

**MUNICIPAL EMPLOYEES'  
RETIREMENT SYSTEM**

ACTUARIAL VALUATION AS OF  
JUNE 30, 2004

# **G. S. CURRAN & COMPANY, LTD.**

**Actuarial Services**

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Consulting Actuary

October 21, 2004

Board of Trustees  
Municipal Employees' Retirement System  
7937 Office Park Blvd.  
Baton Rouge, LA 70809

Ladies and Gentlemen:

We are pleased to present our report on the actuarial valuation of the Municipal Employees' Retirement System for the fiscal year ending June 30, 2004. Our report is based on the actuarial assumptions specified and relies on the data supplied by the system's administrative director and auditors. This report was prepared at the request of the Board of Trustees of the Municipal Employees' Retirement System. The primary purposes of the report are to determine the actuarially required contribution for the retirement system for the fiscal year ending June 30, 2005, and to provide information required for the system's financial statements. In addition, this report recommends employer contribution rates for fiscal 2006.

This report has been prepared in accordance with generally accepted actuarial principles and practices, and to the best of our knowledge and belief fairly reflects the actuarial present values and costs stated herein.

Sincerely,

G. S. CURRAN & COMPANY, LTD.

By: \_\_\_\_\_  
Gary Curran, F.C.A., A.S.A.

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**SUMMARY OF VALUATION RESULTS  
MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM - PLAN A**

Valuation Date:	June 30, 2004	June 30, 2003
Census Summary: Active Members	5,325	5,533
Retirees and Beneficiaries	2,448	2,372
Terminated Due a Deferred Benefit	193	192
Terminated Due a Refund	2,266	2,185
Payroll:	\$ 135,925,550	\$ 135,876,426
Benefits in Payment:	\$ 29,043,640	\$ 27,431,127
Frozen Unfunded Actuarial Accrued Liability:	\$ 70,149,946	\$ 68,936,307
Market Value of Assets:	\$ 485,539,046	\$ 444,996,698
Actuarial Asset Value:	\$ 465,429,341	\$ 452,830,104
Actuarial Accrued Liability (as defined by GASB-25)	\$ 535,579,287	\$ 521,766,411
Ratio of Actuarial Value of Assets to Actuarial Accrued Liability:	86.90%	86.79%

\*\*\*\*\*

	FISCAL 2005	FISCAL 2004
Net Employer Normal Cost (July 1):	\$ 19,751,813	\$ 17,747,260
Amortization Cost (July 1):	\$ 4,151,916	\$ 3,982,653
Total Employer Actuarially Required Contribution (Including Estimated Administrative Costs):	\$ 25,499,485	\$ 23,606,316
Net Direct Employer Actuarially Required Contribution as a Percentage of Projected Payroll:	15.87%	14.61%

\*\*\*\*\*

**Recommended Net Direct Employer Contribution Rate: For Fiscal 2006: 16.00% For Fiscal 2005: 15.00%**

Employee Contribution Rate: 9.25% of Payroll

Actuarial Cost Method: Frozen Attained Age Normal Actuarial Cost Method

Valuation Interest Rate: 8% (Net of Investment Expense)

Exclusions from Census: None

Basis of Actuarial Asset Value: Market Value of Assets adjusted to reflect a three year smoothing of realized and unrealized capital gains. Expense fund assets were allocated to each plan in proportion to reported payroll.

Changes in Valuation Methods, Assumptions, and Amortization Periods: None

Method of Recognizing Gains and Losses: Under the Frozen Attained Age Normal Method, actuarial gains and losses are spread over future normal costs.

**SUMMARY OF VALUATION RESULTS  
MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM - PLAN B**

Valuation Date:	June 30, 2004	June 30, 2003
Census Summary: Active Members	2,052	2,064
Retirees and Beneficiaries	734	720
Terminated Due a Deferred Benefit	74	63
Terminated Due a Refund	820	790
Payroll:	\$ 47,676,817	\$ 45,260,679
Benefits in Payment:	\$ 5,476,263	\$ 5,216,962
Frozen Unfunded Actuarial Accrued Liability:	\$ 6,202,383	\$ 6,444,919
Market Value of Assets:	\$ 92,904,743	\$ 83,836,074
Actuarial Asset Value:	\$ 89,415,704	\$ 86,170,714
Actuarial Accrued Liability (as defined by GASB-25)	\$ 95,618,087	\$ 92,615,633
Ratio of Actuarial Value of Assets to Actuarial Accrued Liability:	93.51%	93.04%

*****		
	FISCAL 2005	FISCAL 2004
Net Employer Normal Cost (July 1):	\$ 4,808,945	\$ 4,137,770
Amortization Cost (July 1):	\$ 687,933	\$ 701,973
Total Employer Actuarially Required Contribution (Including Estimated Administrative Costs):	\$ 5,943,322	\$ 5,370,680
Net Direct Employer Actuarially Required Contribution as a Percentage of Projected Payroll:	9.72%	9.22%

\*\*\*\*\*  
**Minimum Recommended Net Direct Employer Contribution Rate: Fiscal 2006: 9.75% Fiscal 2005: 9.50%**

Employee Contribution Rate: 5.00% of Payroll

Actuarial Cost Method: Frozen Attained Age Normal Actuarial Cost Method

Valuation Interest Rate: 8% (Net of Investment Expense)

Exclusions from Census: None

Basis of Actuarial Asset Value: Market Value of Assets adjusted to reflect a three year smoothing of realized and unrealized capital gains. Expense fund assets were allocated to each plan in proportion to reported payroll.

Changes in Valuation Methods, Assumptions, and Amortization Periods: None

Method of Recognizing Gains and Losses: Under the Frozen Attained Age Normal Method, actuarial gains and losses are spread over future normal costs.

## COMMENTS ON DATA

For the valuation, the administrative director of the system furnished a census on magnetic diskette derived from the system's master data processing file indicating each active covered employee's sex, date of birth, service credit, annual salary, and accumulated contributions. Information on retirees detailing dates of birth of retirees and beneficiaries, as well as option categories and benefit amounts, was provided in like manner. In addition, data was supplied on former employees who are vested or who have contributions remaining on deposit. As illustrated in Exhibit X, there are 5,325 active members in Plan A of whom 2,329 have vested retirement benefits including 202 participants in the Deferred Retirement Option Plan (DROP); 2,448 former Plan A members or their beneficiaries are receiving retirement benefits. An additional 2,459 Plan A members have contributions remaining on deposit with the system; of this number, 193 have vested rights for future retirement benefits. Census data on Plan B members may be found in Exhibit XXI. There are 2,052 active members in Plan B of whom 777 have vested retirement benefits including 54 participants in the Deferred Retirement Option Plan (DROP); 734 former Plan B members or their beneficiaries are receiving retirement benefits. An additional 894 Plan B members have contributions remaining on deposit with the system; of this number, 74 have vested rights for future retirement benefits. All individuals submitted were included in the valuation.

Census data submitted to our office is tested for errors. Several types of census data errors are possible; to ensure that the valuation results are as accurate as possible, a significant effort is made to identify and correct these errors. In order to minimize coverage errors (i.e., missing or duplicated individual records) the records are checked for duplicates, and a comparison of the current year's records to those submitted in prior years is made. Changes in status, new records, and previous records which have no corresponding current record are identified. This portion of the review indicates the annual flow of members from one status to another and is used to check some of the actuarial assumptions, such as retirement rates, rates of withdrawal, and mortality. In addition, the census is checked for reasonableness in several areas, such as age, service, salary, and current benefits. The records identified by this review as questionable are checked against data from prior valuations; those not recently verified are included in a detailed list of items sent to the system's administrative staff for verification and/or correction. Once the identified data has been researched and verified or corrected, it is returned to us for use in the valuation. Occasionally some requested information is either unavailable or impractical to obtain. In such cases, values may be assigned to missing data. The assigned values are based on information from similar records or based on information implied from other data in the record.

In addition to the statistical information provided on the system's participants, the system's administrative director furnished general information related to other aspects of the system's expenses, benefits and funding. Valuation asset values as well as income and expenses for the fiscal year were based on information furnished by the system's auditor, the firm of Duplantier, Hrapmann, Hogan & Maher, L.L.P. As indicated in the system's audit report, the net market value of Plan A's assets was \$485,539,046 as of June 30, 2004. Net investment income for fiscal 2004 measured on a market value basis for Plan A amounted to \$42,700,493. Contributions to the system for the fiscal year totaled \$32,280,590; benefits and expenses amounted to \$34,438,735. The net market value of Plan B's assets was \$92,904,743 as of June 30, 2004. Net investment income for fiscal 2004 measured on a market value basis for Plan B amounted to \$8,196,800. Contributions to the system for the fiscal year totaled \$7,432,569; benefits and expenses amounted to \$6,560,700.

Notwithstanding our efforts to review both census and financial data for apparent errors, we must rely upon the system's administrative staff and accountants to provide accurate information. Our review of submitted information is limited to validation of reasonableness and consistency. Verification of submitted data to source information is beyond the scope of our efforts.

## **COMMENTS ON ACTUARIAL METHODS AND ASSUMPTIONS**

This valuation is based on the Frozen Attained Age Normal actuarial cost method with the unfunded actuarial accrued liability frozen as of June 30, 1989. Under the provisions of Louisiana R.S. 11:103 the unfunded accrued liability for Plan A, which was determined to be \$48,466,297 as of June 30, 1989, was amortized over forty years with payments increasing at 4.25% per year. The unfunded accrued liability for Plan B, which was determined to be \$9,853,175 as of June 30, 1989, was amortized over forty years with payments decreasing at 2% per year. In accordance with R. S. 11:105, in any year in which the net direct employer contribution is scheduled to decrease, the board of trustees may freeze the net direct employer contribution rate and use the excess funds collected, if any, to reduce the frozen unfunded actuarial accrued liability. In Plan B, the board elected to freeze the employer contribution rate in fiscal 2001. As a result of this freeze in rates, the unfunded accrued liability will be fully amortized by June 30, 2023. In Plan A, payroll growth in excess of 4.25% per year will reduce future amortization payments as a percent of payroll. In Plan B, any payroll growth or payroll decline less than 2% per year will reduce future amortization payments as a percent of payroll. Under the Frozen Attained Age Normal Cost Method, actuarial gains and losses are spread over future normal costs. Thus, favorable plan experience will lower future normal costs; unfavorable experience will cause future normal costs to increase. In addition, changes in benefits and assumptions are also spread over future normal costs.

The actuarial assumptions utilized for the report are outlined on pages sixty-one through sixty-four. The valuation for fiscal 2004 utilized the same assumptions as the prior year. In the aggregate the assumptions represent our "best estimate" of future long-term experience for the fund. All calculations, recommendations, and conclusions are based on the assumptions specified. To the extent that prospective experience differs from that assumed, adjustments will be required to contribution levels. Such differences will be revealed in future actuarial valuations.

## **CHANGES IN PLAN PROVISIONS**

**Act 207** amends the statutes governing the educational requirements for the boards of trustees of the state and statewide retirement systems. The act changes the twelve month period in which annual training is required from a calendar year to the twelve month period from September first to August thirty-first. The deadline for notifying the House and Senate committees that each member of the board has met the requirements is changed from January fifteenth to October fifteenth. In addition to training in the areas of actuarial science and ethics, this act requires board members to receive one hour of education regarding the laws, rules, and regulations applicable to their system and one hour of instruction on fiduciary duty.

**Act 264** applies only to mayors who are in office on the effective date of the act. Any mayor who is receiving a retirement benefit from any source other than this system, and who is over the age of sixty-five, will not be required to participate in the retirement system. Any mayor who has been paying employee contributions and who meets the criteria for electing not to participate in the system may choose to terminate membership in the system and apply for a refund of their employee contributions immediately. If a mayor withdraws their contributions or chooses not to become a member of the system and later wishes to receive credit for this service, they will pay an amount sufficient to offset any additional liability to the system, calculated on an actuarial basis in accordance with R.S. 11:158(C).

**Act 275** requires each state and statewide public retirement system to submit its proposed annual operating budget to the Joint Legislative Committee on the Budget for review. In addition the systems must submit any modifications to their annual operating budgets which may occur during the fiscal year to the Joint Legislative Committee on the Budget for review. All statewide retirement systems with a fiscal year ending June thirtieth are required to submit their budgets for review at least thirty days before the convening of the regular legislative session. All other statewide systems are required to submit their budgets for review at least one hundred twenty days before the beginning of the system's fiscal year.

**Act 686** requires consultants and money managers to provide full disclosure of conflicts of interest, including non-pension sponsor sources of revenue. Consultants must also provide full disclosure of any payments they receive from money managers, in hard or soft dollars, for any services they provide, including but not limited to, performance measurement, business consulting and education.

**Act 706** amends the statute governing the seizure of benefits for child support (R.S. 11:292) to include any benefit or refund of contributions paid to a member, former member, or retiree. In addition, the portion of a retirement allowance, benefit or refund of contributions paid to a spouse or former spouse under the provisions of R.S. 11:291 will now be subject to garnishment or court-ordered assignment to pay child support.

**Act 850** amends the prudent-man rule on investments (R.S. 11:263) to allow the governing authority of any system to which R.S. 11:267(A) is inapplicable to invest more than fifty-five percent of their total portfolio in equities, so long as not more than sixty-five percent of the total portfolio is invested in equities, and at least ten percent of the total equity portfolio is invested in one or more index funds which seek to replicate the performance of the chosen index or indices.

**Act 868** requires each person who has or is seeking to obtain contractual or other business or financial relationships with a state or statewide public retirement system to file a report of all expenditures for a retirement official or retirement officials with the Board of Ethics. The act defines a "retirement official" as a member of the board of trustees, a public employee of the system, or an employee of the Department of the Treasury whose job is to assist the retirement system. An expenditure is defined to be a purchase, payment, donation, advance deposit, or gift or payment of money or anything of economic value or the purchase, donation, or gift of promotional items, food, drink, or refreshment, transportation, and entertainment for a retirement official. Persons making expenditures of less than five hundred dollars in a calendar year are not required to file this report.



## ASSET EXPERIENCE

The actuarial and market rates of return for the past ten years are given below. These rates of return on assets were determined by assuming a uniform distribution of income and expense throughout the fiscal year.

		<u>Actuarial Value</u>	<u>Market Value</u>
PLAN A	1995	10.0%	13.2%
	1996	12.0%	10.6%
	1997	9.1% *	14.1%
	1998	10.0% **	16.4%
	1999	12.1%	8.2%
	2000	11.0%	9.1%
	2001	4.5%	-4.2%
	2002	1.1%	-1.8%
	2003	-1.0% ***	4.4%
	2004	3.5%	9.6%

		<u>Actuarial Value</u>	<u>Market Value</u>
PLAN B	1995	9.8%	13.6%
	1996	11.6%	10.5%
	1997	9.2% *	14.7%
	1998	9.7% **	16.2%
	1999	11.7%	7.9%
	2000	10.8%	8.4%
	2001	4.2%	-4.2%
	2002	0.3%	-2.8%
	2003	-1.8% ***	3.8%
	2004	3.1%	9.7%

\* Includes the effect of a change in methodology for determining actuarial value of assets. Prior to 1997 the values were based on market values for stocks and amortized cost for fixed income securities. In 1997, values for common stock were based on two-year smoothing of realized and unrealized capital gains.

\*\* Includes the effect of a change from two-year smoothing of realized and unrealized capital gains on common stock to a three-year smoothing method.

\*\*\* Includes the effect of a change from amortized cost for fixed income securities to three year smoothing of realized and unrealized capital gains.

The market rate of return gives a measure of investment return on a total return basis and includes realized and unrealized capital gains and losses as well as interest income. This rate of return gives an indication of performance for an actively managed portfolio where securities are bought and sold with the objective of producing the highest total rate of return. The deferral of realized and unrealized capital gains and/or losses on securities was the main reason for the difference between the actuarial and market rates of return. Also, the allocation of expense fund assets and income to

both Plan A and Plan B produces an additional very small difference between the actuarial and market rates of return. During 2004, the fund earned \$13,947,648 of dividends and interest for Plan A and \$2,685,867 for Plan B. This income was increased by realized and unrealized capital gains of \$30,253,740 for Plan A and \$5,805,882 for Plan B and offset by investment expenses of \$1,506,101 for Plan A and \$295,675 for Plan B. The geometric mean of the market value rates of return measured over the last ten years was 7.8% for Plan A and 7.6% for Plan B.

The actuarial rate of return is presented for comparison to the assumed long-term rate of return of 8% used for the valuation. This rate is calculated based on the actuarial value of assets and all interest, dividends, other investment income, and recognized capital gains as given in Exhibit VI for Plan A and Exhibit XVII for Plan B, adjusted for any change in asset determination methodology. For Fiscal 2004, it includes one-third of all realized and unrealized capital gains or losses on common stock and fixed income securities accrued during the fiscal year and one-third of those gains or losses accrued in the prior two fiscal years. Yields in excess of the 8% assumption will reduce future costs; yields below 8% will increase future costs. The geometric mean rate of return on an actuarial basis over the past ten years has been 7.1% for Plan A and 6.8% for Plan B. For fiscal 2004, Plan A experienced net actuarial investment earnings of \$20,352,138 less than the actuarial assumed earnings rate of 8%. For Plan B, the shortfall in earnings amounted to \$4,236,669. These actuarial losses increased the normal cost accrual rate by 1.9273% and 1.0642% respectively for Plan A and B.

At the end of each fiscal year, a transfer of assets and liabilities should be made between the Plan A and Plan B trust funds pursuant to the provisions of R.S. 11: 1862(F). For fiscal 2004, we identified two members who had changed plans during the fiscal year. In order to properly assign liabilities to the plan in which they are currently contributing we recommend a transfer of assets of \$25,681 for these individuals from Plan B to Plan A (adjusted with 8% interest from June 30, 2004 to the date of the transfer). The actuarial and market value of assets as of June 30, 2004, for Plan A and Plan B reflect the receivables and payables related to the transfer of these assets.

## **PLAN A – DEMOGRAPHICS AND LIABILITY EXPERIENCE**

A reconciliation of the census for the Plan is given in Exhibit X. The Plan's active membership decreased during the fiscal year by 208 members. The plan has experienced a decline in the active plan population of 381 members between 1999 and 2004. Should the five year trend in plan population continue, a change in the structure of the amortization of the frozen unfunded actuarial accrued liability will be required to prevent continual increases in contributions as a percentage of payroll. The number of retirees and beneficiaries receiving benefits from the system increased by 76 during the fiscal year and by 318 over the last five years.

A review of the active census by age indicates that over the last ten years the population in the under-forty age group has decreased while the proportion of active members over-forty increased. Over the same ten-year period the plan showed a decrease in the percentage of members with service less than five years; the percentage of members with service over five years has increased. These trends are indicative of a maturing population.

Plan liability experience for fiscal 2004 was favorable. There was no one significant factor affecting liability experience. Both regular and disability retirements were less than projected; withdrawals and retiree deaths were above projections. Salary increases were less than projected. All of these elements contributed to cost reduction. DROP entries were above projected levels, partially offsetting the cost reduction. Plan liability gains reduced the normal cost accrual rate by 0.5029%.

## **PLAN B – DEMOGRAPHICS AND LIABILITY EXPERIENCE**

A reconciliation of the census for the Plan is given in Exhibit XXI. The Plan's active membership decreased during the fiscal year with a population decrease of twelve members over the last year. Over the last five years the active population decreased by one hundred members. The number of retirees and beneficiaries receiving benefits from the system increased by fourteen. Over the last five years this group increased by seventy.

A review of the active census by age indicates that over the last ten years the population in the under-forty age group has decreased while the proportion of active members over-forty increased. Over the same ten-year period the system showed a slight decrease in the percentage of members with service less than five years and the corresponding increase in the percentage of members with service over five years. These trends are indicative of a maturing population.

Plan liability experience for fiscal 2004 was unfavorable. The most significant factor increasing costs was salary increases above projected levels. This was offset in part by retirements, disabilities, and DROP entries below projected levels and withdrawals above projections. Retiree deaths were near projected levels. Plan liability gains increased the normal cost accrual rate by 0.1526%.

## **FUNDING ANALYSIS AND RECOMMENDATIONS**

Actuarial funding of a retirement system is a process whereby funds are accumulated over the working lifetimes of employees in such a manner as to have sufficient assets available at retirement to pay for the lifetime benefits accrued by each member of the system. The required contributions are determined by an actuarial valuation based on rates of mortality, termination, disability, and retirement, as well as investment return and other statistical measures specific to the particular group. Each year a determination is made of two cost components, and the actuarially required contributions are based on the sum of these two components plus administrative expenses. These two components are the normal cost and the amortization payment on the unfunded actuarial accrued liability. The normal cost refers to the portion of annual cost based on the salary of active participants. The term unfunded accrued liability (UAL) refers to the excess of the present value of plan benefits over the sum of current assets and future normal costs. Each year the UAL grows with interest and is reduced by payments. Under the funding method used for both plans, changes in plan experience, benefits, or assumptions do not affect the unfunded actuarial accrued liability. These items increase or decrease future normal costs.

In order to establish the actuarially required contribution in any given year, it is necessary to define the assumptions, funding method, and method of amortizing the UAL. Thus, the determination of what contribution is actuarially required depends upon the funding method and amortization schedules employed. Regardless of the method selected, the ultimate cost of providing benefits is dependent upon the benefits, expenses, and investment earnings. Only to the extent that some methods accumulate assets more rapidly and thus produce greater investment earnings does the funding method affect the ultimate cost.

For Plan A, the derivation of the actuarially required contribution for the current fiscal year is given in Exhibit I. The normal cost for fiscal 2005 as of July 1, 2004, is \$19,751,813. The amortization payment on the plan's frozen unfunded actuarial accrued liability as of July 1, 2004, is \$4,151,916. The total actuarially required contribution is determined by adjusting these two values for interest (since payments are made throughout the fiscal year) and adding estimated administrative expenses. As given on line 14 of Exhibit I, the total actuarially required contribution for fiscal 2005 is \$25,499,485. When this amount is reduced by projected tax contributions and revenue sharing funds, the resulting employers' net direct actuarially required contribution for fiscal 2005 is \$22,172,649. This is 15.87% of the projected Plan A payroll for fiscal 2005.

Liability and asset experience as well as changes in assumptions and benefits can increase or lower plan costs. In addition to these factors, any COLA granted in the prior fiscal year will increase required contributions. New entrants to the system can also increase or lower costs as a percent of payroll depending upon their demographic distribution and other factors related to prior plan experience. Finally, contributions above or below requirements may reduce or increase future costs.

The effects of various factors on the cost structure for Plan A are outlined below:

Normal Cost Accrual Rate – Fiscal 2004	13.7704%
Factors Increasing the Normal Cost Accrual Rate:	
Asset Experience	1.9273%
Contribution Shortfall	0.4543%
Factors Decreasing the Normal Cost Accrual Rate:	
New Members	-0.3664%
Liability Experience	-0.5029%
Normal Cost Accrual Rate – Fiscal 2005	15.2827%

For Plan B, the derivation of the actuarially required contribution for the current fiscal year is given in Exhibit XII. The normal cost for fiscal 2005 as of July 1, 2004, is \$4,808,945. The amortization payment on the plan's frozen unfunded actuarial accrued liability as of July 1, 2004, is \$687,933. The total actuarially required contribution is determined by adjusting these two values for interest (since payments are made throughout the fiscal year) and adding estimated administrative expenses. As given on line 14 of Exhibit XII, the total actuarially required contribution for fiscal 2005 is \$5,943,322. When this amount is reduced by projected tax contributions and revenue

sharing funds, the resulting employers' net direct actuarially required contribution for fiscal 2005 is \$4,776,412. This is 9.72% of the projected Plan B payroll for fiscal 2005.

The effects of various factors on the cost structure for Plan B are outlined below:

Normal Cost Accrual Rate – Fiscal 2004	9.6839 %
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Factors Increasing the Normal Cost Accrual Rate:

Asset Experience	1.0642%
Contribution Shortfall	0.1028%
Liability Experience	0.1526%

Factors Decreasing the Normal Cost Accrual Rate:

New Members	-0.3389%
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Normal Cost Accrual Rate – Fiscal 2005	10.6646%
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In addition to the above factors, payroll growth affects plan costs to the extent that payments on the system's unfunded liability are on a schedule that varies from actual trends in payroll growth or decline. If payroll changes at rates not consistent with the amortization schedule the result will be costs that change as a percentage of payroll. For fiscal 2005, the net effect of the change in payroll on amortization costs was an increase of 0.12% of payroll for Plan A, and reduced costs 0.11% of payroll for Plan B. Required net direct employer contributions are also affected by the available ad valorem taxes and revenue sharing funds which the system receives each year. When these funds change as a percentage of payroll, net direct employer contributions are adjusted accordingly. We estimate that for Plan A these funds collected in fiscal 2005 will increase by 0.09% of payroll; in Plan B the corresponding increase is also 0.09%. Although the actuarially required net direct employer contribution rate for Plan A for fiscal 2005 is 15.87%, the actual employer contribution rate for fiscal 2005 is 15.00% of payroll. After giving consideration to the expected shortfall in contributions collected in fiscal 2005, as detailed in Exhibit I, we recommend a net direct employer contribution of 16.00% of payroll for Plan A during fiscal 2006. Although the actuarially required net direct employer contribution rate in Plan B is 9.72%, the actual employer contribution rate for fiscal 2005 is 9.50% of payroll. After giving consideration to the expected contribution shortfall in fiscal 2005, as detailed in Exhibit XII, we recommend a net direct employer contribution of 9.75% of payroll for Plan B during fiscal 2006.

Capital market conditions over the last five fiscal years have resulted in asset experience losses for the Fund that have significantly increased its cost structure. These market conditions may be temporary or it may indicate that future return expectations should be reduced. In order to illustrate the impact of a reduction in return expectations, we have performed an alternative valuation at an assumed valuation interest rate of 7.5% with all other assumptions unchanged. Lowering the valuation interest rate by 0.50% would significantly increase required funding. The employer normal cost accrual rate would be increased in excess of 4.0% for Plan A and 2.2% for Plan B, although there would be a small offset resulting from lower amortization payments on the frozen

unfunded accrued liability. In Plan A, the total employer actuarially required contribution would be increased by \$5,160,648 to \$27,333,297 and would increase the actuarially required net direct employer contribution rate for fiscal 2005 from 15.87% to 19.56%. In Plan B, the total employer actuarially required contribution would be increased by \$1,007,119 to \$5,783,531 and would increase the actuarially required net direct employer contribution rate for fiscal 2005 from 9.72% to 11.77%. After adjusting for the contribution shortfall in fiscal 2005, lowering the valuation interest rate from 8% to 7.50% in fiscal 2005 would result in a recommended minimum net direct employer contribution rate of 20.00% for Plan A and 12.00% for Plan B for fiscal 2006. Whether or not the system's valuation rate will need to be adjusted will depend on the actual future portfolio performance and future long term expectations for the capital markets in general.

### **COST OF LIVING INCREASES**

During fiscal 2004 the actual cost of living (as measured by the US Department of Labor CPI-U) increased by 3.27%. Cost of living provisions for the system are detailed in R.S. 11:1761 and R.S. 11:246. The former statute allows the board to use interest earnings in excess of the normal requirements to grant annual cost of living increases of 2% of each retiree's original benefit. R.S. 11:246 provides cost of living increases of retirees and beneficiaries over the age of 65 equal to 2% of the benefit in payment on October 1, 1977, or the date the benefit was originally received if retirement commenced after that date. R.S. 11:241 provides that cost of living benefits shall be in the form (unless the board otherwise specifies) of \$X (A+B) where X is at most \$1 and "A" represents the number of years of credited service accrued at retirement or at death of the member or retiree and "B" is equal to the number of years since retirement or since death of the member or retiree to June 30<sup>th</sup> of the initial year of such increase. The provisions of this subpart do not repeal provisions relative to cost of living adjustments contained within the individual laws governing systems; however, they are to be controlling in cases of conflict. All of the above provisions require that the system earn sufficient excess interest earnings to fund the increases. In addition, the ratio of the plan's assets to benefit obligations must meet the criteria established in R.S. 11:242. This section sets forth a minimum "target ratio" of the actuarial value of assets to the Pension Benefit Obligation. We have determined that for fiscal 2004 Plan A no longer meets the target ratio although Plan B has met the necessary target ratio. In both plans investment experience was below assumptions. Since COLAs can only be paid out of investment income in excess of the 8% assumption, neither plan is able to fund any cost of living increase for the fiscal year.

**Plan A - Components of Present Value of Future Benefits  
June 30, 2004**

## **Plan A - Components of Present Value of Future Benefits**

## **Plan A - Components of Actuarial Funding**



## **Plan A – Frozen Unfunded Accrued Liability**

### **Plan A Actuarial Value of Assets vs. GASB-25 Accrued Liability**

## Plan A – Historical Asset Yield

## Plan A - Net Non-Investment Income

		199 5	199 6	199 7	199 8	199 9	200 0	200 1	200 2	200 3	200 4
Non-Investment Income (\$Mil)	<input type="checkbox"/>	17. 3	19. 9	20. 3	19. 4	21. 4	22. 1	31. 4	25. 0	27. 8	32. 4
Benefits and Expenses (\$Mil)	<input type="checkbox"/>	26. 5	24. 0	23. 0	27. 4	26. 5	28. 4	33. 5	31. 8	33. 9	35. 5
Net Non-Investment Income (\$Mil)	<input type="checkbox"/>	-9.2	-4.1	-2.7	-8	-5.1	-6.3	-2.1	-6.8	-6.1	-3.1

**Plan A - Total Income vs. Expenses  
(Based on Actuarial Value of Assets)**

		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total Income (\$Mil)	<input type="checkbox"/>	43.9	54.1	49.0	53.3	65.7	66.7	51.2	29.9	23.2	48.1
Benefits and Expenses (\$Mil)	<input type="checkbox"/>	26.5	24.0	23.0	27.4	26.5	28.4	33.5	31.8	33.9	35.5
Net Change in AVA (\$Mil)	<input checked="" type="checkbox"/>	17.4	30.	26.	25.9	39.2	38.3	17.7	-	-	12.6

**Plan A - Active – Census By Age  
(as a percent)**

**Plan A - Active – Census By Service**  
(as a percent)

**Plan B - Components of Present Value of Future Benefits**  
**June 30, 2004**

## **Plan B - Components of Present Value of Future Benefits**

## **Plan B - Components of Actuarial Funding**

## **Plan B – Frozen Unfunded Accrued Liability**

X

**Plan B**  
**Actuarial Value of Assets vs. GASB-25 Accrued Liability**

**Plan B – Historical Asset Yield**



## Plan B - Net Non-Investment Income

		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Non-Investment Income (\$Mil)	<input type="checkbox"/>	3.4	5.6	4.6	3.8	4.8	4.9	-4.4	5.2	6.4	7.4
Benefits and Expenses (\$Mil)	<input type="checkbox"/>	4.8	7.0	4.9	4.7	5.2	6.1	6.3	6.7	7.2	6.9
Net Non-Investment Income (\$Mil)	<input type="checkbox"/>	-1.4	-1.4	-0.3	-0.9	-0.4	-1.2	-10.7	-1.5	-0.8	0.5

**Plan B - Total Income vs. Expenses**  
**(Based on Actuarial Value of Assets)**

		199 5	199 6	199 7	199 8	199 9	200 0	200 1	200 2	200 3	200 4
Total Income (\$Mil)	□	8.9	12. 6	10. 8	10. 9	14. 1	14. 3	-0.3	5.5	4.7	10. 1
Benefits and Expenses (\$Mil)	□	4.8	7.0	4.9	4.7	5.2	6.1	6.3	6.7	7.2	6.9
Net Change in AVA (\$Mil)	—	4.1	5.6	5.9	6.2	8.9	8.2	-6.6	-1.2	-2.5	3.2

**Plan B - Active – Census By Age**  
**(as a percent)**



**Plan B - Active – Census By Service**  
(as a percent)

**EXHIBIT I**

**PLAN A: ANALYSIS OF ACTUARIALLY REQUIRED CONTRIBUTIONS**

1. Present Value of Future Benefits .....	\$ 782,077,437
2. Frozen Unfunded Actuarial Accrued Liability .....	\$ 70,149,946
3. Actuarial Value of Assets .....	\$ 465,429,341
4. Present Value of Future Employee Contributions .....	\$ 85,111,124
5. Present Value of Future Employer Normal Costs (1-2-3-4) .....	\$ 161,387,026
6. Present Value of Future Salaries .....	\$1,056,005,466
7. Employer Normal Cost Accrual Rate (5 - 6) .....	15.282783%
8. Projected Fiscal 2005 Salary for Current Membership .....	\$ 129,242,250
9. Employer Normal Cost as of July 1, 2004 (7 x 8) .....	\$ 19,751,813
10. Amortization Payment on Frozen Unfunded Accrued Liability of \$70,149,946 over 25 remaining years with Payments increasing at 4.25% per year .....	\$ 4,151,916
11. Total Employer Normal Cost & Amortization Payment (9 + 10) .....	\$ 23,903,729
12. Employer Normal Cost and Amortization Payment Interest Adjusted for Midyear Payment .....	\$ 24,841,484
13. Estimated Administrative Cost for Fiscal 2005 .....	\$ 658,001

14. Gross Employer Actuarially Required Contribution for Fiscal 2005 (12 + 13) .....	\$ 25,499,485
15. Projected Tax Contributions for Fiscal 2005 .....	\$ 3,211,002
16. Projected Revenue Sharing Funds for Fiscal 2005 .....	\$ 115,834
17. Net Direct Employer Actuarially Required Contribution for Fiscal 2005 (14 - 15 - 16) .....	\$ 22,172,649
18. Projected Payroll (July 1, 2004 through June 30, 2005) .....	\$ 139,754,336
19. Employers Minimum Net Direct Actuarially Required Contribution as a % of Projected Payroll for Fiscal 2005 (17 - 18) .....	15.87%
20. Actual Employer Contribution Rate for Fiscal 2005 .....	15.00%
21. Contribution Shortfall (Excess) as a Percentage of Payroll (19-20) .....	0.87%
22. Increase (Reduction) to Following Year Payment for Contribution Shortfall (Excess) .....	0.11%
23. Minimum Recommended Net Direct Employer Contribution Rate for Fiscal 2006 (19 + 22, Rounded to nearest .25%) .....	16.00%

**EXHIBIT II**  
**PLAN A: PRESENT VALUE OF FUTURE BENEFITS**

Present Value of Future Benefits for Active Members:

Retirement Benefits .....	\$ 459,033,020
Survivor Benefits .....	17,880,955
Disability Benefits .....	16,912,218
Vested Deferred Termination Benefits .....	17,822,777
Contribution Refunds .....	12,870,493

TOTAL Present Value of Future Benefits for Active Members ..... \$ 524,519,463

Present Value of Future Benefits for Terminated Members:

Terminated Vested Members Due Benefits at Retirement	\$ 8,771,378
Terminated Members with Reciprocals	
Due Benefits at Retirement .....	703,839
Terminated Members Due a Refund .....	1,464,305

TOTAL Present Value of Future Benefits for Terminated Members ..... \$ 10,939,522

Present Value of Future Benefits for Retirees:

Regular Retirees .....	\$ 194,819,077
Disability Retirees .....	15,184,442
Survivors & Widows .....	33,401,944
Reserve for Accrued Retiree DROP Account Balances .....	3,212,989

TOTAL Present Value of Future Benefits for Retirees & Survivors ..... \$ 246,618,452

TOTAL Present Value of Future Benefits ..... \$ 782,077,437

**EXHIBIT III**  
**PLAN A: ACTUARIAL VALUE OF ASSETS**

Current Assets:

Cash .....	\$ 3,351,156
Contributions Receivable from Members .....	2,865,689
Contributions Receivable from Employers .....	3,598,628
Accrued Interest and Dividends on Investments .....	2,612,125
Investment Receivable .....	94,515
Due From Plan B .....	602,918

TOTAL CURRENT ASSETS ..... \$ 13,125,031

Allocated Share of the Expense Fund ..... \$ 1,419,357

Property Plant & Equipment ..... \$ 592,549

Investments:

Common Stock .....	\$ 143,750,326
Corporate Bonds .....	136,897,307
Federal National Mortgage Corporation .....	57,071,809
International Equities .....	50,233,416
Mutual Fund – Domestic Equities .....	49,759,107
Federal Home Loan Mortgage Corporation .....	17,379,670
Government National Mortgage Association .....	3,050,524
Federal Home Loan Bank .....	3,390,446
Cash Equivalents .....	11,252,080
Deferred Capital Losses (Gains) .....	(21,529,062)

TOTAL INVESTMENTS ..... \$ 451,255,623

TOTAL ASSETS ..... \$ 466,392,560

Current Liabilities:

Ad Valorem & Revenue Sharing Taxes Payable to EBR .....	\$ 382,510
Investment Payable .....	206,809
Accounts Payable .....	258,179
Refunds Payable .....	115,721

TOTAL CURRENT LIABILITIES ..... \$ 963,219

ACTUARIAL VALUE OF ASSETS ..... \$ 465,429,341



**EXHIBIT IV**  
**PLAN A: PRESENT VALUE OF FUTURE CONTRIBUTIONS**

Employee Contributions to the Annuity Savings Fund .....	\$ 85,111,124
Employer Normal Contributions to the Pension Accumulation Fund .....	161,387,026
Employer Amortization Payments to the Pension Accumulation Fund .....	70,149,946
 TOTAL PRESENT VALUE OF FUTURE CONTRIBUTIONS .....	 \$316,648,096

**EXHIBIT V**  
**PLAN A: CHANGE IN FROZEN UNFUNDED ACTUARIAL ACCRUED LIABILITY**

Prior Year Frozen Unfunded Accrued Liability .....	\$ 68,936,307
Interest on Frozen Unfunded Accrued Liability .....	\$ 5,514,905
Employer Normal Cost for Prior Year .....	17,747,260
Interest on the Normal Cost .....	1,419,781
Administrative Expenses .....	628,412
Interest on Expenses .....	24,653
 TOTAL Increases to Frozen Unfunded Accrued Liability .....	 \$ 25,335,011
Gross Regular Employer Contributions .....	\$ 18,620,908
Interest on Employer Contributions .....	730,507
Contribution Shortfall (Excess) .....	4,589,892
Interest on Contribution Shortfall (Excess) .....	180,065
 TOTAL Decreases to Frozen Unfunded Accrued Liability .....	 \$ 24,121,372
 CURRENT YEAR FROZEN UNFUNDED ACCRUED LIABILITY .....	 \$ 70,149,946

**EXHIBIT VI**  
**PLAN A: ANALYSIS OF INCREASE IN ASSETS**

Actuarial Value of Assets (June 30, 2003) .....	\$	452,830,104
Income:		
Member Contributions .....	\$	12,345,624
Employer Contributions .....		15,440,343
Ad Valorem Taxes .....		3,063,051
Revenue Sharing Funds .....		117,514
Irregular Contributions .....		1,246,764
Due from Plan B .....		116,663
Other Income .....		67,294
Total Contribution Income .....	\$	32,397,253
Interest and Dividend Income .....	\$	13,947,648
Recognized Realized Capital Gains (Losses) .....		(2,861,869)
Recognized Unrealized Capital Gains (Losses) .....		6,150,658
Investment Income Allocated from Expense Fund .....		15,097
Securities Lending .....		5,206
Allocated Share of Investment Expense .....		(1,506,101)
Net Investment Income .....	\$	15,750,639
TOTAL Income .....	\$	48,147,892
Expenses:		
Retirement Benefits .....	\$	28,317,593
Funds Transferred to Another System .....		891,742
Refunds of Contributions .....		3,036,109
DROP Disbursements .....		2,648,009
Transfer to Plan B .....		0
Allocated Share of Administrative Expenses .....		628,412
TOTAL Expenses .....	\$	35,521,865
Net Income for Fiscal 2004 (Income - Expenses) .....	\$	12,626,027
Unadjusted Fund Balance as of June 30, 2004 .....	\$	465,456,131
Adjustment for Change in Allocated Expense Fund Balance .....	\$	(26,790)
Actuarial Value of Assets (June 30, 2004) .....	\$	465,429,341

**EXHIBIT VII  
PLAN A: FUND BALANCE**

Present Assets of the System Creditable to:

Annuity Savings Fund .....	\$ 94,680,318
Annuity Reserve Fund .....	243,405,463
Pension Accumulation Fund .....	133,663,787
Deferred Retirement Option Plan Account .....	13,789,478
NET MARKET VALUE OF ASSETS .....	\$ 485,539,046
ADJUSTMENT FOR DEFERRAL OF REALIZED AND UNREALIZED CAPITAL LOSSES (GAINS) ON SECURITIES .....	(21,529,062)
ALLOCATED SHARE OF THE EXPENSE FUND .....	1,419,357
ACTUARIAL VALUE OF ASSETS .....	\$ 465,429,341

**EXHIBIT VIII  
PLAN A: PENSION BENEFIT OBLIGATION**

Present Value of Credited Projected Benefits Payable to Current Employees ..	\$ 346,211,957
Present Value of Benefits Payable to Terminated Employees .....	10,939,522
Present Value of Benefits Payable to Current Retirees and Beneficiaries .....	246,618,452
TOTAL PENSION BENEFIT OBLIGATION .....	603,769,931



**EXHIBIT IX**  
**PLAN A: COST OF LIVING ADJUSTMENTS - TARGET RATIO**

1. Actuarial Value of Assets Divided by PBO as of Fiscal 1986: .....	65.05%
2. Amortization of Unfunded Balance over 30 years: .....	20.97%

Adjustments in Funded Ratio Due to Changes in Assumption(s):

Changes for Fiscal 1988 .....	4.97%
Changes for Fiscal 1989 .....	(1.98)%
Changes for Fiscal 1995 .....	(1.38)%
Changes for Fiscal 1997 .....	(3.44)%
Changes for Fiscal 1998 .....	(3.63)%
Changes for Fiscal 2000 .....	(1.35)%
Changes for Fiscal 2003 .....	0.89%
 3. TOTAL Adjustments .....	 (5.92%)

Amortization of Adjustments in Funded Ratio over 30 years:

Changes for Fiscal 1988 .....	(2.65)%
Changes for Fiscal 1989 .....	0.99%
Changes for Fiscal 1995 .....	0.41%
Changes for Fiscal 1997 .....	0.80%
Changes for Fiscal 1998 .....	0.73%
Changes for Fiscal 2000 .....	0.18%
Changes for Fiscal 2003 .....	(0.03)%
 4. TOTAL Amortization of Adjustments .....	 0.43%

5. Target Ratio for Current Fiscal Year (Lesser of 1+2+3+4 or 100%) .....	80.53%
 6. Actuarial Value of Assets Divided by PBO as of June 30, 2004 .....	 77.09%

**EXHIBIT X**  
**PLAN A: CENSUS DATA**

	Active	Terminated with Funds on Deposit	DROP	Retired	Total
Number of members as of June 30, 2003	5,331	2,377	202	2,372	10,282
Additions to Census					
Initial membership	454	54			508
Death of another member	(8)	(5)		13	
Omitted in error last year				5	5
Change in Status during Year					
Actives terminating service	(164)	164			
Actives who retired	(81)			81	
Actives entering DROP	(76)		76		
Term. members rehired	28	(28)			
Term. members who retire		(16)		16	
Retirees who are rehired					
Refunded who are rehired	15	14			29
DROP participants retiring			(42)	42	
DROP returned to work	33		(33)		
Survivor due benefit at age 60					
Eliminated from Census					
Refund of contributions	(397)	(99)			(496)
Deaths	(12)	(3)	(1)	(87)	(103)
Included in error last year					
Adjustment for multiple records		1		6	7
Number of members as of June 30, 2004	5,123	2,459	202	2,448	10,232

















**EXHIBIT XI**  
**PLAN A: YEAR-TO-YEAR COMPARISON**

	Fiscal 2004	Fiscal 2003	Fiscal 2002	Fiscal 2001
Number of Active Members	5,325	5,533	5,481	5,455
Number of Retirees and Survivors	2,448	2,372	2,316	2,255
Number Terminated Due Deferred Benefits	193	192	193	189
Number Terminated Due Refund	2,266	2,185	2,158	2,122
Active Lives Payroll	\$ 135,925,550	\$ 135,876,426	\$ 130,191,230	\$ 125,304,827
Retiree Benefits in Payment	\$ 29,043,640	\$ 27,431,127	\$ 26,145,224	\$ 24,838,273
Market Value of Assets	\$ 485,539,046	\$ 444,996,698	\$ 432,669,352	\$ 447,796,046
Ratio of Actuarial Value of Assets to Actuarial Accrued Liability	86.90%	86.79%	87.26%	87.53%
Actuarial Accrued Liability (As defined by GASB- 25)	\$ 535,579,287	\$ 521,766,411	\$ 531,127,529	\$ 531,562,970
Actuarial Value of Assets	\$ 465,429,341	\$ 452,830,104	\$ 463,477,324	\$ 465,259,344
Unfunded Actuarial Accrued Liability	\$ 70,149,946	\$ 68,936,307	\$ 67,650,205	\$ 66,303,626
Present Value of Future Employer Normal Cost	\$ 161,387,026	\$ 146,656,618	\$ 100,815,782	\$ 67,974,883
Present Value of Future Employee Contributions	\$ 85,111,124	\$ 86,226,350	\$ 83,902,996	\$ 82,237,210
Present Value of Future Benefits	\$ 782,077,437	\$ 754,649,379	\$ 715,846,307	\$ 681,775,063

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	Fiscal 2005	Fiscal 2004	Fiscal 2003	Fiscal 2002
Employee Contribution Rate	9.25%	9.25%	9.25%	9.25%
Proj. Tax Contribution as % of Projected Payroll	2.38%	2.29%	2.28%	2.17%
Actuarially Req'd Net Direct Employer Cont. Rate	15.87%	14.61%	10.78%	7.89%
Actual Employer Direct Contribution Rate	15.00%	11.00%	8.00%	7.00%

Fiscal 2000	Fiscal 1999	Fiscal 1998	Fiscal 1997	Fiscal 1996	Fiscal 1995
5,558	5,706	5,740	5,880	5,820	5,668
2,213	2,130	2,081	2,045	2,022	1,951
187	150	152	163	158	135
2,108	2,010	1,942	1,882	1,888	1,827
\$ 124,683,590	\$ 120,568,583	\$ 116,609,501	\$ 115,687,749	\$ 112,212,880	\$ 105,755,181
\$ 23,418,404	\$ 21,553,214	\$ 20,129,226	\$ 18,865,469	\$ 17,947,961	\$ 16,540,168
\$ 469,525,372	\$ 436,446,684	\$ 408,685,269	\$ 358,812,541	\$ 317,277,291	\$ 290,829,063
87.33%	86.57%	85.65%	85.05%	84.36%	83.37%
\$ 512,465,288	\$ 472,653,880	\$ 432,158,125	\$ 404,727,303	\$ 377,279,030	\$ 345,626,503
\$ 447,557,888	\$ 409,182,585	\$ 370,154,019	\$ 344,213,563	\$ 318,271,740	\$ 288,135,401
\$ 64,907,400	\$ 63,471,295	\$ 62,004,106	\$ 60,513,740	\$ 59,007,290	\$ 57,491,102
\$ 59,512,163	\$ 48,158,874	\$ 38,443,452	\$ 45,413,959	\$ 46,384,507	\$ 46,295,326
\$ 83,646,334	\$ 81,782,562	\$ 86,763,021	\$ 87,008,081	\$ 85,308,608	\$ 80,932,808
\$ 655,623,785	\$ 602,595,316	\$ 557,364,598	\$ 537,149,343	\$ 508,972,145	\$ 472,854,637

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Fiscal 2001	Fiscal 2000	Fiscal 1999	Fiscal 1998	Fiscal 1997	Fiscal 1996
9.25%	9.25%	9.25%	9.25%	9.25%	9.25%
2.02%	2.02%	2.08%	1.93%	1.76%	1.81%
7.03%	6.20%	4.92%	5.73%	5.91%	6.24%
6.25%	5.75%	5.75%	5.75%	6.25%	6.75%

# **Plan B Exhibits**

**EXHIBIT XII**

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**G. S. CURRAN & COMPANY, LTD.**

**PLAN B: ANALYSIS OF ACTUARIALLY REQUIRED CONTRIBUTIONS**

1. Present Value of Future Benefits .....	\$ 156,117,470
2. Frozen Unfunded Actuarial Accrued Liability .....	\$ 6,202,383
3. Actuarial Value of Assets .....	\$ 89,415,704
4. Present Value of Future Employee Contributions .....	\$ 18,040,618
5. Present Value of Future Employer Normal Costs (1 – 2 – 3 – 4) .....	\$ 42,458,765
6. Present Value of Future Salaries .....	\$ 398,126,604
7. Employer Normal Cost Accrual Rate (5 – 6) .....	10.664639%
8. Projected Fiscal 2005 Salary for Current Membership .....	\$ 45,092,428
9. Employer Normal Cost as of July 1, 2004 (7 x 8) .....	\$ 4,808,945
10. Amortization Payment on Frozen Unfunded Accrued Liability of \$6,202,383 with Payments decreasing at 2% per year .....	\$ 687,933
11. TOTAL Employer Normal Cost & Amortization Payment (9 + 10) .....	\$ 5,496,878
12. Employer Normal Cost and Amortization Payment Interest Adjusted for Midyear Payment .....	\$ 5,712,523
13. Estimated Administrative Cost for Fiscal 2005 .....	\$ 230,799
14. TOTAL Employer Actuarially Required Contribution for Fiscal 2005 (12 + 13) .....	\$ 5,943,322
15. Projected Tax Contributions for Fiscal 2005 .....	\$ 1,126,281
16. Projected Revenue Sharing Funds for Fiscal 2005 .....	\$ 40,629
17. Net Direct Employer Actuarially Required Contribution for Fiscal 2005 (14-15-16) .....	\$ 4,776,412
18. Projected Payroll (July 1, 2004 through June 30, 2005) .....	\$ 49,139,692
19. Employers' Minimum Net Direct Actuarially Required Contribution as a % of Projected Payroll for Fiscal 2005 (17 – 18) .....	9.72%
20. Actual Employer Contribution Rate for Fiscal 2005 .....	9.50%
21. Contribution Shortfall (Excess) as a Percentage of Payroll (19-20) .....	0.22%
22. Increase (Reduction) to Following Year Payment for Contribution Shortfall (Excess) .....	0.02%
23. Minimum Recommended Net Direct Employer Contribution Rate for Fiscal 2006 (19+22, Rounded to nearest .25%) .....	9.75%

**EXHIBIT XIII**  
**PLAN B: PRESENT VALUE OF FUTURE BENEFITS**

Present Value of Future Benefits for Active Members:

Retirement Benefits .....	\$ 92,129,838
Survivor Benefits .....	4,824,571
Disability Benefits .....	4,336,435
Vested Deferred Termination Benefits .....	5,448,087
Contribution Refunds .....	2,809,561
 TOTAL Present Value of Future Benefits for Active Members .....	 \$ 109,548,492

Present Value of Future Benefits for Terminated Members:

Terminated Vested Members Due Benefits at Retirement .	\$ 2,068,765
Terminated Members with Reciprocals	
Due Benefits at Retirement .....	132,474
Terminated Members Due a Refund .....	301,872
 TOTAL Present Value of Future Benefits for Terminated Members .....	 \$ 2,503,111

Present Value of Future Benefits for Retirees:

Regular Retirees .....	\$ 34,057,394
Disability Retirees .....	2,323,141
Survivors & Widows .....	7,147,739
Reserve for Accrued Retiree DROP Account Balances .....	537,593
 TOTAL Present Value of Future Benefits for Retirees & Survivors .....	 \$ 44,065,867

TOTAL Present Value of Future Benefits \$156,117,470

**EXHIBIT XIV**  
**PLAN B: ACTUARIAL VALUE OF ASSETS**

Current Assets:

Cash .....	\$ 4,014,495
Contributions Receivable from Members .....	549,077
Contributions Receivable from Employers .....	880,215
Accrued Interest on Investments .....	446,547
Dividends Receivable .....	24,638

Investments Receivable .....	20,103
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TOTAL CURRENT ASSETS .....	\$ 5,935,075
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Allocated Share of the Expense Fund .....	\$ 497,849
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Property, Plant & Equipment .....	\$ 183,266
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Investments:

Common Stock .....	\$ 25,145,144
Corporate Bonds .....	26,283,949
Federal National Mortgage Corporation .....	11,256,994
Mutual Fund – International Equities .....	9,527,906
Mutual Fund – Domestic Equities .....	8,502,709
Federal Home Loan Mortgage Corporation .....	3,702,539
Cash Equivalents .....	2,576,763
Federal Home Loan Bank .....	523,525
Government National Mortgage Association .....	372,383
Deferred Capital Losses (Gains) .....	(3,986,888)

TOTAL INVESTMENTS .....	\$ 83,905,024
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TOTAL ASSETS .....	\$ 90,521,214
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Current Liabilities:

Investments Payable .....	\$ 40,372
Accounts Payable .....	48,651
Refunds Payable .....	73,005
Funds Payable to Plan A .....	813,957
Ad Valorem & Revenue Sharing Taxes Payable to EBR .....	129,525

TOTAL CURRENT LIABILITIES .....	\$ 1,105,510
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ACTUARIAL VALUE OF ASSETS ..... \$ 89,415,704

**EXHIBIT XV**

**PLAN B: PRESENT VALUE OF FUTURE CONTRIBUTIONS**

Employee Contributions to the Annuity Savings Fund .....	\$ 18,040,618
Employer Normal Contributions to the Pension Accumulation Fund .....	42,458,765
Employer Amortization Payments to the Pension Accumulation Fund .....	6,202,383
TOTAL PRESENT VALUE OF FUTURE CONTRIBUTIONS .....	\$ 66,701,766

**EXHIBIT XVI**

**PLAN B: CHANGE IN FROZEN UNFUNDED ACTUARIAL ACCRUED LIABILITY**

Prior Year Frozen Unfunded Accrued Liability .....	\$ 6,444,919
Interest on Frozen Unfunded Accrued Liability .....	\$ 515,594
Employer Normal Cost for Prior Year .....	4,137,770
Interest on the Normal Cost .....	331,022
Administrative Expenses .....	219,740
Interest on Expenses .....	8,621
TOTAL Increases to Frozen Unfunded Accrued Liability .....	\$ 5,212,747
Gross Employer Contributions .....	\$ 4,828,767
Interest on Employer Contributions .....	189,435
Contribution Shortfall (Excess) .....	420,581
Interest on Contribution Shortfall (Excess) .....	16,500
TOTAL Decreases to Frozen Unfunded Accrued Liability .....	\$ 5,455,283
CURRENT YEAR FROZEN UNFUNDED ACCRUED LIABILITY ....	\$ 6,202,383



**EXHIBIT XVII**  
**PLAN B: ANALYSIS OF INCREASE IN ASSETS**

Actuarial Value of Assets (June 30, 2003) .....		\$ 86,170,714
Income:		
Member Contributions .....	\$ 2,343,522	
Employer Contributions .....	3,752,478	
Ad Valorem Taxes .....	1,031,941	
Revenue Sharing Funds .....	44,348	
Irregular Contributions .....	260,280	
Due from Plan A .....	0	
Total Contribution Income .....		\$ 7,432,569
Interest and Dividend Income .....	\$ 2,685,867	
Recognized Realized Capital Gains (Losses) .....	(603,266)	
Recognized Unrealized Capital Gains (Losses) .....	886,238	
Investment Income Allocated from Expense Fund .....	5,295	
Securities Lending .....	726	
Allocated Share of Investment Expense .....	(295,675)	
Net Investment Income .....		\$ 2,679,185
TOTAL Income .....		\$ 10,111,754
Expenses:		
Retirement Benefits .....	\$ 5,424,856	
Refunds of Contributions .....	545,522	
Funds Transferred to Another System .....	170,952	
DROP Disbursements .....	415,821	
Transfer to Plan A .....	116,663	
Allocated Share of Administrative Expenses .....	219,740	
TOTAL Expenses .....		\$ 6,893,554
Net Income for Fiscal 2004 (Income - Expenses) .....		\$ 3,218,200
Unadjusted Fund Balance as of June 30, 2004 (Fund Balance Previous Year + Net Income) .....		\$ 89,388,914
Adjustment for Change in Allocated Expense Fund Balance .....		\$ 26,790
Actuarial Value of Assets (June 30, 2004) .....		\$ 89,415,704

**EXHIBIT XVIII**  
**PLAN B: FUND BALANCE**

Present Assets of the System Creditable to:

Annuity Savings Fund .....	\$ 16,507,610
Annuity Reserve Fund .....	43,528,274
Pension Accumulation Fund .....	30,444,909
Deferred Retirement Option Plan Account .....	2,423,950
NET MARKET VALUE OF ASSETS .....	\$ 92,904,743
ADJUSTMENT FOR DEFERRAL OF REALIZED AND UNREALIZED CAPITAL LOSSES (GAINS) ON SECURITIES .....	(3,986,888)
ALLOCATION OF EXPENSE FUND .....	497,849
ACTUARIAL VALUE OF ASSETS .....	\$ 89,415,704

**EXHIBIT XIX**  
**PLAN B: PENSION BENEFIT OBLIGATION**

Present Value of Credited Projected Benefits Payable to Current Employees .....	\$ 67,012,415
Present Value of Benefits Payable to Terminated Employees .....	2,503,111
Present Value of Benefits Payable to Current Retirees and Beneficiaries .....	44,065,867
TOTAL PENSION BENEFIT OBLIGATION .....	\$ 113,581,393

**EXHIBIT XX**  
**PLAN B: COST OF LIVING ADJUSTMENTS - TARGET RATIO**

1. Actuarial Value of Assets Divided by PBO as of Fiscal 1986: .....	63.44%
2. Amortization of Unfunded Balance over 30 years: .....	21.94%

Adjustments in Funded Ratio Due to Changes in Assumption(s):

Changes for Fiscal 1988 .....	2.40%	
Changes for Fiscal 1989 .....	(2.94%)	
Changes for Fiscal 1995 .....	(1.22%)	
Changes for Fiscal 1997 .....	(3.84%)	
Changes for Fiscal 1998 .....	(3.71%)	
Changes for Fiscal 2000 .....	(2.29%)	
Changes for Fiscal 2001 .....	1.21%	
Changes for Fiscal 2003 .....	0.53%	
3. TOTAL Adjustments .....		(9.86%)

Amortization of Adjustments in Funded Ratio over 30 years:

Changes for Fiscal 1988 .....	(1.28%)	
Changes for Fiscal 1989 .....	1.47%	
Changes for Fiscal 1995 .....	0.37%	
Changes for Fiscal 1997 .....	0.90%	
Changes for Fiscal 1998 .....	0.74%	
Changes for Fiscal 2000 .....	0.31%	
Changes for Fiscal 2001 .....	(0.12%)	
Changes for Fiscal 2003 .....	(0.02%)	
4. TOTAL Amortization of Adjustments .....		2.37%

5. Target Ratio for Current Fiscal Year (Lesser of 1+2+3+4 or 100%) .....	77.89%
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6. Actuarial Value of Assets Divided by PBO as of June 30, 2004 .....	78.72%
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**EXHIBIT XXI**  
**PLAN B - CENSUS DATA**

	<b>Active</b>	<b>Terminated with Funds on Deposit</b>	<b>DROP</b>	<b>Retired</b>	<b>Total</b>
Number of members as of June 30, 2003	2,007	853	57	720	3,637
Additions to Census					
Initial membership	235	17			252
Death of another member	(4)		(1)	5	
Omitted in error last year				2	2
Change in Status during Year					
Actives terminating service	(82)	82			
Actives who retired	(22)			22	
Actives entering DROP	(16)		16		
Term. members rehired	9	(9)			
Term. members who retire		(3)		3	
Retirees who are rehired					
Refunded who are rehired	6	10			16
DROP participants retiring			(9)	9	
DROP returned to work	9		(9)		
Omitted in error last year					
Eliminated from Census					
Refund of contributions	(134)	(55)			(189)
Deaths	(5)	(1)		(27)	(33)
Included in error last year					
Adjustment for multiple records					
Moved to Plan A	(5)				(5)
Number of members as of June 30, 2004	1,998	894	54	734	3,680





















**EXHIBIT XXII**  
**PLAN B: YEAR-TO-YEAR COMPARISON**

	Fiscal 2004	Fiscal 2003	Fiscal 2002	Fiscal 2001
Number of Active Members	2,052	2,064	2,066	2,069
Number of Retirees and Survivors	734	720	705	700
Number Terminated Due Deferred Benefits	74	63	60	53
Number Terminated Due Refund	820	790	761	713
Active Lives Payroll	\$ 47,676,817	\$ 45,260,679	\$ 43,560,002	\$ 42,572,472
Retiree Benefits in Payment	\$ 5,476,263	\$ 5,216,962	\$ 5,039,462	\$ 4,855,154
Market Value of Assets	\$ 92,904,743	\$ 83,836,074	\$ 81,767,131	\$ 87,702,933
Ratio of Actuarial Value of Assets to Actuarial Accrued Liability	93.51%	93.04%	92.99%	92.86%
Actuarial Accrued Liability (As defined by GASB- 25)	\$ 95,618,087	\$ 92,615,633	\$ 95,381,233	\$ 96,857,576
Actuarial Value of Assets	\$ 89,415,704	\$ 86,170,714	\$ 88,697,416	\$ 89,937,940
Unfunded Actuarial Accrued Liability	\$ 6,202,383	\$ 6,444,919	\$ 6,683,817	\$ 6,919,636
Present Value of Future Employer Normal Cost	\$ 42,458,765	\$ 36,670,550	\$ 28,532,252	\$ 22,615,159
Present Value of Future Employee Contributions	\$ 18,040,618	\$ 17,184,709	\$ 16,666,322	\$ 16,496,208
Present Value of Future Benefits	\$ 156,117,470	\$ 146,470,892	\$ 140,579,807	\$ 135,968,943

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	Fiscal 2005	Fiscal 2004	Fiscal 2003	Fiscal 2002
Employee Contribution Rate	5.00%	5.00%	5.00%	5.00%
Proj. Tax Contribution as % of Projected Payroll	2.37%	2.28%	2.27%	2.18%
Actuarially Req'd Net Direct Employer Cont. Rate	9.72%	9.22%	7.53%	6.16%
Actual Employer Direct Contribution Rate	9.50%	7.75%	6.25%	4.50%

Fiscal 2000	Fiscal 1999	Fiscal 1998	Fiscal 1997	Fiscal 1996	Fiscal 1995
2,068	2,152	2,102	2,056	2,012	1,998
689	664	653	651	646	628
52	58	63	61	68	80
715	702	680	664	632	701
\$ 41,586,147	\$ 41,646,939	\$ 37,963,401	\$ 36,584,814	\$ 34,234,222	\$ 33,750,064
\$ 4,579,320	\$ 4,235,936	\$ 3,926,054	\$ 3,713,381	\$ 3,502,189	\$ 3,279,414
\$ 100,649,110	\$ 94,054,385	\$ 87,582,921	\$ 76,245,708	\$ 66,737,143	\$ 61,752,808
92.73%	91.92%	90.88%	89.95%	88.92%	87.77%
\$ 104,176,006	\$ 96,158,035	\$ 87,395,782	\$ 81,392,511	\$ 75,655,433	\$ 70,206,923
\$ 96,602,212	\$ 88,384,208	\$ 79,421,207	\$ 73,216,211	\$ 67,276,177	\$ 61,623,243
\$ 7,573,794	\$ 7,773,827	\$ 7,974,575	\$ 8,176,300	\$ 8,379,256	\$ 8,583,680
\$ 12,529,147	\$ 10,902,426	\$ 12,607,109	\$ 9,440,170	\$ 4,991,127	\$ 6,659,816
\$ 16,317,771	\$ 16,469,405	\$ 15,103,116	\$ 14,674,371	\$ 13,851,727	\$ 13,965,323
\$ 133,022,924	\$ 123,529,866	\$ 115,106,007	\$ 105,507,052	\$ 94,498,287	\$ 90,832,062

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Fiscal 2001	Fiscal 2000	Fiscal 1999	Fiscal 1998	Fiscal 1997	Fiscal 1996
5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
2.01%	2.01%	2.03%	1.93%	1.77%	1.80%
3.68%	3.32%	4.31%	2.73%	2.72%	3.34%
4.50%	4.50%	3.75%	2.75%	3.25%	3.75%

## **SUMMARY OF PRINCIPAL PLAN PROVISIONS**

All members of the Municipal Employees' Retirement System are participants in either Plan A or B according to the provisions of the agreement entered into by their employer. All employees of a participating employer must participate in the same plan. The principal provisions of each plan are given below. The following summary of plan provisions as of July 1, 2004, is for general informational purposes only and does not constitute a guarantee of benefits.

**MEMBERSHIP** - All persons who are actively employed by a participating employer on a permanent, regularly scheduled basis of at least an average of thirty-five hours per week are members of this system. Excluded from membership are members of city councils, alderman, town councilmen, and constables; the exclusion does not apply to persons serving in excluded positions on January 1, 1997.

### **PLAN A PROVISIONS:**

**CONTRIBUTION RATES** - Employee contributions in Plan A are 9.25% of the member's earnings. In addition, each sheriff and ex officio tax collector deducts one-fourth of one percent of the aggregate amount of the tax shown to be collected by the tax roll of each respective parish, excepting Orleans Parish, and remits the money to the system on an annual basis. Taxes are apportioned between Plan A and Plan B in proportion to salaries of plan participants. Taxes received from East Baton Rouge Parish are apportioned between the Municipal Employees' Retirement System and the Employees' Retirement System of the City of Baton Rouge. The system also receives revenue sharing funds each year as appropriated by the legislature. The remaining employer contributions are determined according to actuarial requirements and are set annually.

**RETIREMENT BENEFITS** - Members with ten years of creditable service may retire at age sixty; members with twenty-five years of service may retire regardless of age. The monthly retirement allowance is equal to three percent of the member's final compensation multiplied by his years of creditable service; elected officials receive an additional one-half percent of final compensation for each year of such elective service. However, the accrued retirement benefits for those employees who were members of only the supplemental plan prior to October 1, 1978, are based on one percent of final compensation plus two dollars per month for each year of service credited prior to October 1, 1978. The retirement allowance may not exceed the greater of final annual salary or one hundred percent of the member's final three-year average compensation. Members with twenty years of service credit, not otherwise eligible for normal retirement, are eligible for a modified actuarially reduced early retirement.

**DISABILITY BENEFITS** - Five years of creditable service are required in order to be eligible for disability benefits. Twenty years of creditable service are required in order for a member to have a vested disability benefit. A disabled member receives a normal retirement allowance if eligible under regular retirement provisions; if he is not eligible for a normal retirement, he receives a disability benefit equal to the lesser of:



- 1) Forty-five percent of his final average compensation or three percent of his final average compensation multiplied by his years of creditable service, whichever is greater; or
- 2) Three percent of his final average compensation multiplied by his years of creditable service projected to his earliest normal retirement age.

**SURVIVOR BENEFITS** - Five years of creditable service are required in order to be eligible for survivor benefits. If the member is eligible for normal retirement at the time of death, the surviving spouse receives an automatic option two benefit. If the member is not eligible for a normal retirement, the surviving spouse with minor children receives sixty percent of final compensation payable until no child in her care satisfies the definition of minor child. The surviving spouse with no minor children receives forty percent of final compensation payable upon attainment of age sixty by the spouse, or the actuarial equivalent of this amount payable immediately (such equivalent not to be less than 20% of final compensation). Minor children with no surviving unmarried parent receive thirty percent of final compensation each not to exceed a total of sixty percent of final compensation. Survivor benefits are also payable to the surviving spouse's of former members who have not withdrawn their accumulated contributions and who have at least twenty years of creditable service. The benefits payable are the actuarial equivalent of the Option 2 benefits that would have become payable to the surviving spouse at the time the former member would have begun receiving deferred normal retirement benefits, had the member survived until that date, election Option 2, and died at that time.

#### **PLAN B PROVISIONS:**

**CONTRIBUTION RATES** - Employee contributions in Plan B are 5.00% of the member's earnings. In addition, each sheriff and ex officio tax collector deducts one-fourth of one percent of the aggregate amount of the tax shown to be collected by the tax roll of each respective parish, excepting Orleans Parish, and remits the money to the system on an annual basis. Taxes are apportioned between Plan A and Plan B in proportion to salaries of plan participants. Taxes received from East Baton Rouge Parish are apportioned between the Municipal Employees' Retirement System and the Employees' Retirement System of the City of Baton Rouge. The system also receives revenue sharing funds each year as appropriated by the legislature. The remaining employer contributions are determined according to actuarial requirements and are set annually.

**RETIREMENT BENEFITS** - Members with ten years of creditable service may retire at age sixty; members with thirty years of service may retire at any age. The monthly retirement allowance is equal to two percent of the member's final compensation multiplied by his years of creditable service; elected officials receive an additional one-half percent of final compensation for each year of such elective service.

**DISABILITY BENEFITS** - Ten years of creditable service are required in order to be eligible for disability benefits. Twenty years of creditable service are required in order for a member to have a vested disability benefit. A disabled member receives a normal retirement allowance if eligible under regular retirement provisions; if he is not eligible for a normal retirement allowance, he receives a disability benefit equal to the lesser of:

- 1) Thirty percent of his final average compensation or two percent of his final average compensation multiplied by his years of creditable service, whichever is greater; and
- 2) Two percent of his final average compensation multiplied by his years of creditable service projected to his earliest normal retirement age.

**SURVIVOR BENEFITS** - The surviving spouse of a member who was eligible for normal retirement at the time of death receives an automatic option two benefit. The surviving spouse of a member with five or more years of creditable service and not eligible for normal retirement at the time of death receives either 30% of the member's final compensation payable to the spouse when they attain age 60 or an actuarial equivalent of 30% of the deceased member's final compensation, but not less than 15% of such final compensation. Survivor benefits are also payable to the surviving spouse's of former members who have not withdrawn their accumulated contributions and who have at least twenty years of creditable service. The benefits payable are the actuarial equivalent of the Option 2 benefits that would have become payable to the surviving spouse at the time the former member would have begun receiving deferred normal retirement benefits, had the member survived until that date, elected Option 2, and died at that time.

#### **PROVISIONS APPLICABLE TO BOTH PLAN A AND B:**

**UNUSED SICK & ANNUAL LEAVE** – All unused sick and annual leave is credited at the time of retirement to the member if the employer so elects for his employees. The actuarial cost of providing this conversion is borne solely by the employer and must be paid to the board within thirty days of the member's retirement date.

**OPTIONAL ALLOWANCES** - Members may receive their benefits as a life annuity, or in lieu of such a reduced benefit according to the option selected which is the actuarial equivalent of the maximum benefit.

**Option 2** - Upon retirement, the member receives a reduced benefit. Upon the member's death, the designated beneficiary will continue to receive the same reduced benefit.

**Option 3** - Upon retirement, the member receives a reduced benefit. Upon the member's death, the designated beneficiary will receive one-half of the member's reduced benefit.

**Option 4** - Upon retirement, the member elects to receive a board-approved benefit which is actuarially equivalent to the maximum benefit.

**DEFERRED RETIREMENT OPTION PLAN** - In lieu of terminating employment and accepting a service retirement allowance, any member of Plan A or B who is eligible for a normal retirement may elect to participate in the Deferred Retirement Option Plan (DROP) for up to three years and defer the receipt of benefits. Upon commencement of participation in the plan, membership in the system terminates. During participation in the plan, employer contributions are payable but employee contributions cease. The monthly retirement benefits that would have been payable, had the person elected to cease employment and receive a service retirement allowance, are paid into the DROP account. After a member terminates his participation in DROP his account will earn

interest at the actual rate of return earned on the funds left on deposit as certified by the custodian of the system's assets. This interest will be credited to the individual member's account balance on an annual basis. In addition, no cost of living increases are payable to participants until employment which made them eligible to become members of the system has been terminated for at least one full year.

Upon termination of employment prior to, or at the end of, the specified period of participation, a participant in the plan may receive, at his option, a lump sum payment from the account equal to the payments into the account, a true annuity based upon his account balance in that fund, or any other method of payment if approved by the board of trustees. The monthly benefits that were being paid into the DROP account will begin to be paid to the retiree. If a participant dies during the participation in the plan, a lump sum equal to his account balance in the plan fund shall be paid to his named beneficiary or, if none, to his estate. If employment is not terminated at the end of the three years, payments into the plan fund cease and the person resumes active contributing membership in the system. Additional accrued benefits are based on final average compensation used to calculate the member's original benefit unless the additional period of service is at least thirty-six months.

**COST OF LIVING INCREASES** - The board of trustees is authorized to grant retired members, and widows of members, who have been retired for at least one full year an annual cost of living increase of two percent of their benefit and all retired members and widows who are sixty-five years of age and older a two percent increase in their original benefit (or their benefit as of October 1, 1977, if they retired prior to that time). In order for the board to grant either of these increases the system must meet certain criteria detailed in the statute related to funding status and interest earnings on investments. In lieu of other cost of living increases the board may grant an increase to retirees in the form "X (A&B)" where "A" is equal to the number of years of credited service accrued as retirement or death of the member or retiree and "B" is equal to the number of years since death of the member or retiree to June 30 of the initial year of increase and "X" is equal to any amount available for funding such increase up to a maximum of \$1.00.

## ACTUARIAL ASSUMPTIONS

In determining actuarial costs, certain assumptions must be made regarding future experience under the plan. These assumptions include the rate of investment return, mortality of plan members, rates of salary increase, rates of retirement, rates of termination, rates of disability, and various other factors that have an impact on the cost of the plan. To the extent that future experience varies from the assumptions selected for valuation, future costs will be either higher or lower than anticipated. The effect of emerging experience on the fund is illustrated by the following chart.

Factor	Increase in Factor Results in
Investment Earnings Rate	Decrease in Cost
Annual Rate of Salary Increase	Increase in Cost
Rates of Retirement	Increase in Cost
Rates of Termination	Decrease in Cost
Rates of Disability	Increase in Cost
Rates of Mortality	Decrease in Cost

**ACTUARIAL COST METHOD:** Frozen Attained Age Normal Actuarial Cost Method with allocation based on earnings. The frozen actuarial accrued liabilities were calculated on the projected unit credit cost method.

**ACTUARIAL ASSET VALUES:** The actuarial value of assets is based on the market value of investment securities adjusted to smooth realized and unrealized capital gains over a three year period by deferring one-third of such gains accrued in the prior fiscal year and two thirds of such gains accrued in the current fiscal year. In addition, expense fund assets were allocated to each plan in proportion to covered payroll.

**VALUATION INTEREST RATE:** 8% (Net of Investment Expense)

**ANNUAL SALARY INCREASE RATE:** 6% (3.25% Inflation / 2.75% Merit)

**ANNUITANT MORTALITY:** 110% of 1971 Group Annuity Mortality Table (Female rates are based on 6 year setback of male rates)

**RETIREE COST OF LIVING INCREASES:** The present value of future retirement benefits is based on benefits currently being paid by the system and includes previously granted cost of living increases. The present values do

not include provisions for potential future increases not yet authorized by the Board of Trustees.

**RATES OF RETIREMENT:** The table of these rates is included later in the report. These rates apply only to those individuals eligible to retire. Members are assumed to retire no earlier than normal retirement age.

**DROP ENTRY RATES:** The table of these rates is included later in the report. These rates apply only to those individuals eligible to participate in DROP. In Plan A, the tabular rate is multiplied by 2.5 in the first year of eligibility.

**DROP PARTICIPATION PERIOD:** All DROP participants are assumed to participate for 3 years and retire at the end of this participation period.

**RETIREMENT RATES FOR ACTIVE FORMER DROP PARTICIPANTS:** Retirement rates for active former DROP participants are as follows:

Ages	Retirement Rates
Below 81	0.30
81-89	0.90
90	1.00

**RATES OF WITHDRAWAL:** The table of these rates is included later in the report. In the first ten years of service, the tabular rates were multiplied by the following adjustment factors:

Service	Adjustment Factor
1	7.000
2	5.500
3	4.000
4	3.500
5	3.000
6	2.666
7	2.333
8	2.000
9	1.666
10	1.333

Note: The withdrawal rate for individuals eligible to retire is assumed to be zero.

MARRIAGE STATISTICS: 80% of the members are assumed to be married; husbands are assumed to be three years older than wives.

FAMILY STATISTICS: Assumptions utilized in determining the costs of various survivor benefits as listed below:

Age at Death	% With Children	Number of Children	Average Age
25	55%	2.2	7
35	80%	2.7	11
45	60%	1.9	13
55	20%	1.5	14
65	2%	1.0	17

DISABLED LIVES MORTALITY: 175% of 1971 Group Annuity Table  
(Female rates are based on 6 year setback of male rates)

VESTING ELECTING PERCENTAGE: 65% of those vested elect deferred benefits in lieu of contribution refunds.

## ACTUARIAL TABLES AND RATES

Age	Mortality Rates	Plan A Retirement Rates	Plan B Retirement Rates	Plan A DROP Entry Rates	Plan B DROP Entry Rates	Withdrawal Rates	Base Disability Rates	Remarriage Rates
18	0.00052	0.00000	0.00000	0.00000	0.00000	0.04000	0.00073	0.05665
19	0.00053	0.00000	0.00000	0.00000	0.00000	0.04000	0.00073	0.05665
20	0.00055	0.00000	0.00000	0.00000	0.00000	0.04000	0.00073	0.05665
21	0.00057	0.00000	0.00000	0.00000	0.00000	0.03950	0.00073	0.05213
22	0.00060	0.00000	0.00000	0.00000	0.00000	0.03900	0.00073	0.04834
23	0.00062	0.00000	0.00000	0.00000	0.00000	0.03850	0.00073	0.04522
24	0.00065	0.00000	0.00000	0.00000	0.00000	0.03800	0.00073	0.04270
25	0.00068	0.00000	0.00000	0.00000	0.00000	0.03750	0.00073	0.04070
26	0.00071	0.00000	0.00000	0.00000	0.00000	0.03700	0.00073	0.03915
27	0.00075	0.00000	0.00000	0.00000	0.00000	0.03650	0.00073	0.03799
28	0.00079	0.00000	0.00000	0.00000	0.00000	0.03600	0.00076	0.03714
29	0.00084	0.00000	0.00000	0.00000	0.00000	0.03550	0.00081	0.03654
30	0.00089	0.00000	0.00000	0.00000	0.00000	0.03500	0.00086	0.03611
31	0.00095	0.00000	0.00000	0.00000	0.00000	0.03450	0.00093	0.03578
32	0.00101	0.00000	0.00000	0.00000	0.00000	0.03400	0.00101	0.03549
33	0.00108	0.00000	0.00000	0.00000	0.00000	0.03350	0.00111	0.03515
34	0.00115	0.00000	0.00000	0.00000	0.00000	0.03300	0.00121	0.03471
35	0.00123	0.00000	0.00000	0.00000	0.00000	0.03250	0.00132	0.03409
36	0.00132	0.00000	0.00000	0.00000	0.00000	0.03200	0.00144	0.03286
37	0.00142	0.00000	0.00000	0.00000	0.00000	0.03150	0.00157	0.03139
38	0.00154	0.00000	0.00000	0.00000	0.00000	0.03100	0.00171	0.02973
39	0.00166	0.00000	0.00000	0.00000	0.00000	0.03050	0.00185	0.02787
40	0.00180	0.00000	0.00000	0.00000	0.00000	0.03000	0.00199	0.02585
41	0.00197	0.15000	0.00000	0.17000	0.00000	0.02950	0.00213	0.02352
42	0.00220	0.15000	0.00000	0.17000	0.00000	0.02900	0.00227	0.02111
43	0.00249	0.15000	0.00000	0.17000	0.00000	0.02850	0.00241	0.01868
44	0.00283	0.15000	0.00000	0.17000	0.00000	0.02800	0.00254	0.01629
45	0.00321	0.15000	0.00000	0.17000	0.00000	0.02750	0.00268	0.01400
46	0.00365	0.15000	0.18000	0.17000	0.25000	0.02700	0.00282	0.01208
47	0.00413	0.15000	0.18000	0.17000	0.25000	0.02650	0.00298	0.01034
48	0.00465	0.15000	0.18000	0.17000	0.25000	0.02600	0.00430	0.00879
49	0.00521	0.15000	0.18000	0.17000	0.25000	0.02550	0.00562	0.00744
50	0.00581	0.15000	0.18000	0.17000	0.25000	0.02500	0.00694	0.00629
51	0.00645	0.15000	0.18000	0.17000	0.25000	0.02450	0.00736	0.00551
52	0.00713	0.15000	0.18000	0.17000	0.25000	0.02400	0.00784	0.00493
53	0.00784	0.15000	0.18000	0.17000	0.25000	0.02350	0.00834	0.00451
54	0.00859	0.15000	0.18000	0.17000	0.25000	0.02300	0.00893	0.00423
55	0.00937	0.15000	0.15000	0.17000	0.20000	0.02250	0.00786	0.00406
56	0.01019	0.15000	0.15000	0.17000	0.20000	0.02200	0.00679	0.00000
57	0.01104	0.15000	0.15000	0.17000	0.20000	0.02150	0.00570	0.00000
58	0.01198	0.15000	0.15000	0.17000	0.20000	0.02100	0.00627	0.00000

59	0.01312	0.15000	0.15000	0.17000	0.20000	0.02050	0.00694	0.00000
60	0.01443	0.15000	0.20000	0.17000	0.30000	0.02000	0.00770	0.00000
61	0.01588	0.15000	0.15000	0.17000	0.20000	0.02000	0.00858	0.00000
62	0.01745	0.15000	0.15000	0.17000	0.20000	0.02000	0.00959	0.00000
63	0.01915	0.15000	0.15000	0.17000	0.20000	0.02000	0.01037	0.00000
64	0.02110	0.15000	0.15000	0.17000	0.20000	0.02000	0.01117	0.00000
65	0.02339	0.15000	0.15000	0.17000	0.20000	0.02000	0.01197	0.00000

## GLOSSARY

**Actuarial Assumptions** - Assumptions as to the occurrence of future events affecting pension costs. These assumptions include rates of mortality, withdrawal, disablement, and retirement. Also included are rates of investment earnings, changes in compensation, as well as statistics related to marriage and family composition.

**Actuarial Cost Method** - A procedure for determining an allocation of pension costs to each fiscal year. Although all proper cost methods will accumulate sufficient assets to provide for members pensions, some accumulate assets more or less rapidly than others by producing higher or lower costs in the earlier years with corresponding decreasing or increasing costs in future years.

**Actuarial Present Value** - The value, as of a specified date, of an amount or series of amounts payable or receivable thereafter, with each amount adjusted to reflect the time value of money (through accrual of interest) and the possibility of payments. For example: if \$600 invested today will be worth \$1,000 in 10 years and there is a 50% probability that a person will live 10 years, then the actuarial present value of \$1,000 payable to that person if he should survive 10 years is \$300.

**Actuarial Value of Assets** - The value of cash, investments, and other property belonging to the pension plan as used by the actuary for the purpose of the actuarial valuation. This may correspond to the book value, market value, or some modification involving either or both book and market value.

**Asset Gain (Loss)** - That portion of the actuarial gain attributable to investment performance above (below) the expected rate of return in the actuarial assumptions.

**Amortization Payment** - That portion of the pension plan contribution designated to pay interest and reduce the outstanding principal balance of unfunded actuarial accrued liability. If the amortization payment is less than the accrued interest on the unfunded actuarial accrued liability the outstanding principal balance will increase.

**Contribution Shortfall (Excess)** - The difference between contributions recommended in the prior valuation and the actual amount received.

**Employer Normal Cost** - That portion of the normal cost not attributable to employee contributions. It includes both direct contributions made by the employer and contributions from other non-employee sources such as revenue sharing and revenues related to taxes.



**Net Direct Employer Contribution Rate** – Contribution rate applied to the employers’ active payroll. This does not include contributions made to the plan by revenue sharing or ad valorem taxes.

**Normal Cost** - That portion of the actuarial present value of pension plan benefits and expenses allocated to a valuation year by the actuarial cost method. This is analogous to one year's insurance premium.

**Pension Benefit Obligation** - The actuarial present value of benefits earned or credited to date based on the member’s expected final average compensation at retirement. For current retirees or terminated members this is equivalent to the actuarial present value of their accrued benefit.

**Unfunded Actuarial Accrued Liability** - The excess of the actuarial accrued liability over the actuarial value of assets.

**Vested Benefits** - Benefits that the members are entitled to even if they withdraw from service.