# MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM 

## ACTUARIAL VALUATION AS OF

 JUNE 30, 2003
# G. S. CURRAN \& COMPANY, LTD. <br> Actuarial Services <br> 10555 N. Glenstone Place • Baton Rouge, Louisiana 70810 • (225) 769-4825 

Gary S. Curran, FCA, MAAA, ASA, EA
Consulting Actuary

December 18, 2003

Board of Trustees<br>Municipal Employees' Retirement System<br>7937 Office Park Blvd.<br>Baton Rouge, LA 70809<br>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, 2003. 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 , 2004, and to provide information required for the system's financial statements. In addition, this report recommends employer contribution rates for fiscal 2005.

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:
$\begin{array}{cl}\text { Census Summary: } & \text { Active Members } \\ \ddots & \begin{array}{l}\text { Retirees and Beneficiaries } \\ \text { Terminated Due a Deferred Benefit } \\ \text { Terminated Due a Refund }\end{array}\end{array}$
Payroll:
Benefits in Payment:
Frozen Unfunded Actuarial Accrued Liability:
Market Value of Assets:
Actuarial Asset Value:
Actuarial Accrued Liability (as defined by GASB-25)

June 30, 2003
5,533 5,481

2,372 192
2,185
\$ 135,876,426
$\$ 27,431,127$
$\$ 68,936,307$
\$ 444,996,698
\$ 452,830,104
\$ $521,766,411$
86.79\%

2,316
\$ 463,477,324
June 30, 2002
5,481 193
2,158
\$ 130,191,230
\$ 26,145,224
\$ 67,650,205
\$ 432,669,352
\$ 531,127,529
87.26\%
***********************************************************************************************
FISCAL 2004
FISCAL 2003
Net Employer Normal Cost (July 1):
$\$ 17,747,260$
\$ 12,048,989
Amortization Cost (July 1):
\$ 3,982,653
\$ 3,820,291
Total Employer Actuarially Required Contribution
(Including Estimated Administrative Costs):
\$ 23,606,316
\$ 17;490,652
Net Direct Employer Actuarially Required
Contribution as a Percentage of Projected Payroll: $\quad 14.61 \% \quad 10.78 \%$
***********************************************************************************************
Recommended Net Direct Employer Contribution Rate: For Fiscal 2005: 15.00\% For Fiscal 2004: 11.00\%
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: Change in the method of calculating the actuarial value of assets; changes in methods of modeling survivor benefits.

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:

Census Summary: | Active Members |
| :--- |
| Retirees and Beneficiaries |
|  |
|  |
|  |
|  |
| Terminated Due a Deferred Benefit |
| Terminated Due a Refund |

| Payroll: | $\$$ | $45,260,679$ | $\$ 43,560,002$ |
| :--- | :--- | :--- | :--- |
| Benefits in Payment: | $\$$ | $5,216,962$ | $\$, 039,462$ |
| Frozen Unfunded Actuarial Accrued Liability: | $\$$ | $6,444,919$ | $\$$ |
| Market Value of Assets: | $\$$ | $83,836,074$ | $\$ 81,767,131$ |
| Actuarial Asset Value: | $\$$ | $86,170,714$ | $\$ 88,697,416$ |
| Actuarial Accrued Liability (as defined by GASB-25) | $\$$ | $92,615,633$ | $\$ 95,381,233$ |
| Ratio of Actuarial Value of Assets to Actuarial Accrued Liability: | $93.04 \%$ | $92.99 \%$ |  |

June 30, 2003
2,064
720
63
790
************************************************************************************************
FISCAL 2004
FISCAL 2003


Minimum Recommended Net Direct Employer Contribution Rate: Fiscal 2005: 9.50\% Fiscal 2004: 7.75\%
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: Change in the method of calculating the actuarial value of assets; changes in methods of modeling survivor benefits.

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 5,533 active members in Plan A of whom 2,325 have vested retirement benefits including 202 participants in the Deferred Retirement Option Plan (DROP); 2,372 former Plan A members or their beneficiaries are receiving retirement benefits. An additional 2,377 Plan A members have contributions remaining on deposit with the system; of this number, 192 have vested rights for future retirement benefits. Census data on Plan B members may be found in Exhibit XXI. There are 2,064 active members in Plan B of whom 765 have vested retirement benefits including 57 participants in the Deferred Retirement Option Plan (DROP); 720 former Plan B members or their beneficiaries are receiving retirement benefits. An additional 853 Plan B members have contributions remaining on deposit with the system; of this number, 63 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 $\$ 444,996,698$ as of June 30, 2003. Net investment income for fiscal 2003 measured on a market value basis for Plan A amounted to $\$ 18,705,480$. Contributions to the system for the fiscal year totaled $\$ 27,203,364$; benefits and expenses amounted to $\$ 33,581,498$. The net market value of Plan B's assets was $\$ 83,836,074$ as of June 30,2003 . Net investment income for fiscal 2003 measured on a market value basis for Plan B amounted to $\$ 3,080,558$. Contributions to the system for the fiscal year totaled $\$ 6,169,357$; benefits and expenses amounted to $\$ 7,180,972$.
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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.

For the 2003 valuation the method of determining the actuarial value of assets was changed. In the past the value of fixed income investments used in the valuation was based on their amortized cost. The active management of fixed income securities, including increased frequency of active trading, has made the amortized cost measure less valuable as a tool for smoothing the changes in the actuarial value of assets. Therefore, the asset valuation method was changed to the market value of fixed income investments less one-third of all realized and unrealized capital gains or losses accrued during the prior year and less two-thirds of all realized and unrealized capital gains or losses accrued during the current fiscal year. This change slightly increased the actuarial value of assets and reduced costs. A technical change in the valuation method for determining the present value of survivor benefits was made for both Plan A and Plan B. This change served to increase costs. The sum total of the effect of all of these changes was to reduce the normal cost accrual rate by $0.3324 \%$ in Plan A and $0.0734 \%$ in Plan B.

The actuarial assumptions utilized for the report are outlined on pages sixty-two through sixty-five. 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.

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## CHANGES IN PLAN PROVISIONS

Act 555 exempts those individuals who have retired from any Louisiana state public retirement system, plan or fund, and are over the age of sixty-five from the requirement that they participate in this retirement system if they accept a position with an employer whose employees are enrolled in the system.

Act 684 provides that any repayment of previously refunded employee contributions received by the system on or after January 1, 2002, may be accomplished by a trustee-to-trustee transfer of monies to this fund from an annuity in compliance with Section 403(b) of the Internal Revenue Code or from a deferred compensation plan in compliance with Section 457 of the Internal Revenue code so long as such transfer otherwise complies with all other applicable provisions of federal and state law.

Act 845 expands the definition of "employer" given in R.S. 11:1732(14)(a) to allow employees of planning and development commissions to join the retirement system.

Act 860 provides that an elected official who would otherwise be required to be a member of the system but who is subject to term limits which prevent him from earning the minimum number of years of creditable service necessary to receive a benefit will not be eligible to be a member of the system. Any elected official who is a member of the system on July 1, 2003, who has been paying employee contributions, and who is subject to term limits, will no longer be a member of the system and may apply for a refund of his employee contributions immediately. Any person who withdraws his contributions or who is not eligible to be a member of the system under the provisions of this statute who later wishes to receive credit for service for these years in this or any other system covered by Title 11 will pay to the system 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 938 defines "supplemental marshals' earnings" to mean the salary received from the state of Louisiana, fees received for service of civil papers, and commissions received as à result of sales and garnishments pursuant to R.S. 33:1704. The act provides for an additional regular retirement benefit for any city marshal or deputy city marshal, based on their supplemental marshals' earnings.

Act 953 states that any member of a state or statewide retirement system board of trustees who does not hold an office by virtue of an election conducted pursuant to the Louisiana Election Code will be deemed a public employee for purposes of compliance with the Code of Governmental Ethics. By December first of each calendar year, the board of trustees of each state and statewide retirement system is required to submit to the House and Senate Committees on retirement a proposed schedule of all board and committee meetings for the following calendar year. The proposed schedule will be subject to review by the committees, and the chairman of either committee may request changes in the proposed schedule of any system in order to avoid conflicting meetings or for any other purpose. Members of the board of trustees are required to attend at least eight hours of investment training, two hours of actuarial information education, and one hour of ethics. Board members may not receive per diem during any calendar year until they have completed the ethics requirement and at least one hour each of investment and actuarial training. The system is required to submit evidence of training in compliance of this requirement to the speaker of the House of Representatives and the president of the Senate within fourteen days after the completion thereof.

New board members are not allowed to vote on any matter until they have completed one hour each of ethics, investment, and actuarial education. By January fifteenth of each year the board of trustees is required to submit to the House and Senate committees on retirement a letter stating whether or not each member of that board has met these requirements.

Act 962 requires that, for individuals who become eligible to participate in the Deferred Retirement Option Plan on or after January 1, 2004, all amounts which remain credited to the individual's subaccount after termination in the plan will be placed in liquid asset money market investments at the discretion of the board of trustees. These subaccounts may be credited with interest at the actual rate of return earned on the subaccount investments less one-fourth of one percent per annum, or at the option of the system, the funds may be credited to self-directed subaccounts. The participant in the self-directed portion of this plan must agree that the benefits payable to the participant are not the obligations of the state or the system, and that any returns and other rights of the plan are the sole liability and responsibility of the participant and the designated provider to which contributions have been made.

Act 967 re-establishes the Commission on Public Retirement, which previously terminated on August 31, 1990. In addition to its original purpose to study and make recommendations concerning the administration, benefits, investments, and funding of the state and statewide public retirement systems, this act stipulates that the commission will study and make recommendations concerning the efficiency änd accountability of the state and statewide public retirement systems. The commission will meet at least quarterly, beginning in September, 2003, for a maximum of sixty months as required and will issue electronic reports to the House and Senate committees on retirement, to be submitted annually at least sixty days before convening of the regular session of the legislature. The commission will hold a public meeting in the week before the convening of the regular session of the legislature to review and prioritize all bills prefiled for that session affecting state or statewide retirement systems.

## 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.

PLAN A 1994
1995
1996
1997
1998
1999
2000
2001
2002
2003

Actuarial Value
Market Value

| $5.6 \%$ | $1.0 \%$ |
| ---: | ---: |
| $10.0 \%$ | $13.2 \%$ |
| $12.0 \%$ | $10.6 \%$ |
| $9.1 \%$ | $*$ |
| $10.0 \%$ | $* *$ |
| $12.1 \%$ | $14.1 \%$ |
| $11.0 \%$ | $16.4 \%$ |
| $4.5 \%$ | $8.2 \%$ |
| $1.1 \%$ | $9.1 \%$ |
| $-1.0 \%$ | $* * *$ |

Actuarial Value

| PLAN B | 1994 | $5.7 \%$ | $-0.3 \%$ |
| :---: | ---: | ---: | ---: |
|  | 1995 | $9.8 \%$ | $13.6 \%$ |
|  | 1996 | $11.6 \%$ | $10.5 \%$ |
|  | 1997 | $9.2 \%$ | $*$ |

* 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 threeyear 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 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 2003, 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. Prior to fiscal 2003, various other methods were used to calculate the actuarial value of assets as indicated above. 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 7.3\% for Plan A and 7.0\% for Plan B. For fiscal 2003, Plan A experienced net actuarial investment earnings of $\$ 47,770,093$ less than the actuarial assumed earnings rate of $8 \%$. For Plan B, the shortfall in earnings amounted to $\$ 9,468,697$. These actuarial losses increased the normal cost accrual rate by $4.4854 \%$ and $2.5005 \%$ respectively for Plan A and B.

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 2003, the fund earned $\$ 15,915,542$ of dividends and interest for Plan A and $\$ 2,998,765$ for Plan B. This income was increased by realized and unrealized capital gains of $\$ 4,079,705$ for Plan A and $\$ 348,899$ for Plan B and offset by investment expenses of $\$ 1,289,767$

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for Plan A and $\$ 267,106$ for Plan B. The geometric mean of the market value rates of return measured over the last ten years was $6.9 \%$ for Plan A and $6.5 \%$ for Plan 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 2003, we identified twenty-nine members, including twenty-seven from the Town of Farmerville, who had changed plans during the fiscal year. The Town of Farmerville left membership in Plan B to become members of Plan A. In order to properly assign liabilities to the plan in which they are currently contributing we recommend a transfer of assets of $\$ 847,534$ for these individuals from Plan B to Plan A (adjusted with $8 \%$ interest from June 30, 2003 to the date of the transfer). The actuarial and market value of assets as of June 30, 2003, 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 increased slightly during the fiscal year with a population increase of 52 members. This is a modest deviation from the recent past. The plan had experienced a decline in the active plan population of 207 members between 1998 and 2003. 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 56 during the fiscal year and by 291 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 slight decrease in the percentage of members with service less than five years; the percentage of members with service over fifteen years has increased. These trends are indicative of a maturing population.

Plan liability experience for fiscal 2003 was slightly 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 $0.2495 \%$.

## 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 two members over the last year. Over the last five years the active population decreased by thirty-eight members. The number of retirees and beneficiaries receiving benefits from the system increased by fifteen. Over the last five years this group increased by sixty-seven.

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 ten years. These trends are indicative of a maturing population.

Plan liability experience for fiscal 2003 was favorable. The most significant factors reducing costs were related to withdrawals and retiree deaths above projections. Retirements and DROP entries were at projected levels. Salary increases were slightly above projections, although most of those increases above the assumed rate of $6 \%$ occurred among the groups with low service. Plan liability gains reduced the normal cost accrual rate by $0.3431 \%$.

## 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 2004 as of July 1, 2003, is $\$ 17,747,260$. The amortization payment on the plan's frozen unfunded actuarial accrued liability as of July 1,2003 , is $\$ 3,982,653$. 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 2004 is $\$ 23,606,316$. When this amount is reduced by projected tax contributions and revenue sharing funds, the resulting employers' net direct actuarially required contribution for fiscal 2004 is $\$ 20,406,697$. This is $14.61 \%$ of the projected Plan A payroll for fiscal 2004.
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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 $2003 \quad 9.7553 \%$
Factors Increasing the Normal Cost Accrual Rate:

| Asset Experience | $4.4854 \%$ |
| :--- | :--- |
| Contribution Shortfall | $0.2905 \%$ |

Factors Decreasing the Normal Cost Accrual Rate:

| Assumption Gain | $-0.3324 \%$ |
| :--- | :--- |
| New Members | $-0.1789 \%$ |
| Liability Experience | $-0.2495 \%$ |

Normal Cost Accrual Rate - Fiscal $2004 \quad$ 13.7704\%
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 2004 as of July 1, 2003, is $\$ 4,137,770$. The amortization payment on the plan's frozen unfunded actuarial accrued liability as of July 1,2003 , is $\$ 701,973$. 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 2004 is $\$ 5,370,680$. When this amount is reduced by projected tax contributions and revenue sharing funds, the resulting employers' net direct actuarially required contribution for fiscal 2004 is $\$ 4,304,882$. This is $9.22 \%$ of the projected Plan B payroll for fiscal 2004.

The effects of various factors on the cost structure for Plan B are outlined below:
Normal Cost Accrual Rate - Fiscal 2003 . 7.7692 \%
Factors Increasing the Normal Cost Accrual Rate:
$\begin{array}{ll}\text { Asset Experience } & 2.5005 \% \\ \text { Contribution Shortfall } & 0.1172 \%\end{array}$
Factors Decreasing the Normal Cost Accrual Rate:
Assumption Gain -0.0734\%
Liability Experience $-0.3431 \%$
New Members -0.2865\%
Normal Cost Accrual Rate - Fiscal $2004 \quad 9.6839 \%$
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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 2004, the net effect of the change in payroll on amortization costs was negligible for Plan A, and reduced costs $0.09 \%$ 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 Plán A these funds collected in fiscal 2004 will increase by $0.01 \%$ of payroll; in Plan B the corresponding increase is $0.01 \%$. Although the actuarially required net direct employer contribution rate for Plan A for fiscal 2004 is $14.61 \%$, the actual employer contribution rate for fiscal 2004 is $11.00 \%$ of payroll. After giving consideration to the expected shortfall in contributions collected in fiscal 2004, as detailed in Exhibit I, we recommend a net direct employer contribution of $15.00 \%$ of payroll for Plan A during fiscal 2005. Although the actuarially required net direct employer contribution rate in Plan B is $9.22 \%$, the actual employer contribution rate for fiscal 2004 is $7.75 \%$ of payroll. After giving consideration to the expected contribution shortfall in fiscal 2004, as detailed in Exhibit XII, we recommend a net direct employer contribution of $9.50 \%$ of payroll for Plan B during fiscal 2005.

Capital market conditions over the last four 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 $3.9 \%$ 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 $\$ 5,077,533$ to $\$ 25,484,230$ and would increase the actuarially required net direct employer contribution rate for fiscal 2004 from $14.61 \%$ to $18.25 \%$. In Plan B, the total employer actuarially required contribution would be increased by $\$ 916,434$ to $\$ 5,221,316$ and would increase the actuarially required net direct employer contribution rate for fiscal 2004 from $9.22 \%$ to $11.19 \%$. After adjusting for the contribution shortfall in fiscal 2004, lowering the valuation interest rate from $8 \%$ to $7.50 \%$ in fiscal 2004 would result in a recommended minimum net direct employer contribution rate of $19.00 \%$ for Plan A and $11.50 \%$ for Plan B for fiscal 2005. 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 2003 the actual cost of living (as measured by the US Department of Labor CPI-U) increased by $2.11 \%$. 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 $2 \%$
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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 $\$ \mathrm{X} \times(\mathrm{A}+\mathrm{B})$ 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 $30^{\text {th }}$ 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 2003 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, 2003 


$\square$ Present Value of Future Employer Normal Cost
$\square$ Unfunded Accrued Liability

- Present Value of Future Employee Contributions
$\square$ Actuarial Value of Assets


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



## Plan A-Components of Actuarial Funding


$\square$ Employee Contributions

- Actuarially Required Tax Contributions
$\square$ Required Net Direct Employer Cont.


## 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


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


|  |  | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Income (\$Mil) | $\square$ | 32.4 | 43.9 | 54.1 | 49.0 | 53.3 | 65.7 | 66.7 | 51.2 | 29.9 | 23.2 |
| Benefits and Expenses (\$Mil) | $\square$ | 18.5 | 26.5 | 24.0 | 23.0 | 27.4 | 26.5 | 28.4 | 33.5 | 31.8 | 33.9 |
| Net Change in AVA (\$Mil) | - | 13.9 | 17.4 | 30.1 | 26.0 | 25.9 | 39.2 | 38.3 | 17.7 | -1.9 | -10.7 |



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

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# Plan B - Components of Present Value of Future Benefits June 30, 2003 


$\square$ Present Value of Future Employer Normal Cost
$\square$ Unfunded Accrued Liability
$\square$ Present Value of Future Employee Contributions
$\square$ Actuarial Value of Assets

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



## Plan B - Components of Actuarial Funding



## Plan B - Frozen Unfunded Accrued Liability



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


Plan B - Historical Asset Yield


Plan B - Net Non-Investment Income


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



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


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G. S. CURRAN \& COMPANY, LTD.
EXHIBIT IPLAN A: ANALYSIS OF ACTUARIALLY REQUIRED CONTRIBUTIONS

1. Present Value of Future Benefits ..... \$ 754,649,379
2. Frozen Unfunded Actuarial Accrued Liability ..... 68,936,307
3. Actuarial Value of Assets ..... 452,830,104
4. Present Value of Future Employee Contributions ..... 86,226,350
5. Present Value of Future Employer Normal Costs (1-2-3-4) ..... 146,656,618
6. Present Value of Future Salaries ..... \$1,065,009;738
7. Employer Normal Cost Accrual Rate $(5 \div 6)$ ..... 13.770449\%
8. Projected Fiscal 2004 Salary for Current Membership ..... \$ 128,879,314
9. Employer Normal Cost as of July 1, $2003(7 \times 8)$ ..... \$ 17,747,260
10. Amortization Payment on Frozen Unfunded Accrued Liability of \$68,936,307 over 27 remaining years with Payments increasing at $4.25 \%$ per year ..... \$ ..... 3,982,653
11. Total Employer Normal Cost \& Amortization Payment $(9+10)$ ..... \$ ..... 21,729,913
12. Employer Normal Cost and Amortization Payment Interest Adjusted for Midyear Payment ..... \$ ..... 22,582,388
13. Estimated Administrative Cost for Fiscal 2004 ..... \$ ..... 1,023,928
14. Gross Employer Actuarially Required Contribution for Fiscal $2004(12+13)$ ..... \$ ..... 23,606,316
15. Projected Tax Contributions for Fiscal 2004 ..... \$ ..... 3,081,144
16. Projected Revenue Sharing Funds for Fiscal 2004. ..... \$ ..... 118,475
17. Net Direct Employer Actuarially Required Contribution for Fiscal 2004 (14-15-16) ..... \$ ..... 20,406,697
18. Projected Payroll (July 1, 2003 through June 30, 2004) ..... \$ 139,668,358
19. Net Direct Employer Actuarially Required Contribution as a \% of Projected Payroll for Fiscal $2004(17 \div 18)$ ..... 14.61\%
20. Actual Employer Contribution Rate for Fiscal 2004 ..... 11.00\%
21. Contribution Gain (Loss) as a Percentage of Payroll (20-19) ..... (3.61\%)
22. Adjustment to Following Year Payment for Contribution Gain (Loss) ..... (0.44\%)
23. Recommended Net Direct Employer Contribution Rate for 2005 (19-22) (Rounded to nearest .25\%) ..... 15.00\%

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

Present Value of Future Benefits for Active Members:
Retirement Benefits ..... \$ 447,109,666
Survivor Benefits ..... 17,636,706
Disability Benefits ..... 17,010,279
Vested Deferred Termination Benefits ..... 17,890,364
Contribution Refunds ..... 13,127,252
TOTAL Present Value of Future Benefits for Active Members ..... \$ 512,774,267
Present Value of Future Benefits for Terminated Members:
Terminated Vested Members Due Benefits at Retirement.. \$ ..... 7,590,662
Terminated Members with Reciprocals
Due Benefits at Retirement ..... 1,057,167
Terminated Members Due a Refund ..... 1,337,740
TOTAL Present Value of Future Benefits for Terminated Members ..... \$ ..... 9,985,569
Present Value of Future Benefits for Retirees:
Regular Retirees ..... \$ 181,752,011
Disability Retirees ..... $15,497,678$
Survivors \& Widows ..... 31,799,919
Reserve for Accrued Retiree DROP Account Balances ..... 2,839,935
TOTAL Present Value of Future Benefits for Retirees \& Survivors. ..... \$ 231,889,543
TOTAL Present Value of Future Benefits ..... \$ 754,649,379

## EXHIBIT III <br> PLAN A: ACTUARIAL VALUE OF ASSETS

## Current Assets:

Cash ..... \$ 2,841,243
Contributions Receivable from Members ..... 2,923,060
Contributions Receivable from Employers ..... 2,701,063
Accrued Interest and Dividends on Investments ..... 2,830,764
Investment Receivable ..... 244,063
Due From Plan B ..... 1,498,789
TOTAL CURRENT ASSETS ..... $\$ 13,038,982$
Allocated Share of the Expense Fund ..... $\$ 2,397,518$
Property Plant \& Equipment ..... \$ 563,036
Investments:
Common Stock ..... \$ 143,952,578
Corporate Bonds ..... 140,915,419
Federal National Mortgage Corporation. ..... 59,739,915
International Equities ..... 39,512,965
Federal Home Loan Mortgage Corporation ..... 16,734,681
Government National Mortgage Association ..... 6,111,270
U.S. Treasury Notes, Bonds and Bills ..... 7,222,712
Cash Equivalents ..... 17,714,728
Deferred Capital Losses ..... 5,435,888
TOTAL INVESTMENTS ..... \$ 437,340,156
TOTAL ASSETS ..... \$ 453,339,692
Current Liabilities:
Investment Payable ..... \$ ..... 113,600
Accounts Payable ..... 216,755
Refunds Payable ..... 179,233
TOTAL CURRENT LIABILITIES ..... \$ 509,588
ACTUARIAL VALUE OF ASSETS ..... \$ 452,830,104
EXHIBIT IVPLAN A: PRESENT VALUE OF FUTURE CONTRIBUTIONS
Employee Contributions to the Annuity Savings Fund ..... \$ 86,226,350
Employer Normal Contributions to the Pension Accumulation Fund ..... $146,656,618$
Employer Amortization Payments to the Pension Accumulation Fund. ..... 68,936,307
TOTAL PRESENT VALUE OF FUTURE CONTRIBUTIONS ..... $\$ 301,819,275$
EXHIBIT V
PLAN A: CHANGE IN FROZEN UNFUNDED ACTUARIAL ACCRUED LIABILITY
Prior Year Frozen Unfunded Accrued Liability ..... \$ 67,650,205
Interest on Frożen Unfunded Accrued Liability ..... \$ 5,412,016
Employer Normal Cost for Prior Year ..... 12,048,989
Interest on the Normal Cost ..... 963,919
Administrative Expenses ..... 570,641
Interest on Expenses ..... 22,387
TOTAL Increases to Frozen Unfunded Accrued Liability\$ 19,017,952
Gross Regular Employer Contributions ..... \$ 14,065,724
Interest on Employer Contributions ..... 551,805
Contribution Shortfall (Excess) ..... 2,996,756
Interest on Contribution Shortfall (Excess) ..... 117,565
TOTAL Decreases to Frozen Unfunded Accrued Liability ..... \$ $17,731,850$
CURRENT YEAR FROZEN UNFUNDED ACCRUED LIABILITY ..... \$ 68,936,307

## EXHIBIT VI <br> PLAN A: ANALYSIS OF INCREASE IN ASSETS

Actuarial Value of Assets (June 30, 2002) ..... \$Income:
Member Contributions ..... \$
12,155,055
Employer Contributions ..... 11,059,848
Ad Valorem Taxes ..... 2,881,880
Revenue Sharing Funds ..... 123,996
Irregular Contributions ..... 951,372
Due from Plan B ..... 632,008
Other Income ..... 31,213
Total Contribution Income ..... \$ ..... $27,835,372$
Interest and Dividend Income ..... \$ 15,915,542
Recognized Realized Capital Gains (Losses) ..... $(8,093,875)$
Recognized Unrealized Capital Gains (Losses) ..... $(11,167,815)$
Investment Income Allocated from Expense Fund ..... 36,002
Allocated Share of Investment Expense. ..... $(1,289,767)$
Net Investment Income ..... \$
TOTAL Income ..... \$$23,235,459$
Expenses:
Retirement Benefits ..... \$ ..... 26,917,845
Funds Transferred to Another System ..... 900,862
Refunds of Contributions ..... 2,777,389
DROP Disbursements ..... 2,541,866
Transfer to Plan B ..... 193,835
Allocated Share of Administrative Expenses ..... 570,641
TOTAL Expenses ..... $\$ 33,902,438$
Net Income for Fiscal 2003 (Income - Expenses) ..... $\$(10,666,979)$
Unadjusted Fund Balance as of June 30, 2003. ..... \$ 452,810,345
Adjustment for Change in Allocated Expense Fund Balance ..... \$ ..... 19,759
Actuarial Value of Assets (June 30, 2003). ..... \$ 452,830,104

## EXHIBIT VII PLAN A: FUND BALANCE

Present Assets of the System Creditable to:
Annuity Savings Fund ..... \$ 91,246,482
Annuity Reserve Fund ..... 229,049,608
Pension Accumulation Fund ..... 111,850,707
Deferred Retirement Option Plan Account ..... 12,849,901
NET MARKET VALUE OF ASSETS ..... $\$ 444,996,698$
ADJUSTMENT FOR DEFERRAL OF REALIZED AND UNREALIZED CAPITAL LOSSES (GAINS) ON SECURITIES. ..... 5,435,888
ALLOCATED SHARE OF THE EXPENSE FUND ..... 2,397,518
ACTUARIAL VALUE OF ASSETS ..... \$ 452,830,104
EXHIBIT VIII PLAN A: PENSION BENEFIT OBLIGATION
Present Value of Credited Projected Benefits Payable to Current Employees ... \$ ..... 332,994,052
Present Value of Benefits Payable to Terminated Employees ..... 9,985,569
Present Value of Benefits Payable to Current Retirees and Beneficiaries ..... 231,889,543
TOTAL PENSION BENEFIT OBLIGATION ..... 574,869,164

## EXHIBIT IX <br> 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: ..... 19.81\%
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 ..... (2.49)\%
Changes for Fiscal 1989 ..... 0.92\%
Changes for Fiscal 1995 ..... 0.37\%
Changes for Fiscal 1997 ..... 0.69\%
Changes for Fiscal 1998 ..... 0.61\%
Changes for Fiscal 2000 ..... 0.14\%
Changes for Fiscal 2003 ..... 0.00\%
4. TOTAL Amortization of Adjustments ..... 0.24\%
5. Target Ratio for Current Fiscal Year (Lesser of $1+2+3+4$ or $100 \%$ ) ..... 79.18\%
6. Actuarial Value of Assets Divided by PBO as of June 30, 2003 ..... 78.77\%

## EXHIBIT X

PLAN A: CENSUS DATA

\begin{tabular}{|c|c|c|c|c|c|}
\hline \& Active \& Terminated with Funds on Deposit \& DROP \& Retired \& Total \\
\hline Number of members as of June 30, 2002 \& 5,264 \& 2,351 \& 217 \& 2,316 \& 10,148 \\
\hline \begin{tabular}{l}
Additions to Census \\
Initial membership \\
Death of another member Omitted in error last year
\end{tabular} \& \[
\begin{array}{r}
648 \\
(10) \\
2 \\
\hline
\end{array}
\] \& \[
\begin{gathered}
35 \\
(1)
\end{gathered}
\] \& \& 11
1 \& 683
3 \\
\hline \begin{tabular}{l}
Change in Status during Year \\
Actives terminating service \\
Actives who retired \\
Actives entering DROP \\
Term. members rehired \\
Term. members who retire \\
Retirees who are rehired \\
Refunded who are rehired \\
DROP participants retiring \\
DROP returned to work \\
Survivor due benefit at age 60
\end{tabular} \& \begin{tabular}{l}
(121) \\
(74) \\
(79) \\
18 \\
22 \\
43
\end{tabular} \& \begin{tabular}{l}
121 \\
(18) \\
(6) \\
26 \\
5
\end{tabular} \& \begin{tabular}{l}
79 \\
(51) \\
(43)
\end{tabular} \& 74
6

51
(5) \& 48 <br>

\hline | Eliminated from Census |
| :--- |
| Refund of contributions |
| Deaths |
| Included in error last year |
| Adjustment for multiple records | \& | (379) |
| :--- |
| (4) |
| 1 | \& | (134) |
| :--- |
| (2) | \& \& | (4) |
| :--- |
| (81) |
| (1) |
| 4 | \& (517)

(87)
$(1)$
5 <br>
\hline Number of members as of June 30, 2003 \& 5,331 \& 2,377 \& 202 \& 2,372 \& 10,282 <br>
\hline
\end{tabular}

pLAN A - ACTIVES CENSUS BY AGE:


THE ACTIVE CENSUS INCLUDES 2,325 ACTIVE'S WITH VEGTED BENEFITS, INCLUDING 202 DROP PARTICIPANTS AND 117 ACTIVE FORMER DROP PARTICIPANTS.

PLAN A - TERMINATED MEMBERS DUE A DEFIKRRED REYTRKAMENT BENEFFT:

| Age | Number Male | Number <br> Femala | Total <br> Number | Average. Benefit |  | Total Banefit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31-35 | 0 | 1 | 1 | 70 |  |  |
| 36-40 | 2 | 9 | 11: | 7,765 |  | 11,700 |
| 41-45 | 12 | 15 | 27 | 8,389 |  | 226,498 |
| 46-50 | 21 | 14 | 35 | 12,130 |  | 424,562 |
| 51-55 | 31 | 8 | 39 | 10,100 |  | 393,905 |
| 56-60 | 41 | 13 | 54 | 8,610 |  | 464,938 |
| 61-65 | 20 | 2 | 22. | 3,078 |  | 67,726 |
| 66-70 | 1 | 1 | 2 | 6,379 | , | 12,758 |
| 76-80. | 1 | 0 | 1 | 3,828 |  | 3,828 |
| TONAL | 129 | 63 | 192 | 8,809 |  | 1,691,-333 |

PLAN A - TERMINATED MEMBERS DUE A REFUND OF CONIRIBUTIONS:

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G. S. CURRAN \& COMPANY, LTD.

PLAN A - REGUĖAR RETIREES:

| Age | Number Male | Number <br> Famale | Total <br> Number | Average Benefit | Total <br> Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 41-45 | 8 | 2 | 10 | 13,413 | 134,128 |
| 46-50 | 22 | 4 | 26 | 19,873 | 516,686 |
| 51-55 | 44 | 18 | 62 | 20,746 | 1,286,280 |
| 56-60 | 78 | 14 | 92 | 20,871 | 1,920,150 |
| 61-65 | 221 | 58 | 279 | 15,376 | 1,289,863 |
| 66-70 | 267 | 69 | 336 | 14,150 | 4,754,384 |
| 71-75 | 243 | 73 | 316 | 12,333 | 3,897,187 |
| 76-80 | 190 | 62 | 252 | 10,842 | 2,732,181 |
| 81-85 | 124 | 40 | 164 | 9,961 | 1,633,680 |
| 86-90 | 58 | 14 | 72 | 7,098 | 511,037 |
| 91-99 | 17 | 5 | 22 | 6,000 | 131,994 |
| TOTAL | 1,272 | 359 | 1,631 | 13,371 | 21,807,570 |

PLAN A - DIGABILITY REYIREES:

| Age | Number <br> Male |
| :---: | :---: |
| $31-35$ | 2 |
| $36-40$ | 3 |
| $41-45$ | 13 |
| $46-50$ | 24 |
| $51-55$ | 33 |
| $56-60$ | 27 |
| $61-65$ | 20 |
| $66-70$ | 15 |
| $71-75$ | 10 |
| $76-80$ | 8 |
| $81-85$ | 1 |
| $T O 2 A L$ | 156 |


| Number | Total |
| :---: | :---: |
| Female | Number |
| 0 | 2 |
| 2 | 5 |
| 1 | 14 |
| 7 | 31 |
| 3 | 36 |
| 10 | 37 |
| 4 | 24 |
| 2 | 17 |
| 3 | 13 |
| 1 | 9 |
| 0 | 1 |
| 33 | 189 |


| Average | Total |
| :---: | ---: |
| Benefit | Benofit |
| 10,135 | 20,270 |
| 9,162 | 45,809 |
| 8,617 | 120,642 |
| 9,296 | 288,168 |
| 10,681 | 384,529 |
| 8,875 | 328,392 |
| 7,924 | 190,184 |
| 6,975 | 118,583 |
| 5,144 | 66,869 |
| 5,639 | 50,749 |
| 2,014 | 2,014 |
| 8,551 | $1,616,209$ |

PLAN A - SURVIVORS:

| Age | Number Male | Number <br> Female | Total <br> Number | Average <br> Benefit | Total <br> Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0-25 | 1 | 9 | 10 | 3,172 | 31,721 |
| 26-30 | 1 | 1 | 2 | 4,426 | 8,852 |
| 31-35 | 0 | 2 | 2 | 8,362 | 16,723 |
| 36-40 | 3 | 6 | 9 | 5,970 | 53,726 |
| 41-45 | 1 | 10 | 11 | 7,643 | 84,071 |
| 46-50 | 4 | 20 | 24 | 7,732 | 185,571 |
| 51-55 | 0 | 25 | 25 | 6,246 | 156,151 |
| 56-60 | 2 | 31 | 33 | 7,899 | 260,674 |
| 61-65 | 4 | 63 | 67 | 8,784 | 588,539 |
| 66-70 | 1 | 64 | 65 | 7,555 | 491,063 |
| 71-75 | 4 | 94 | 98 | 8,755 | 857,946 |
| 76-80 | 7 | 67 | 74 | 7,861 | 581,679 |
| 81-85 | 5 | 69 | 74 | 6,089 | 450,570 |
| 86-90 | 0 | 46 | 46 | 4,291 | 197,365 |
| 91-99 | 1 | 11 | 12 | 3,558 | 42,697 |
| TOTAL | 34 | 518 | 552 | 7,260 | 4,007,348 |

PLAN A - ACTIVE MEMBERS:
Completed Years of Service

| Attained Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 3080ver | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-20 | 34 | 8 |  |  |  |  |  |  |  |  |  |  |
| 21-25 | 107 | 76 | 54 | 21 | 16 | 5 |  |  |  | , |  | 42 |
| 26-30 | 93 | 63 | 49 | 38 | 24 | 90 | 2 |  |  |  |  | 279 |
| 31-35 | 62 | 50 | 49 | 37 | 34 | 140 | 97 | 3 |  |  |  | 459 |
| 36-40 | 80 | 49 | , 49 | 57 | 44 | 158 | 162 | 74 | 12 |  |  | 684 |
| 41-45 | 97 | 61 | 48 | 41 | 36 | 187 | 158 | 128 | 145 | 9 |  | 980 |
| 46-50 | 64 | 53 | 48 | 40 | 49 | 186 | 164 | 113 | 136 | 77 | 6 | 936 |
| 51-55 | 42 | 53 | 35 | 35 | 33 | 128 | 129 | 106 | 98 | 55 | 21 | $\therefore 735$ |
| 56-60 | 32 | 36 | 34 | 26 | 21 | 119 | 104 | 87 | 57 | 36 | 20 | 572 |
| 61-65 | 11 | 11 | 21 | 9 | 9 | 70 | 77 | 50 | 43 | 27 | 14 | 342 |
| 66-70 | 6 | 5 | 2 | 10 | 4 | 29 | 26 | 20 | 12 | 12 | 7 | 133 |
| 71 \& Over | 3 | 1 | 6 | 5 | 3 | 13 | 20 | 11 | 4 | 6 | 7 | 79 |
| Totals | 631 | 466 | 395 | 319 | 273 | 1125 | 939 | 582 | 506 | 222 | - 75 | 5533 |
| 3 a |  |  |  |  |  |  |  |  |  |  |  |  |

Completed Years of Service

| Attained Ages | 0 | 2 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 3080 cer | Average Salary |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-20 | 23,324 | 17,939 |  |  |  |  |  |  |  |  |  |  |
| 21-25 | 14,498 | 16,793 | 16,524 | 19,066 |  |  |  |  |  |  |  | 14.203 |
| 26-30 | 16,026 | 18,336 | 21,402 | 21,988 | 29,615 | 22,451 | 35,422 |  |  |  |  | 26,219 |
| 31-35 | 16,113 | 20,394 | 20,203 | 21,586 | 22,761 | 24,657 | 26,938 | 29,875 |  |  |  | 19,755 |
| 36-40 | 16,121 | 20,065 | 19,842 | 21,848 | 19,081 | 23,108 | 28,251 | 30,004 | 30,397 |  |  | 22,589 |
| 41-45 | 18,084 | 21.495 | 19,986 | 21,208 | 22,822 | 23,376 | 26,005 | 32,304 | 31,467 | 32,506 |  | 23,556 |
| 46-50 | 20,241 | 21,029 | 20,840 | 17,696 | 24,806 | 24,122 | 27,270 | 31,901 | 34,449 | 34,226 | 38,890 | 27,192 |
| 51-55 | 17,626 | 20.496 | 18,914 | 21,391 | 25,182 | 23,698 | 28,275 | 29,764 | 32,448 | 38,399 | 34,461 | 27,084 |
| 56-60 | 21,107 | 21,039 | 23,742 | 23,687 | - 22,729 | 23,056 | 25,263 | 28,392 | 34,089 | 31,806 | 34,590 | 27,084 |
| 61-65 | 18,849 | 21,787 | 20,266 | 18,200 | 23,790 | 22,234 | 23,092 | 27,934 | 29,605 | 31,053 | 33,148 | 25,021 |
| 66-70 | 17,354 | 25,898 | 25,514 | 22,810 | 20,045 | 25,701 | 25,114 | 24,506 | 30,254 | 28,012 | 38,176 | 25,773 |
| 71 \& Over | 36,244 | 61,944 | 19,366 | 18,478 | 27,821 | 14,897 | 16,376 | 25,149 | 35,694 | 33,708 | 17,533 | 21,877 |
| Average | 16,908 | 19,911 | 20,012 | 20,790 | 22,336 | 23,439 | 26,477 | 30,095 | 32,577 | 34,062 | 33,371 | 24,55 |

PLAN A - tErminated members doe a dgferred retiremgnt benefit:

| Attained Ages | , Years Ontil Retirement Eligibility |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30sOver | Total |
| 0-30 |  |  |  |  |  |  |  |  |  |  |  |  |
| 31-35 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 36-40 |  |  |  |  |  | 1 |  |  |  | 1 |  | 2 |
| 41-45 |  |  |  |  |  | 2 |  |  | 10 |  |  | 12 |
| 46-50 |  |  |  |  |  |  |  | 26 | 1 |  |  | 27 |
| 52-55 |  |  |  |  |  | 37 | 34 | 1 |  |  |  | 35 |
| 56-60 | 11 | 12 | 12 | 10 | 9 |  |  | 1 |  |  |  | 39 |
| 61-65 | 22 |  |  |  |  |  |  |  |  |  |  | 54 |
| 66-70 | 2 |  |  |  |  |  | . |  |  |  |  | 22 |
| 71-75 |  |  |  |  |  |  |  |  |  |  |  | 2 |
| 76-80 | 1 |  |  |  |  |  |  |  |  |  |  | 0 |
| 81 \& Over |  |  |  |  |  |  |  |  |  |  |  | 2 |
| Totals | 36 | 12 | 12 | 10 | 9 | 38 | 35 | 28 | 21 | 1 | 0 | 192 |
| PLAN A - average annoal bensfits of teratnated menbers due a deferred retirement benteit: |  |  |  |  |  |  |  |  |  |  |  |  |
| Years Ontil Retirement sligibility |  |  |  |  |  |  |  |  |  |  |  |  |
| Attained Ages | 0 | 1 | 2 |  |  |  |  |  |  |  |  | Average |
|  | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 3080ver | Benefit |
| 0-30 |  |  |  |  |  |  |  |  |  |  |  |  |
| 31-35 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 36-40 |  |  |  |  |  | 1,180 |  |  |  | 11,700 |  | 11,700 |
| 41-45 |  |  |  |  |  | 1,180 |  |  | 8,394 7,834 |  |  | 7,765 |
| 46-50 |  |  |  |  |  |  |  | 6,480 |  |  |  | $\begin{array}{r}8,389 \\ \hline 12,130\end{array}$ |
| 51-55 |  |  |  |  |  | 10,014 | 7,596 | 15,804 |  |  |  | 12,130 |
| 56-60 | 8,498 | 7,651 | 8,462 | 10,230 | 8,422 | 10,014 |  | 15,804 |  | - |  | 10,100 |
| 61-65 | 3,078 |  |  |  |  |  |  |  |  |  |  | 8,610 |
| 66-70 | 6,379 |  |  |  |  | - |  |  |  |  |  | 3,078 |
| 71-75 |  |  |  |  |  |  |  |  |  |  |  | 6,379 |
| 76-80 | 3,828 |  |  | - |  |  |  |  |  |  |  | 0 |
| 81 \& Over |  |  |  |  |  |  | - |  |  |  |  | 3,828 |
| Average | 4,939 | 7,651 | 8,462 | 10,230 | 8,422 | 9,789 | 12,162 | 8,605 | 8,343 | 70 |  |  |

PLAN A - SERVICE RETIREES:
Completed Years since Retirement

Completed Years since Retirement

| Attained Ages | . 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | - 25-29 | $3080 v e r$ | Average Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-50 | 21,378 | 14,752 | 10,217 | 17,445 |  |  |  |  |  |  |  |  |
| 51. 55 | 21,779 | 19,065 | 20,122 | 22,013 | 32,636 | 26,741 |  |  |  |  |  | 18,078 |
| 56-60 | 19,479 | 20,477 | 21,707 | 23,103 | 22,273 | 22,682 | 12,258 |  |  |  |  | 20,746 |
| 61-65 | 12,105 | 22,943 | 14,253 | 13,872 | 14,976 | 20,021 | 19,787 | 10,671 | 8,383 |  |  | 20,871 |
| 66 - 70 | 9,704 | 11,655 | 9,073 | 9,802 | 11,600 | 13,567 | 19,378 | 22,071 | 10,471 | 4,374 |  | 15,376 |
| 71-75 | 8,922 | 12,003 | 6,604 | 11,753 | 9,997 | 11,277 | 12,055 | 15,911 | -18,537 | 15,868 |  | 14,150 |
| 76-80 | 4,257 | 7,413 | 9,292 | 7,784 | 9,254 | 9,899 | 11,668 | 10,222 | . 12,097 | 12,569 |  | 12,3312 |
| 81-85 | 7,875 | 29,435 | 12,875 | 7,474 | 7,126 | 8,671 | 12,709 | 8,948 | 9,609 | 10,656 |  | 10,842 |
| 86-90 |  |  | 3,447 |  |  | 3,890 | 12,085 | 8,125 | 5,485 | 8,527 |  | 9,961 7,098 |
| 91 \& Over |  |  |  |  | 23,837 |  | 6,008 | 4,594 | 7,606 | 5,606 | 1,254 | $\begin{aligned} & 7,098 \\ & 6,000 \end{aligned}$ |
| Average | 15,284 | 15.041 | 13,773 | 14,518 | 13,528 | 14,172 | 23,850 | 12,187 | 9,913 | 8,456 | 1,254 | 23,371 |

PLAN A - DISABILITY RETIREES:
Completed Years sinco Retirement

| Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 25-19 | 20-24 | 25-29 | 30\&Orer | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-30 |  |  |  |  |  |  |  |  |  |  |  |  |
| 31-35 |  |  |  | 2 |  | 1 |  |  |  |  |  | 0 |
| 36-40 |  |  |  |  | 1 | 3 | 1 |  |  |  |  | 5 |
| 41-45 |  | 3 | 2 |  | 2 | 6 | 1 |  |  |  |  | 14 |
| 46-50 | 2 | 6 | 2 | 3 | 3 | 12 | 3 |  |  |  |  | 31 |
| 51-55 |  | 2 | 4 | 3 | 2 | 13 | - 8 | 4 |  |  |  | 36 |
| 56-60 | 3 | 3 | 5 | 5 | 4 | 7 | 4 |  | 6 |  |  | 37 |
| 61-65 |  | 1 | 2 | 1 | 1 | 6 | 8 |  | 3 | 1 | 1 | 24 |
| 66-70 | 1 |  |  |  |  | 8 | 4 | 2 | 2 | 1 | 1 | 17 |
| 71-75 |  |  |  |  |  | 4 | 5 | 1 | 1 | 2 |  | 13 |
| 76-80 |  |  |  |  | 2 |  | 3 | 1 | 1 | 2 | 1 | 9 |
| 81-85 |  |  |  |  |  |  |  |  | 1 | 1 | 2 | 1 |
| 86 \& Over |  |  |  |  |  |  |  |  |  |  |  | 0 |
| Totals | 6 | 15 | 15 | 13 | 14 | 60 | 37 | 8 | 13 | 6 | 2 | 189 |

Completed Yoars since Retirement

| Attained Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Average Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-30 |  |  |  |  |  |  |  |  |  |  |  |  |
| $31-35$ |  |  |  | 8,208 |  | 12,062 |  |  |  |  |  | 10,135 |
| 36-40 |  |  |  |  | 14,175 | 7,908 | 7,909 |  |  |  |  | 10,135 |
| 41-45 |  | 20,413 | 6,476 |  | 8,388 | 8,928 | 6,110 |  |  |  |  | 9,162 |
| 46-50 | 8,502 | 10,373 | 8,886 | 9,913 | 11,030 | 8,347 | 9,386 |  |  |  |  | 8,617 9,296 |
| 51-55 |  | 6,004 | 9,943 | 12,044 | 15,128 | 12,678 | 8,963 | 7,463 |  | - |  | 9,296 10,681 |
| 56-60 | 7,462 | 9,296 | 11,248 | 5,956 | 10,127 | 10,722 | 10,709 |  | 5,617 |  |  |  |
| 61-65 |  | 7,644 | 5,104 | 9,081 | 5,221 | 8,650 | 9,508 |  | 6,467 | 5,052 |  | 8,875 7,924 |
| 66-70 | 4,623 |  |  |  |  | 5,687 | 8,710 | 7,582 | 9,229 | 5.052 | 5,611 | 7,924 6,975 |
| 71-75 |  |  |  |  |  | 4,409 | 4:092 | 8,627 | 9,815 | 5,165 |  | 6,975 |
| 76-80 |  |  |  |  | 23,175 |  | 5,233 | 8,458 | 245 | $4,950$ | 3,574 | 5,144 5,639 |
| 81-85 |  |  |  |  |  | - |  |  |  | 2,014 | 3,574 | 2,639 |
| 86 \& Over |  |  |  |  |  |  |  |  |  |  |  | 0 |
| Average | 7,336 | 9,401 | 9,130 | 8,687 | 10,943 | 9,074 | 8,202 | 7,762 | 6,278 | 4,549 | 4,592 | 8,551 |


Completed Yearis since Retirement

| 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7 |  |  | 2 |  | 1 |  |  |  |  |  | 10 |
|  | 1 |  |  |  |  | 1 |  |  |  |  | 0 |
| 1 |  |  |  | 1 |  | 2 | . |  |  |  | 2 |
|  |  |  | 1 | 1 | 1 | 2 | 1 | 4 |  |  | 9 |
| 2 | 2 |  |  |  | 2 | 4 | 1 | * |  |  | 11 |
| 1 |  | - 1 | 2 | 4 | 9 | 6 | 1 | * |  |  | 24 |
| 2 | 1 |  |  | 1 | 11 | . 6 | 4 |  |  |  | 25 |
| 1 | 3 | 1 | 2 | 2 | 14 | 7 | 4 |  |  |  | 33 |
| 2 | 3 | 12 | 1 | 4 | 18 | 19 | 15 | 4 | 1 |  | 67 |
| 2 | 2 |  | 1 | 2 | 16 | 24 | 13 | 3 | 3 | 1 | 65 |
|  |  |  | 2 | 2 | 2 | 10 | 31 | 12 | 4 | 2 | 98 |
|  |  |  |  |  | 1 | 10 | 25 | 23 | 7 | 3 | 74 |
|  |  |  |  |  | 1 | 7 | 13 | 30 | 22 | 1 | 74 |
|  |  |  |  |  |  | 2 | 3 | . 13 | 21 | 7 | 46 |
|  |  |  |  |  |  |  |  |  | 8 | 4 | 12 |
| 17 | 9 | 6 | 12 | 19 | 83. | 122 | 111 | 89 | 66 | 18 | 552 |


Completed Years Since Retirement

| Attained Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 20-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Average Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $0-20$ $21-25$ | 2,428 |  |  | 4,443 |  | 5,836 |  |  |  |  |  | 3,272 |
| 26-30 |  | 1,810 |  |  |  |  | 7.042 |  |  |  |  | 0 |
| 31-35 | 12,169 |  |  |  | 4,554 |  | 7,042 |  |  |  |  | 4,126 |
| 36-40 |  |  |  | 20,823 | 7,286 | 5,095 | 9,446 | 6,416 | 1,165 | - |  | 8,361 |
| 41-45 | 10,067 | 9,224 |  | 20.823 |  | 11,212 | 4,531 | 6,426 | 1,165 |  |  | 5,970 |
| 46-50 | 6,736 |  | 4,750 | 13,540. | 10,740 | 8,108 | 4,148 | 6,186 |  |  |  | 7,643 |
| 51-55 | 12,844 | 5,492 |  |  | 4,554 | 6,927 | 4,249 | 4,682 |  |  |  | 7,732 |
| 56-60 | 17,717 | 5,059 | 9,406 | 7,149 | 8,572 | 8,494 | 7,202 | 4,602 |  |  |  | 6,246 |
| 61-65 | 6,723 | 18,079 | 7,439 | 13,176 | 10,285 | 9,713. | 9.296 | 5,635 | 4,856 |  |  | 7,899 |
| 66-70 |  |  | 7,094 | 3,898 | 7,317 | 8,164 | 7,431 | 8,673 | 4,856 7,707 | 10,416 4,415 |  | 8,784 7,555 |
| 71-75 | 6,286 | 6,405 |  | 11,242 | 5,894 | 10,146 | 8,190 | 11,419 | 6,701 | 2,731 | 1.358 | 7,555 |
| 76-80 |  |  |  | 5,548 | 12,829 | 7,286 | 9,728 | 8,543 | 7,837 | 5,203 | 1,941 | 8,755 7,861 |
| 81-85 |  |  |  |  |  | 9,573 | 15,375 | 6,337 | 5,588 | 5,203 $.3,634$ | 3,108 | 7,861 |
| $86-90$ |  |  |  |  |  |  | 3,937 | 7,551 | 6,689 | 3,634 3,476 | 3,108 .983 | 6,089 4,291 |
| 91 \& Over |  |  |  |  |  | . | 3,937 | 7.551 | 6,689 | 3,476 | 3,983 | 4,291 3,558 |
| Average | 6,985 | 10,261 | 7,532 | 9,208 ${ }^{\circ}$ | 8,932 | 8,581 | 8,130 | 8,309 | .6,320 | 3,858 | 1,565 | 7,260 |

## EXHIBIT XI <br> PLAN A: YEAR-TO-YEAR COMPARISON

Number of Active Members
Number of Retirees and Survivors
Number Terminated Due Deferred Benefits
Number Terminated Due Refund
Active Lives Payroll
Retiree Benefits in Payment
Market Value of Assets
Ratio of Actuarial Value of Assets to
Actuarial Accrued Liability
Actuarial Accrued Liability
(As defined by GASB- 25)
Actuarial Value of Assets
Unfunded Actuarial Accrued Liability
Present Value of Future Employer Normal Cost
Present Value of Future Employee Contributions
Present Value of Future Benefits

|  | Fiscal 2003 |  | Fiscal 2002 |  | Fiscal 2001 |  | Fiscal 2000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5,533 |  | 5,481 |  | 5,455 |  | 5,558 |
|  | 2,372 |  | 2,316 |  | 2,255 |  | 2,213 |
|  | 192 |  | 193 |  | 189 |  | 187 |
|  | 2,185 |  | 2,158 |  | 2,122 |  | 2,108 |
| \$ | 135,876,426 | \$ | 130,191,230 | \$ | 125,304,827 | \$ | 124,683,590 |
| \$ | 27,431,127 | \$ | 26,145,224 | \$ | 24,838,273 | \$ | 23,418,404 |
| \$ | 444,996,698 | \$ | 432,669,352 | \$ | 447,796,046 | , | 469,525,372 |
|  | 86.79\% |  | 87.26\% |  | 87.53\% |  | 87.33\% |
| \$ | 521,766,411 | \$ | 531,127,529 | \$ | 531,562,970 | \$ | 512,465,288 |
| \$ | 452,830,104 | \$ | 463,477,324 | \$ | 465,259,344 | \$ | 447,557,888 |
| \$ | 68,936,307 | \$ | 67,650,205 | \$ | 66,303,626 | \$ | 64,907,400 |
|  | 146,656,618 | \$ | 100,815,782 | \$ | 67,974,883 | \$ | 59,512,163 |
|  | 86,226,350 | \$ | 83,902,996 | \$ | 82,237,210 | \$ | 83;646,334 |
|  | 754,649,379 | \$ | 715,846,307 | \$ | 681,775,063 |  | 655,623,785 |

Fiscal 2004 Fiscal 2003 Fiscal 2002 Fiscal 2001

| Employee Contribution Rate | $9.25 \%$ | $9.25 \%$ | $9.25 \%$ | $9.25 \%$ |
| :--- | :--- | :--- | :--- | :--- |
| Proj. Tax Contribution as \% of Projected Payroll | $2.29 \%$ | $2.28 \%$ | $2.17 \%$ | $2.02 \%$ |
| Actuarially Req'd Net Direct Employer Cont. Rate | $14.61 \%$ | $10.78 \%$ | $.7 .89 \%$ | $7.03 \%$ |
| Actual Employer Direct Contribution Rate | $11.00 \%$ | $8.00 \%$ | $7.00 \%$ | $6.25 \%$ |


|  | Fiscal 1999 |  | Fiscal 1998 |  | Fiscal 1997 |  | Fiscal 1996 |  | Fiscal 1995 | Fiscal 1994 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5,706 |  | 5,740 |  | 5,880 |  | 5,820 |  | 5,668 | 5,655 |
|  | 2,130 |  | 2,081 |  | 2,045 |  | 2,022 |  | 1,951 | 1,923 |
|  | 150 |  | 152 |  | 163 |  | 158 |  | 135 | 124 |
|  | 2,010 |  | 1,942 |  | 1,882 |  | 1,888 |  | 1,827 | 1,755 |
| \$ | 120,568,583 | \$ | 116,609,501 | \$ | 115,687,749 | \$ | 112,212,880 | \$ | 105,755,181 | \$ 102,250,546 |
| \$ | 21,553,214 | \$ | 20,129,226 | \$ | 18,865,469 | \$ | 17,947,961 | \$ | 16,540,168 | \$ 15,975,744 |
| \$ | 436,446,684 | \$ | 408,685,269 | \$ | 358,812,541 | \$ | 317,277,291 | \$ | 290,829,063 | \$ 265,002,413 |
|  | 86.57\% |  | 85.65\% |  | 85.05\% |  | 84.36\% |  | 83.37\% | 82.87\% |
| \$ | 472,653,880 | \$ | 432,158,125 | \$ | 404,727,303 | \$ | 377,279,030 | \$ | 345,626,503 | \$ 326,696,611 |
| \$ | 409,182,585 | \$ | 370,154,019 | \$ | 344,213,563 | \$ | 318,271,740 | \$ | 288,135,401 | \$ 270,725,765 |
| \$ | 63,471,295 | \$ | 62,004,106 | \$ | 60,513,740 | \$ | 59,007,290 | \$ | 57,491,102 | \$ 55,970,846 |
| \$ | 48,158,874 | \$ | 38,443,452 | \$ | 45,413,959 | \$ | 46,384,507 | \$ | 46,295,326 | \$ 46,572,782 |
| \$ | 81,782,562 | \$ | 86,763,021 | \$ | 87,008,081 | \$ | 85,308,608 | \$ | 80,932,808 | \$ 79,722,087 |
| \$ | 602,595,316 | \$ | 557,364,598 | \$ | 537,149,343 | \$ | 508,972,145 | \$ | 472,854,637 | \$ 452,991,480 |


| Fiscal 2000 | Fiscal 1999 | Fiscal 1998 | Fiscal 1997 | Fiscal 1996 | Fiscal 1995 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $9.25 \%$ | $9.25 \%$ | $9.25 \%$ | $9.25 \%$ | $9.25 \%$ | $9.25 \%$ |
| $2.02 \%$ | $2.08 \%$ | $1.93 \%$ | $1.76 \%$ | $1.81 \%$ | $1.80 \%$ |
| $6.20 \%$ | $4.92 \%$ | $5.73 \%$ | $5.91 \%$ | $6.24 \%$ | $6.55 \%$ |
| $5.75 \%$ | $5.75 \%$ | $5.75 \%$ | $6.25 \%$ | $6.75 \%$ | $5.50 \%$ |

## Plan B Exhibits

## EXHIBIT XII <br> PLAN B: ANALYSIS OF ACTUARIALLY REQUIRED CONTRIBUTIONS

1. Present Value of Future Benefits ..... \$ 146,470,892
2. Frozen Unfunded Actuarial Accrued Liability ..... \$ 6,444,919
3. Actuarial Value of Assets ..... \$ 86,170,714
4. Present Value of Future Employee Contributions ..... $\$ 17,184,709$
5. Present Value of Future Employer Normal Costs (1-2-3-4). ..... \$ 36,670,550
6. Present Value of Future Salaries ..... \$ 378,674,373
7. Employer Normal Cost Accrual Rate $(5 \div 6)$ ..... 9.683927\%
8. Projected Fiscal 2004 Salary for Current Membership ..... \$ 42,728,228
9. Employer Normal Cost as of July 1, 2003 (7x8) ..... \$ ..... 4,137,770
10. Amortization Payment on Frozen Unfunded Accrued Liability of $\$ 6,444,919$ with Payments decreasing at 2\% per year ..... \$ ..... 701,973
11. TOTAL Employer Normal Cost \& Amortization Payment $(9+10)$ ..... \$ ..... 4,839,743
12. Employer Normal Cost and Amortization Payment Interest Adjusted for Midyear Payment ..... \$ ..... 5,029,608
13. Estimated Administrative Cost for Fiscal 2004 ..... \$ ..... 341,072
14. TOTAL Employer Actuarially Required Contribution for Fiscal $2004(12+13)$ ..... \$ ..... 5,370,680
15. Projected Tax Contributions for Fiscal 2004 ..... 1,026,334
16. Projected Revenue Sharing Funds for Fiscal 2004 ..... \$ ..... 39,464
17. Net Direct Employer Actuarially Required Contribution for Fiscal 2004 (14-15-16) ..... \$ 4,304,882
18. Projected Payroll (July 1, 2003 through June 30, 2004) ..... \$ ..... $46,666,148$
19. Net Direct Employer Actuarially Required Contribution as a \% of Projected Payroll for Fiscal $2004(17 \div 18)$ ..... 9.22\%
20. Actual Employer Contribution Rate for Fiscal 2004 ..... 7.75\%
21. Contribution Gain (Loss) as a Percentage of Payroll (20-19) ..... (1.47\%)
22. Adjustment to Following Year Payment for Contribution Gain(Loss) ..... (0.17\%)
23. Recommended Net Direct Employer Contribution Rate for 2005 (19-22) (Rounded to nearest .25\%) ..... 9.50\%

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

Present Value of Future Benefits for Active Members:
Retirement Benefits ..... \$ 86,091,638
Survivor Benefits ..... 4,523,650
Disability Benefits ..... 4,134,722
Vested Deferred Termination Benefits ..... 5,196,673
Contribution Refunds ..... 2,691,337
TOTAL Present Value of Future Benefits for Active Members ..... \$
Present Value of Future Benefits for Terminated Members:
Terminated Vested Members Due Benefits at Retirement.... ..... $\$ 1,492,386$
Terminated Members with Reciprocals
Due Benefits at Retirement ..... 144,386
Terminated Members Due a Refund ..... 266,159
TOTAL Present Value of Future Benefits for Terminated Members ..... \$
Present Value of Future Benefits for Retirees:
Regular Retirees ..... \$ 32,162,800
Disability Retirees ..... 2,274,298
Survivors \& Widows ..... 7,020,780
Reserve for Accrued Retiree DROP Account Balances ..... 472,063
TOTAL Present Value of Future Benefits for Retirees \& Survivors ..... \$ ..... 41,929,941
TOTAL Present Value of Future Benefits ..... \$ 146,470,892

## EXHIBIT XIV <br> PLAN B: ACTUARIAL VALUE OF ASSETS

Current Assets:
Cash ..... \$ ..... 538,353
Contributions Receivable from Members ..... 559,324
Contributions Receivable from Employers ..... 726,143
Accrued Interest on Investments ..... 438,311
Dividends Receivable ..... 25,160
Investments Receivable ..... 52,289
TOTAL CURRENT ASSETS ..... \$ ..... 2,339,580
Allocated Share of the Expense Fund ..... \$ ..... 798,617
Property, Plant \& Equipment ..... \$ ..... 174,306
Investments:
Common Stock ..... \$ 35,526,774
Federal National Mortgage Corporation ..... 12,395,264
Corporate Bonds ..... 26,742,014
US Treasury Bonds and Notes. ..... 3,329,893
Federal Home Loan Mortgage Corporation ..... 1,268,971
Cash Equivalents ..... 3,014,022
Government National Mortgage Association ..... 632,581
Deferred Capital Losses. ..... 1,536,023
TOTAL INVESTMENTS ..... \$ 84,445,542
TOTAL ASSETS ..... \$ 87,758,045
Current Liabilities:
Investments Payable ..... \$ ..... 28,741
Accounts Payable. ..... 41,678
Refunds Payable ..... 18,123
Funds Payable to Plan A ..... 1,498,789
TOTAL CURRENT LIABILITIES ..... \$ 1,587,331
ACTUARIAL VALUE OF ASSETS ..... \$ 86,170,714
EXHIBIT XVPLAN B: PRESENT VALUE OF FUTURE CONTRIBUTIONS
Employee Contributions to the Annuity Savings Fund ..... \$ 17,184,709
Employer Normal Contributions to the Pension Accumulation Fund ..... 36,670,550
Employer Amortization Payments to the Pension Accumulation Fund ..... 6,444,919
TOTAL PRESENT VALUE OF FUTURE CONTRIBUTIONS ..... $\$ 60,300,178$
EXHIBIT XVIPLAN B: CHANGE IN FROZEN UNFUNDED ACTUARIAL ACCRUED LIABILITY
Prior Year Frozen Unfunded Accrued Liability. ..... \$ ..... 6,683,817
Interest on Frozen Unfunded Accrued Liability ..... \$ 534,705
Employer Normal Cost for Prior Year ..... 3,202,523
Interest on the Normal Cost ..... 256,202
Administrative Expenses ..... 189,679
Interest on Expenses ..... 7,441
TOTAL Increases to Frozen Unfunded Accrued Liability ..... \$ 4,190,550
Gross Employer Contributions ..... $\$ 3,855,018$
Interest on Employer Contributions ..... 151,234
Contribution Shortfall (Excess) ..... 407,220
Interest on Contribution Shortfall (Excess) ..... 15,976
TOTAL Decreases to Frozen Unfunded Accrued Liability ..... \$ 4,429,448
CURRENT YEAR FROZEN UNFUNDED ACCRUED LIABILITY ..... \$ ..... $6,444,919$

## EXHIBIT XVII <br> PLAN B: ANALYSIS OF INCREASE IN ASSETS

Actuarial Value of Assets (June 30, 2002) ..... $\$ 88,697,416$
Income:
Member Contributions ..... \$ 2,188,629
Employer Contributions ..... 2,836,103
Ad Valorem Taxes ..... 977,130
Revenue Sharing Funds ..... 41,785
Irregular Contributions ..... 125,710
Due from Plan A ..... 193,835
Total Contribution Income ..... \$6,363,192
Interest and Dividend Income ..... \$ 2,998,765
Recognized Realized Capital Gains (Losses) ..... $(1,750,795)$
Recognized Unrealized Capital Gains (Losses) ..... $(2,615,131)$
Investment Income Allocated from Expense Fund ..... 11,992
Allocated Share of Investment Expense. ..... $(267,106)$
Net Investment Income ..... \$$(1,622,275)$
TOTAL Income ..... \$ ..... 4,740,917
Expenses:
Retirement Benefits ..... \$ 5,153,576
Refunds of Contributions ..... 632,946
Funds Transferred to Another System ..... 194,953
DROP Disbursements ..... 444,698
Transfer to Plan A ..... 632,008
Allocated Share of Administrative Expenses ..... 189,679
TOTAL Expenses ..... \$ ..... $7,247,860$
Net Income for Fiscal 2003 (Income - Expenses) ..... \$ ..... $(2,506,943)$
Unadjusted Fund Balance as of June 30, 2003
(Fund Balance Previous Year + Net Income) ..... \$ 86,190,473
Adjustment for Change in Allocated Expense Fund Balance ..... \$$(19,759)$
Actuarial Value of Assets (June 30, 2003) ..... \$ 86,170,714

## EXHIBIT XVIII <br> PLAN B: FUND BALANCE

Present Assets of the System Creditable to:
Annuity Savings Fund ..... \$ 15,460,936
Annuity Reserve Fund ..... $41,457,878$
Pension Accumulation Fund ..... $24,794,874$
Deferred Retirement Option Plan Account ..... 2,122,386
NET MARKET VALUE OF ASSETS ..... \$ ..... 83,836,074
ADJUSTMENT FOR DEFERRAL OF REALIZED AND UNREALIZED CAPITAL LOSSES (GAINS) ON SECURITIES ..... $1,536,023$
ALLOCATION OF EXPENSE FUND ..... 798,617
ACTUARIAL VALUE OF ASSETS ..... \$ ..... 86,170,714
EXHIBIT XIX PLAN B: PENSION BENEFIT OBLIGATION
Present Value of Credited Projected Benefits Payable to Current Employees ..... \$ ..... 62,181,682
Present Value of Benefits Payable to Terminated Employees ..... 1,902,931
Present Value of Benefits Payable to Current Retirees and Beneficiaries ..... 41,929,941
TOTAL PENSION BENEFIT OBLIGATION ..... \$ 106,014,554

## EXHIBIT XX <br> 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: ..... 20.72\%
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 ..... (1.20\%)
Changes for Fiscal 1989 ..... 1.37\%
Changes for Fiscal 1995 ..... 0.33\%
Changes for Fiscal 1997 ..... 0.77\%
Changes for Fiscal 1998 ..... 0.62\%
Changes for Fiscal 2000 ..... 0.23\%
Changes for Fiscal 2001 ..... (0.08\%)
Changes for Fiscal 2003 ..... 0.00\%
4. TOTAL Amortization of Adjustments ..... 2.04\%
5. Target Ratio for Current Fiscal Year (Lesser of $1+2+3+4$ or $100 \%$ ) ..... 76.34\%
6. Actuarial Value of Assets Divided by PBO as of June 30, 2003 ..... 81.28\%

EXHIBIT XXI
PLAN B - CENSUS DATA

|  | Active | Terminated with Funds on Deposit | DROP | Retired | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number of members as of June 30, 2002 | 2,013 | 821 | 53 | 705 | 3,592 |
| Additions to Census <br> Initial membership <br> Death of another member <br> Omitted in error last year | $317$ <br> (6) | 16 |  | 6 | 333 1 |
| Change in Status during Year <br> Actives terminating service <br> Actives who retired <br> Actives entering DROP <br> Term. members rehired <br> Term. members who retire <br> Retirees who are rehired <br> Refunded who are rehired DROP participants retiring DROP returned to work Omitted in error last year | (84) <br> (31) <br> (22) <br> 11 <br> 9 <br> 11 | 84 <br> (11) <br> (3) <br> 5 | 22 <br> (7) <br> (11) | 31 | 14 |
| Eliminated from Census <br> Refund of contributions <br> Deaths <br> Included in error last year <br> Adjustment for multiple records Moved to Plan A | (171) <br> (6) <br> (34) | (58) <br> (1) |  | (33) | (229) <br> (39) <br> (35) |
| Number of members as of June 30, 2003 | 2,007 | 853 | 57 | 720 | 3,637 |

PLAN B - ACTIVES CENSUS BY AGE:

| Age | Number Male | Number <br> Female | Total <br> Number | Average Salayy | $\begin{gathered} \text { Total } \\ \text { Salary } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 16-20 | 18 | 2 | 20 | 14,412 | 288,243 |
| 21-25 | 87 | 37 | 124 | 15,277 | 1,894,334 |
| 26-30 | 106 | 39 | 145 | 17,765 | 2,575,943 |
| 31-35 | 131 | 67 | 198 | 18,864 | 3,734,980 |
| 36-40 | 165 | 62 | 227 | 20,933 | 4,751,709 |
| 41-45 | 217 | 113 | 330 | 22,702 | 7,491,563 |
| 46-50 | 233 | 101 | 334 | 23,103 | 7,716,448 |
| 51-55 | 183 | 73 | 256 | 24,439 | 6,256,308 |
| 56-60 | 141 | 52 | 193 | 24,887 | 4,803,195 |
| 61-65 | 99 | 28 | 127 | 24,191 | 3,072,273 |
| 66-70 | 52 | 22 | 74 | 26,548 | 1,964,559 |
| 71-75 | 21 | 3 | 24 | 20,973 | 503,355 |
| 76-80 | 9 | 0 | 9 | 17,280 | 155,516 |
| 81-85 | 2 | 1 | 3 | 17,418 | 52,253 |
| TOTAL | 1,464 | 600 | 2,064 | 21,929 | 45,260,679 |

THE ACTIVE CENSUS INCLUDES 765 ACTIVES WITH VESTED BENEFITS, INCLUDING 57 DROP PARTICIPANTS AND 29 ACTIVE FORMER DROP PARTICIPANTS.

PLAN B - TERMINATED MEMBERS DUE A DEFERRED RETIREMENT BENEFIT:

| Age | Number Male | Number <br> Female | Total <br> Number | Average Benefit | Total Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 31-35 | 0 | 1 | 1 | 6,100 | 6,100 |
| 36-40 | 1 | 1 | 2 | 5,957 | 11,914 |
| 41-45 | 4 | 0 | 4 | 7,377 | 29,509 |
| 46-50 | 9 | 4 | 13 | 8,252 | 107,280 |
| 51-55 | 10 | 4 | 14 | 5,632 | 78,850 |
| 56-60 | 15 | 6. | 21 | 4,239 | 89,023 |
| 61-65 | 5 | 0 | 5 | 871 | 4,354 |
| 71"-75 | 0 | 2 | 2 | 1,184 | 2,367 |
| 76-80 | 0 | 1 | 1 | 1,812 | 1,812 |
| TOTAL | 44 | 19 | 63 | 5,257 | 331,209 |

PLAN B - TERMINATED MEMBERS DUE A REFUND OF CONTRIBUTIONS:

| Contributions Ranging |  | Total |  |
| ---: | ---: | ---: | :---: |
| From | To | Number | Contributions |
| 0 | - | 99 | 616 |


| Age | Number Male | Number <br> Female | Total <br> Number | Average Benefit. | Total <br> Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 51-55 | 3 | 1 | 4 | 16,330 | 65,321 |
| 56-60 | 11 | 0 | 11 | 14,488 | 159,363 |
| 61-65 | 55 | 15 | 70 | 9,466 | 662,641 |
| 66-70 | 102 | 29 | 131 | 8,576 | 1,123,406 |
| 71-75 | 90 | 22 | 112 | 7,639 | 855,514 |
| 76-80 | 62 | 24 | 86 | 7,889 | 678,489 |
| 81-85 | 42 | 21 | 63 | 5,970 | 376,103 |
| 86-90 | 18 | 5 | 23 | 5,403. | 124,274 |
| 91-99 | 7 | 4 | 11 | 3,276 | 36,035 |
| - total | 390 | 121 | 511 | 7,987 | 4,081,146 |

PLAN B - DISABILITY RETIREES:

| Age | Number | Number | Total | Average | Total |
| ---: | :---: | :---: | :---: | :---: | ---: |
| $41-45$ | Male | Female | Number | Benefit | Benefit: |
| $46-50$ | 3 | 1 | 4 | 5,361 | 21,442 |
| $51-55$ | 8 | 2 | 6 | 5,349 | 32,091 |
| $56-60$ | 7 | 2 | 10 | 6,535 | 65,353 |
| $61-65$ | 2 | 1 | 8 | 5,948 | 47,586 |
| $66-70$ | 3 | 1 | 1 | 3 | 7,310 |
| $76-80$ | 2 | 1 | 4 | 6,887 | 21,929 |
| TOTAL | 29 | 9 | 38 | 27,549 |  |

PLAN B - SURVIVORS:

| Age | Number Male | Number <br> Female | Total <br> Number | Average Benefit | * | Total <br> Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 26-30 | 0 | 1 | 1 | 4,143 |  | 4,143 |
| 41-45 | 1 | 0 | 1 | 5,022 |  | 5,022 |
| 46-50 | 2 | 4 | 6 | 4,245 |  | 25,467 |
| 51-55 | 0 | 8 | 8 | 4,995 |  | 39,963 |
| 56-60 | 0 | 10 | 10 | 5,980 |  | 59,803 |
| 61-65 | 1 | 18 | 19 | 6,456 |  | 122,664 |
| 66-70 | 0 | 19 | 19 | 6,680 |  | 126,912 |
| 71-75 | 2 | 29 | 31 | 6,229 |  | 193,113 |
| 76-80 | 1 | 32 | 33 | 4,802 |  | 158,468 |
| 81-85 | 1 | 29 | 30 | 4,800 |  | 143,988 |
| 86-90 | 0 | 8 | 8 | 2,562 |  | 20,492 |
| 91-99 | 0 | 5 | 5 | 2,008 |  | 10,042 |
| TOTAL | 8 | 163 | 171 | 5,322 |  | 910,077 |

PLAN B - ACTIVE MEMBERS:
Completed Years of Service

Completed Years of Service

| Attained Ages | 0 | 1 | 2 | 3 | 1 | 5-9 | 10-14 | 25-19 | 20-24 | 25-29 | 3080ver | Avorage Salazy |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-20 | 13,566 | 16,765 | 20,895 |  |  |  |  |  |  |  |  |  |
| 21-25 | 14,681 | 14,844 | 16,196 | 15',395 | 19,654 | 18,461 |  |  |  |  |  | 14,412 |
| 26-30 | 15,627 | 17,432 | 18,839 | 17,463 | 18,852 | 20,678 | 18,685 |  |  |  |  | 15,277 |
| 31-35 | 15,864 | 15,837 | 15,960 | 19,515 | 24,603 | 20,907 | 21,128 | 30,157 |  |  |  | $17,765$ <br> 18,864 |
| 36-40 | 16,016 | 18,471 | 21,297 | 20,388 | 22,085 | 19,766 | 26,049 | 28,689 | 24,399 |  |  | 18,864 20,933 |
| 41-45 | 15,988 | 18,341 | 23,126 | 18,098 | 16,968 | 21,069 | 26,060 | 28,103 | 28,647 | 27,532 |  |  |
| 46-50 | 14,196 | 29,397 | 19,909 | 21,346 | 20,819 | 21,681 | 24,117 | 26,555 | 29,246 | 33,920 | 40,685 | 22,702 23,103 |
| 51-55 | 21,792 | 23,254 | 16,603 | 26,154 | 19,425 | 20,497 | 24,369 | 26,188 | 28,818 | 31,358 | 32,374 |  |
| 56-60 | 19,756 | 20,331 | 20,048 | 18,637 | 21,282 | 21,531 | 22,848 | 31,210 | 25,489 | 31,358 38,116 | 32,374 | 24,439 |
| 61-65 | 16,233 | 27,423 | 29,744 | 17,888 | 24,914 | 20,785 | 25,770 | 21,350 | 25,750 |  | 39,864 | 24,887 |
| 66-70 | 15,324 |  | 29,246 | 19,124 | 8,500 | 20,028 | 31,305 | 30,137 | 29,750 29,921 | 26,369 24,893 | 41,841 49,463 | $\begin{aligned} & 24,191 \\ & 26,548 \end{aligned}$ |
| 71 \& Over | 10,500 |  | 34,451 |  |  | 15,099 | 18,832 | 16,538 | 29,921 32,360 | 24,893 32,561 | 49,463 | $\begin{aligned} & 26,548 \\ & 19,753 \end{aligned}$ |
| Average | 15,892 | 18,229 | 19,910 | 19,558 | 19,869 | 20,683 | 24,512 | 26,853 | 28,500 | 31,567 | 38,377 | 21.929 |

PLAN B - terminated mekbers dug a defrrrid retirghignt benifit:

PLAN B - SERVICE RETIREES:

Complated Years since Retirement

| $\begin{gathered} \text { Attained } \\ \text { Ages } \end{gathered}$ | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30¢0ver | Average Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-50 |  |  |  |  |  |  |  |  |  |  |  |  |
| 51-55 | 28,564 | 19,054 | 8,629 |  |  | ' |  |  |  |  |  | 16,330 |
| 56-60 | 12,904 | 16,742 | .14,927 |  |  |  |  |  |  |  |  | 16,330 |
| 61-65 | 8,469 | 8,645 | 10,246 | 5,788 | 7,987 | 13,036 | 12,002 |  |  |  |  | 14,488 |
| 66-70 | 9,784 | 9,401 | 9,302 | 9,372 | 9,373 | 7,014 | 10,716 |  |  |  |  | 9,466 |
| 71-75 | 6,844 |  | 5,444 | 8,045 | 5,774 | 8,067 | 6,768 | 13,627 |  | - |  | 8,576 7,639 |
| 76-80 | 5,244 | 2,705 |  | 6,459 | 1,926 | 11,703 | 8,038 | 7,602 | 13,658 |  |  | 7,639 7,889 |
| $81-85$ |  |  | 7,340 |  |  | 4,608 | 7,866 | 6,161 | 5,397 | 5,093 |  | 7,889 5,970 |
| 86-90 |  |  |  |  |  | 4,394 |  | 5,044 | 6,293 | 2,901 | - | 5,970 5,403 |
| 91 \& Over |  |  |  |  |  |  | 10,945 |  | 5,822 | 1,591 | 1,950 | 3,276 |
| Average | 8,973 | 10,498 | 9,377 | 7,951 | 8,237 | 8,168 | 7,867 | 7,516 | 6,503 | 2,611 | 1,950 | 7,987 |

PLAN B - DISABILITY RETIREES:

| $\begin{gathered} \text { Attained } \\ \text { Ages } \end{gathered}$ | Completed Years Since Retirement |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Ovar | Total |
| 0-40 |  |  |  |  |  |  |  |  |  |  |  |  |
| 41-45 | 1 |  |  |  |  | 1 | 2 |  |  |  |  | 4 |
| 46-50 | 1 |  | 1 | 2 | 1 | 1 |  |  |  |  |  | 4 |
| 51-55 | 1 | 1 | 1 | 2 | 1 | 1 | 3 |  |  |  |  | 6 |
| 56-60 | $\cdots$ | 1 |  | 2 |  | 1 | 2 |  |  | 1 |  | 10 |
| 61-65 |  | 1 |  |  | 2 | 2 |  |  |  | 1 |  | 8 |
| 66-70 |  |  |  |  |  |  | 3 | 1 |  |  |  | 4 |
| 71-75 |  |  |  |  |  |  |  |  |  |  |  | 4 |
| 76-80 |  |  |  |  |  |  |  | 1 | 2 |  |  | 3 |
| $81 \&$ Over |  |  |  |  |  |  |  |  |  |  |  | 0 |
| Totals | 4 | 3 | 2 | $\sigma$ | 3 | 5 | 10 | 2 | 2 | 1 | 0 | 38 |
| plan b - average annoal benefits payable to disability retiress: |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Completed Years Since Retirement |  |  |  |  |  |  |  |  |  |  |  |
| Attained Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 3080ver | Average |
| 0-40 |  |  | - |  |  |  |  |  |  |  |  |  |
| 41-45 | 8,335 |  |  |  |  | 4,619 | 4,244 |  |  |  |  | 5,360 |
| 46-50 | 9,061 |  | 2,578 | 3,847 | 4,282 | 8,476 |  |  |  |  |  | 5,349 |
| 51-55 | 5,869 | 11,902 | 7.112 | 6,837 | 7,169 | 2,795 | 5,611 |  |  |  |  | 5,349 6,535 |
| 56-60 | 4,394 | 10,479 |  | 4,124 |  | 3,928 | 7,267 |  |  | 6,002 |  | 6,535 5,948 |
| $61-65$ $66-70$ |  | 6,637 |  |  | 9,969 | 5,322 |  |  |  | 6,002 |  | 5,948 7,310 |
| $66-70$ $71-75$ |  |  |  |  |  |  | 8;032 | 3,453 |  |  |  | 6,887 |
| 76-80 |  |  |  |  |  | . |  | 3,870 |  |  |  | ${ }^{0}$ |
| 81 \& Over |  |  |  |  |  |  |  |  | 2,959 |  |  | 3,263 |
| Average | 6,915 | 9,673 | 4,845 | 4,936 | 7,140 | 5,028 | 6,395 | 3,661 | 2,959 | 6,002 | 0 | 5,940 |

PLAN B - SURVIVING BENEFICIARIES OF FORMER MEMBERS:


## EXHIBIT XXII <br> PLAN B: YEAR-TO-YEAR COMPARISON

|  |  | Fiscal 2003 |  | Fiscal 2002 |  | Fiscal 2001 |  | Fiscal 2000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Active Members |  | 2,064 |  | 2,066 |  | 2,069 |  | 2,068 |
| Number of Retirees and Survivors |  | 720 |  | 705 |  | 700 |  | 689 |
| Number Terminated Due Deferred Benefits |  | 63 |  | 60 |  | 53 |  | 52 |
| Number Terminated Due Refund |  | 790 |  | 761 |  | 713 |  | 715 |
| Active Lives Payroll | \$ | 45,260,679 | \$ | 43,560,002 | \$ | 42,572,472 | \$ | 41,586,147 |
| Retiree Benefits in Payment | \$ | 5,216,962 | \$ | 5,039,462 | \$ | 4,855,154 | \$ | 4,579,320 |
| Market Value of Assets | \$ | 83,836,074 | \$ | 81,767,131 | , | 87,702,933 | \$ | 100,649,110 |
| Ratio of Actuarial Value of Assets to |  |  |  |  |  |  |  |  |
| Actuarial Accrued Liability |  | 93.04\% |  | 92.99\% |  | 92.86\% |  | 92.73\% |
| Actuarial Accrued Liability <br> (As defined by GASB- 25 ) | \$ | 92,615,633 | \$ | 95,381,233 | \$ | 96,857,576 | \$ | 104,176,006 |
| Actuarial Value of Assets | \$ | 86,170,714 | \$ | 88,697,416 | \$ | 89,937,940 | \$ | 96,602,212 |
| Unfunded Actuarial Accrued Liability | \$ | 6,444,919 | \$ | 6,683,817 | \$ | 6,919,636 | \$ | 7,573,794 |
| Present Value of Future Employer Normal Cost | \$ | 36,670,550 | \$ | 28,532,252 | \$ | 22,615,159 | \$ | 12,529,147 |
| Present Value of Future Employee Contributions | \$ | 17,184,709 | \$ | 16,666,322 | \$ | 16,496,208 | \$ | 16,317,771 |
| Present Value of Future Benefits | \$ | 146,470,892 | \$ | 140,579,807 | \$ | 135,968,943 | \$ | 133,022,924 |


|  | Fiscal 2004 | Fiscal 2003 | Fiscal 2002 | Fiscal 2001 |
| :---: | :---: | :---: | :---: | :---: |
| Employee Contribution Rate | 5.00\% | 5.00\% | 5.00\% | 5.00\% |
| Proj. Tax Contribution as \% of Projected Payroll | 2.28\% | 2.27\% | 2.18\% | 2.01\% |
| Actuarially Req'd Net Direct Employer Cont. Rate | 9.22\% | 7.53\% | 6.16\% | 3.68\% |
| Actual Employer Direct Contribution Rate | 7.75\% | 6.25\% | 4.50\% | 4.50\% |


|  | Fiscal 1999 |  | Fiscal 1998 |  | Fiscal 1997 |  | Fiscal 1996 |  | Fiscal 1995 |  | Fiscal 1994 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2,152 |  | 2,102 |  | 2,056 |  | 2,012 |  | 1,998 |  | 1,984 |
|  | 664 |  | 653 |  | 651 |  | 646 |  | 628 |  | 614 |
|  | 58 |  | 63 |  | 61 |  | 68 |  | 80 |  | 78 |
|  | 702 |  | 680 |  | 664 |  | 632 |  | 701 |  | 690 |
| \$ | 41,646,939 | \$ | 37,963,401 | \$ | 36,584,814 | \$ | 34,234,222 | \$ | 33,750,064 | \$ | 32,721,647 |
| \$ | 4,235,936 | \$ | 3,926,054 | \$ | 3,713,381 | \$ | 3,502,189 | \$ | 3,279,414 | \$ | 3,129,478 |
| \$ | 94,054,385 | \$ | 87,582,921 | \$ | 76,245,708 | \$ | 66,737,143 | \$ | 61,752,808 | \$ | 55,524,052 |
|  | 91.92\% |  | 90.88\% |  | 89.95\% |  | 88.92\% |  | 87.77\% |  | 86.73\% |
| \$ | 96,158,035 | \$ | 87,395,782 | \$ | 81,392,511 | \$ | 75,655,433 | \$ | 70,206,923 | \$ | 66,254,195 |
| \$ | 88,384,208 | \$ | 79,421,207 | \$ | 73,216,211 | \$ | 67,276,177 | \$ | 61,623,243 | \$ | 57,464,395 |
| \$ | 7,773,827 | \$ | 7,974,575 | \$ | 8,176,300 | \$ | 8,379,256 | \$ | 8,583,680 | \$ | 8,789,800 |
| \$ | 10,902,426 | \$ | 12,607,109 | \$ | 9,440,170 | \$ | 4,991,127 | \$ | 6,659,816 | \$ | 6,623,442 |
| \$ | 16,469,405 | \$ | 15,103,116 | \$ | 14,674,371 | \$ | 13,851,727 | \$ | 13,965,323 | \$ | 13,584,705 |
| \$ | 123,529,866 | \$ | 115,106,007 | \$ | 105,507,052 | \$ | 94,498,287 | \$ | 90,832,062 | \$ | 86,462,342 |


| Fiscal 2000 | Fiscal 1999 | Fiscal 1998 | Fiscal 1997 | Fiscal 1996 | Fiscal 1995 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5.00\% | 5.00\% | 5.00\% | 5.00\% | 5.00\% | 5.00\% |
| 2.01\% | 2.03\% | 1.93\% | 1.77\% | 1.80\% | 1.76\% |
| 3.32\% | 4.31\% | 2.73\% | 2.72\% | 3.34\% | 3.00\% |
| 4.50\% | 3.75\% | 2.75\% | 3.25\% | 3.75\% | 4.00\% |

G. S. CURRAN \& COMPANY, LTD.

## 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, 2003, 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 " $\mathrm{X} \times(\mathrm{A} \& B)$ " 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) |
| ETIREE 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 <br> Death | \% With <br> Children | Number of <br> Children | Average <br> 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 <br> Retirement Rates | Plan B Retirement Rates | $\qquad$ | $\qquad$ | 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 |
| $50{ }^{\circ}$ | 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.

