asset valuation method	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the actuarial value, and is recognized over a five - year period, further adjusted, if necessary, to be within 20% of the market value.		
Actuarial assumptions:			
Investment rate of return	7.00%		
Projected salary increases			
Inflations	3.50%		
Merit, longevity, etc.	Varies from 0.00% to 5.50%		
Plan membership:			
Retired participants and beneficiaries receiving benefits	2,255		
Terminated participants entitled to, but not yet receiving benefits	204		
Active participants	<u>3,782</u>		
Total	6,241		

EXHIBIT V

Development of the Net Pension Obligation and the Annual Pension Cost Pursuant to GASB 27

Plan Year Ended June 30	Employer Annual Required Contribution (a)	Employer Amount Contributed (b)	Interest on NPO (h)* 7.50% (c)	ARC Adjustment (h) / (e) (d)	Amortization Factor (e)	Pension Cost (a) + (c) – (d) (f)	Change in NPO (f) – (b) (g)	NPO Balance NPO + (g) (h)
2001	\$4,347,350	\$10,151,206	-\$823,022	-\$1,108,873	9.8962	\$4,633,201	-\$5,518,005	-\$16,491,629
2002	8,580,579	10,537,461	-1,236,872	-1,923,386	8.5743	9,267,093	-1,270,368	-17,761,997
2003	9,756,787	10,697,621	-1,332,150	-2,022,300	8.7831	10,446,937	-250,684	-18,012,681
2004	11,290,871	11,347,715	-1,350,951	-2,089,340	8.6212	12,029,259	681,544	-17,331,137
2005	12,875,198	10,881,632	-1,299,835	-2,035,605	8.5140	13,610,968	2,729,336	-14,601,802
2006	13,742,543	11,398,732	-1,095,135	-1,150,095	12.6962	13,797,503	2,398,771	-12,203,031

EXHIBIT VI

Actuarial Assumptions and Actuarial Cost Method

Mortality Rates:

Healthy:	1983 Group Annuity Mortality Table
Disabled:	Healthy table set forward 10 years

Termination Rates

Before Retirement:

			Ra	te (%)			
	Mor	rtality	Dis	ability		Withdrawal	
Age	Male	Female	General	Fire & Police	General*	Fire**	Police***
20	0.04	0.02	0.09	0.18	6.53	2.52	4.58
25	0.05	0.03	0.13	0.26	6.35	1.80	3.26
30	0.06	0.03	0.17	0.33	6.08	1.38	2.51
35	0.09	0.05	0.22	0.44	5.64	1.06	1.93
40	0.12	0.07	0.33	0.66	5.03	0.80	1.45
45	0.22	0.10	0.54	1.08	4.24	0.54	0.99
50	0.39	0.16	0.91	1.82	2.97	2.27	2.48
55	0.61	0.25	1.51	3.03	1.13	5.00	5.00
60	0.92	0.42	2.44	4.88	0.00	0.00	0.00

* Withdrawal rates shown for general employees are multiplied by 1.25 and have 0.015 added during the first five years of employment.

** Withdrawal rates shown for firemen are multiplied by 3.8181 during the first five years of employment.

*** Withdrawal rates shown for policemen are multiplied by 3.0 during the first five years of employment.

accordance with the following rates:				
Fire		Police		
Years of Service	Rate	Years of Service	Rate	
20	5%	20	20%	
21-22	5	21-22	7	
23	10	23	7	
24	10	24	3	
25	10	25	10	
26	5	26	10	
27	10	27	10	
28	15	28	10	
29	30	29	10	
30-32	0	30-32	0	
33	50	33	50	
34	25	34	25	
35	100	35	100	

Retirement Rates:

General employees are assumed to retire, after meeting the service requirements, in accordance with the following rates:

Fire and Police employees are assumed to retire on a Retirement and Relief pension in

<u>Age</u>	<u>Rate</u> *
Under 50	0%
50-51	35
52-54	10
55	20
56-59	10
60	5
61-66	20
67-74	25
Over 74	100

* Rates are decreased by 75% when employee has 31-32 years of service. Rates are increased to 1.5 times the rate shown when employee reaches 33 years of service.

Retirement Age for Inactive Vested Participants:	60	
Unknown Data for Participants:	Same as those exhibited by Participants with similar known characteristics. If not specified, Participants are assumed to be male.	
Percent Married:	1972 Social Security Awards	
Age of Spouse:	Females 3 years younger than males.	
On the Job Disability:		
General	30%	
Fire and Police	90%	
On the Job Death:		
General	5%	
Fire and Police	15%	

Net Investment Return:	7.00%				
Salary Scale:					
-	Annual increase				
		Ra	<u>te (%)</u>		
	Age	<u>General</u>	Fire and Police		
	20	8.00	9.50		
	25	7.25	7.60		
	30	6.50	6.20		
	35	6.00	5.10		
	40	5.50	4.50		
	45	4.50	4.00		
	50	4.50	4.00		
	55	4.50	4.00		
	Includes allowa	nce for inflation of	of 3.5% per year.		
Administrative Expenses:	\$150,000, payable monthly, equivalent to \$144,269 at the beginning of the year.				
Actuarial Value of Assets:	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the actuarial value, and is recognized over a five - year period, further adjusted, if necessary, to be within 20% of the market value.				
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method. Entry Age is the age at the time the participant would have commenced employment if the plan had always been in existence. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by service, with Normal Cost determined as if the current benefit accrual rate had always been in effect. Actuarial Liability is allocated by salary.				

Change in Assumptions:	A comprehensive experience review for the period July 1, 2000 through June 30, 2005 has recently been completed and presented to the Board. As a result of the Board adopting the changes recommended in the experience review, the following assumption and method changes have been incorporated into this report:
	• The investment return assumption has been lowered from 7.50% to 7.00%
	• The inflation component was lowered from 4.00% to 3.50. In conjunction with the decrease in the inflation assumption, salary rates decreased by 0.50% as well. For employees in their mid-20's through mid-30's, this was coupled with a modest increase.
	• Healthy mortality was changed to the 1983 Group Annuity Mortality Table for all dates of hire.
	• Retirement rates were changed to those shown in this Exhibit.
	• Termination rates for firemen and policemen were increased by 50% for the first five years and decreased by 50% thereafter.
	• The asset valuation method was changed to the method describe as Approval 16 in Revenue Procedure 2000-40. This method recognizes gains and losses on a market value basis over a five-year period.

EXHIBIT VII

Summary of Plan Provisions

This exhibit summarizes the major provisions of the Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan Year:	July 1 through June 30	
Normal Pension:		
Eligibility	A participant may retire at (a) age 60 if he has completed 5 years of credited service, or (b) any age if he has completed 30 years of credited service.	
Amount:	2.50% of final average salary for each year of credited service. This amount cannot be greater than 75.0% of the final average salary nor less than \$400 per month.	
	Service credit used to determine the benefit amount may be increased by credit granted for unused sick leave (on a percent of possible total basis).	
	Final average salary is defined as the highest average compensation over any 36-month period of the employee's last ten years of participation.	
Early Retirement Pension:		
Eligibility	A City participant may retire at age 55 if he has completed 25 years of credited service.	
Amount	1.85% of final average salary for each year of credited service.	

Disability:	
Ordinary	
Service Requirement	5 years credited service.
Amount	2.00% of final average salary at disability for each year of credited service, payable immediately. This amount cannot be greater than 60% of final average salary nor less than \$400 per month.
Extraordinary	
Service Requirement	None
Amount	70% of final monthly salary at disability, payable immediately. The amount cannot b less than \$400 per month.
Termination:	To a participant terminating before becoming eligible for a vested deferred pension from the plan, a lump sum of his or her own contributions without interest is payable.
	Participants terminating after 5 years of actual service who leave their contributions in the System Fund have a non-forfeitable right to a monthly pension beginning at age 60. The form and amount of the pension are the same as the normal pension.
Death Benefits:	If a participant dies prior to his or her attainment of eligibility for retirement, a lump sum of his or her own contributions without interest is payable to his or her beneficiary.
	If an active participant who is eligible to retire or a retired participant dies, 60% of th accrued pension benefit is payable to the surviving spouse, if any, during his or he remaining lifetime. If an active participant (other than a participant of the Fireme and Policemen Supplemental System) who is not eligible to retire, but who ha completed 5 years of service dies, a portion of 60% of the accrued pension benefit i payable to the spouse during her remaining lifetime. This portion is defined a follows:

	Number of Years _of service	Portion of his entitled benefit			
	5 6 7 8 9 10 or more	50% 60 70 80 90 100			
	have attained age 60 or (b) the day years of service. In lieu of the all is payable to the surviving spous service connected; the maximum	lier of (a) the date that the deceased participant would ate the deceased participant would have completed 20 bove, for all participants, an annuity of 60% of salary ate and 10% is payable to a minor child if death is a for spouse and children is 75% and the maximum for the minimum spouse benefit is \$320 per month.			
	*60% benefit is effective July 1, 2002. Prior to July 1, 2002 the percentage was 45%.				
Back-DROP:	service may elect up to a 36-mor will be calculated using service a	ervice or who is at least age 63 with 23 years of anth Back-DROP. The employee's monthly benefit and final average salary as of the Back-DROP date lump sum equal to the number of months dropped t, accumulated with interest.			
Participation:	All qualified employees of the R participate.	etirement and Relief System are required to			
Contributions:	The City and the City employees	s each contribute 6.50% of compensation for the year.			
Changes in Plan Provisions: 6085276v1/02030.001	There have been no changes in plan provisions since the last valuation.				