

SOUTH CAROLINA RETIREMENT SYSTEM
REPORT OF THE ACTUARY ON
THE THIRTY-SECOND VALUATION
PREPARED AS OF JUNE 30, 1983

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February 6, 1984

State Budget and Control Board
South Carolina Retirement System
Columbia, South Carolina 29211

BUCK
CONSULTANTS

Gentlemen:

We transmit herewith our report on the thirty-second actuarial valuation of the South Carolina Retirement System, prepared as of June 30, 1983.

The actuarial assumptions are, in the aggregate, reasonable, and represent our best estimate of anticipated experience under the System. The actuarial cost method utilized is the projected benefit method with level percentage entry age normal cost and open-end accrued liability. This cost method is specifically recognized as an acceptable method by the Employee Retirement Income Security Act of 1974. The current assets applicable to the System were supplied by the Retirement System office. They are valued at adjusted amortized cost.

In our opinion, the Schedule of Valuation Results included in this report correctly presents the condition of the South Carolina Retirement System as to those benefits which are funded on an actuarial reserve basis.

The valuation indicates that for Class One employers the total contribution rate payable, exclusive of the pre-retirement death benefit, should be continued at 3.20 per cent of earnable compensation. For Class Two employers the contribution rates, exclusive of the pre-retirement death benefit, should be continued at 6.50 per cent of earnable compensation by the State and 5.65 per cent of earnable compensation by other employers. These rates are exclusive of any payments to the post-retirement increase special fund. In addition, the contribution rates of participating employers should be continued at .30 per cent of payroll to provide the pre-retirement death benefits.

Also, .30 per cent of compensation was diverted from regular funding to the post-retirement increase special fund. The Law requires employers to make an additional contribution to this fund of .20 per cent of compensation. Thus, the total contribution rate to the post-retirement increase special fund should be .50 per cent of compensation.

We trust that the report is in satisfactory form for use by the Board.

Respectfully submitted,

GEORGE B. BUCK CONSULTING ACTUARIES, INC.

(Signed) THOMAS J. CAVANAUGH

Thomas J. Cavanaugh, F.S.A.
Consulting Actuary

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REPORT ON AN ACTUARIAL VALUATION OF THE
SOUTH CAROLINA RETIREMENT SYSTEM
PREPARED AS OF JUNE 30, 1983

SECTION I - SUMMARY OF PRINCIPAL RESULTS

1. For convenience of reference, the principal results of the valuation and a comparison with the preceding valuation's results are summarized below:

<u>Valuation Date</u>	<u>6/30/83</u>	<u>6/30/82</u>
Number of active members:		
Men	50,038	50,571
Women	85,510	86,726
Total	135,548	137,297
Annual earnable compensation of active members during year:		
Men	\$ 881,561,375	\$ 818,998,192
Women	1,156,904,691	1,020,110,891
Total	\$ 2,038,466,066	\$ 1,839,109,083
Number of retired members and beneficiaries	27,837	26,150
Annual retirement allowances	\$ 110,611,031	\$ 99,677,070
Assets for valuation purposes	\$ 2,700,202,783	\$ 2,353,300,619
Normal contribution as per cent of compensation:		
Class One Service	2.22%	2.44%
Class Two Service:		
State	3.41	3.35
Others	3.02	3.00
Unfunded accrued liability (UAL)	\$ 388,143,764	\$ 393,549,030
Unfunded accrued liability contribution as per cent of compensation:		
Class One Service	.98%	.76%
Class Two Service:		
State	3.09	3.15
Others	2.63	2.65
Unfunded accrued liability liquidation period (years)	9	10
Pre-retirement death benefit contribution as per cent of compensation	.30%	.30%
Post-retirement increase special fund contribution as per cent of compensation*	.50%	.50%

*Includes .30% to be diverted to post-retirement increase special fund effective July 1, 1981. Remainder is additional contribution required of all employers.

2. Comments on the valuation results as of June 30, 1983 are given in Section IV and further discussion of the contribution levels is set out in Section V. Two amendments were made to the provisions of the System since the June 30, 1982 valuation and were taken into account in this valuation. One changed the interest rate credited for member contributions from 6% to 4% only for the purpose of calculating a disability allowance. The second amendment, which has no effect on valuation results, deletes the requirement that a member who otherwise qualifies for retirement must die in active service to qualify his beneficiary for a monthly survivor benefit.
3. Schedule B of this report outlines the full set of actuarial assumptions and methods employed. The provisions of the System are summarized in Schedule C.

SECTION II - MEMBERSHIP DATA

1. In order to obtain the aggregate liabilities and assets on account of members of the System as of June 30, 1983, data were needed with respect to each active member and beneficiary of the System and also with respect to terminations during the valuation year. The data with respect to both active and terminated members and beneficiaries were furnished to the actuary by the Retirement System office on a magnetic tape.
2. From the data, tabulations were made showing as of June 30, 1983 the number and annual earnable compensation of active members classified by age and years of service and the number and retirement allowances of retired members and beneficiaries on the roll as of June 30, 1983 classified by age. These tabulations are presented in Schedule D.

3. The following table shows the number of active members of the Retirement System together with earnable compensation as of June 30, 1983.

TABLE I
THE NUMBER AND EARNABLE COMPENSATION OF ACTIVE MEMBERS
AS OF JUNE 30, 1983

GROUP	TOTAL		TEACHERS		EMPLOYEES	
	Number	Earnable Compensation	Number	Earnable Compensation	Number	Earnable Compensation
Men	50,038	\$ 881,561,375	12,339	\$ 214,656,423	37,699	\$ 666,904,952
Women	85,510	1,156,904,691	45,937	633,490,623	39,573	523,414,068
Total	135,548	\$2,038,466,066	58,276	\$ 848,147,046	77,272	\$1,190,319,020

NOTE: There are in addition 70,821 inactive members and 13,142 active members not on the payroll as of the valuation date. The results of the valuation were adjusted to take these members into account.

4. The following table shows the number and annual amount of retirement allowances payable to retired members and to beneficiaries of deceased retired and active members as of June 30, 1983.

Handwritten calculations:

$$\begin{array}{r}
 135,548 \\
 13,142 \\
 \hline
 148,690 \\
 70,821 \\
 \hline
 219,511
 \end{array}$$

TABLE II

THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF
RETIRED MEMBERS AND BENEFICIARIES ON THE ROLL
AS OF JUNE 30, 1983

GROUP	NUMBER	TOTAL ANNUAL RETIREMENT ALLOWANCES
Service Retirements		
Teachers:		
Men	2,295	\$ 11,888,276
Women	10,950	44,771,693
Employees:		
Men	5,281	23,114,359
Women	4,024	13,279,281
Total	22,550	\$ 93,053,609
Disability Retirements		
Teachers:		
Men	355	\$ 1,637,354
Women	1,024	3,945,919
Employees:		
Men	1,251	4,565,876
Women	711	2,410,076
Total	3,341	\$ 12,559,225
Beneficiaries of Deceased Retired Members and Active Members		
Men	248	\$ 639,000
Women	1,698	4,359,197
Total	1,946	\$ 4,998,197
Grand Total	27,837	\$ 110,611,031

SECTION III - ASSETS

The amounts of the present assets taken into account in this valuation are at adjusted amortized cost. The values of the assets were taken from a statement furnished by the Director of the System and exclude reserve assets creditable to the Group Life Insurance Fund for pre-retirement lump sum death benefits and the Cost-of-Living Fund for post-retirement increases.

Included in the valuation are the assets of the employee annuity savings fund which represent the accumulated contributions of members together with interest thereon. As of June 30, 1983, these assets amounted to \$760,154,417.

Also included in the valuation are the assets of the employer annuity accumulation fund to which the contributions made by employers are credited and from which are paid all benefits on account of retired members and their beneficiaries. The assets of the accumulation fund amounted to \$1,940,048,366 as of June 30, 1983.

SECTION IV - COMMENTS ON THE VALUATION

Schedule A of this report contains the results of the valuation which show present and prospective assets and liabilities of the System as of June 30, 1983. The following comments on the valuation are pertinent:

The schedule shows that the System has actuarial liabilities of \$5,333,281,857 of which \$902,510,325 is for the prospective benefits payable on account of present retired members and beneficiaries, and \$4,430,771,532 is for the prospective benefits payable on account of present active and inactive members. Against these liabilities, the System has present assets of \$2,700,202,783 and anticipated future contributions by members of \$1,406,574,794 leaving a balance of \$1,226,504,280 to be provided by future contributions of the employers. Of this amount,

\$838,360,516 represents the present value of normal contributions by the employers and the balance of \$388,143,764 represents the present value of accrued liability contributions.

The retirement act provides that the contributions of employers shall consist of a normal contribution to cover the liability on account of service currently rendered and an accrued liability contribution on account of liabilities for past service which are not covered by present assets.

The following rates of contribution are payable by employers exclusive of the rate required for the pre-retirement lump sum death benefit and post-retirement increase special fund:

For Class One employers, the total employer contribution rate should be continued at 3.20 per cent of earnable compensation of which 2.22 per cent is attributable to the normal contribution and .98 per cent is attributable to the accrued liability contribution for the period July 1, 1983 to June 30, 1984.

For Class Two employers, the total contribution rate should be continued at 6.50 per cent payable by the State and 5.65 per cent by the other Class Two employers. Of the total rates, 3.41 per cent and 3.02 per cent are attributable to normal contributions of the State and other employers, respectively. The accrued liability rates are therefore 3.09 per cent for the State and 2.63 per cent for other employers for the period July 1, 1983 to June 30, 1984.

On the basis of the above accrued liability contribution rates it is anticipated that the accrued liability of \$388,143,764 shown in the valuation balance sheet will be liquidated within a period of 9 years from the valuation date.

The rate necessary to provide the pre-retirement lump sum death benefit on a one-year term cost basis may be continued at .30 per cent of earnable compensation on the basis of the valuation. In view of the development of reserve assets of \$23,031,058 creditable to the Group Life Insurance Fund, consideration should be given to reducing the rate in the near future. Employers participating in the Pre-retirement Death Benefit Program should contribute .30 per cent of earnable compensation in addition to the appropriate rate above.

The employer contribution rate of .30 per cent of compensation has been diverted from regular funding to the post-retirement increase special fund. In addition, all employers are required to make an additional contribution of .20 per cent of compensation to the Cost-of-Living Fund which had assets in the amount of \$10,844,446 as of June 30, 1983. Therefore, a total contribution rate of .50 per cent of compensation should be made by all employers to the post-retirement increase special fund.

SECTION V - CONTRIBUTIONS PAYABLE UNDER THE SYSTEM

The following table gives the rates of contribution payable by employers, as determined on the basis of the present valuation.

RATES OF CONTRIBUTION	CLASS ONE	CLASS TWO	
		State	Others
Normal	2.22%	3.41%	3.02%
Accrued Liability	.98	3.09	2.63
Pre-retirement Death Benefit	.30	.30	.30
Post-retirement Increase Special Fund	.50	.50	.50
Total	4.00%	7.30%	6.45%

SECTION VI - VALUATION BASIS

The valuation of the Retirement System was made on the basis of the rates of separation and mortality tables in effect since June 11, 1974 and a salary scale and interest rate of 7% adopted by the Board on April 8, 1980. An outline of the actuarial assumptions and methods employed is presented in Schedule B.

SECTION VII - ACCOUNTING INFORMATION

1. Opinion No. 8 of the Accounting Principles Board of the American Institute of Certified Public Accountants, as amended by Statement No. 36 of the Financial Accounting Standards Board, requires that certain items of information concerning retirement systems be furnished by the actuary for the State's audited financial statements.
2. Statement No. 35 of the Financial Accounting Standards Board requires that certain items of information be furnished by the actuary for the system's audited financial statements.
3. The information required by the amended Opinion No. 8 and Statement No. 35 includes the actuarial present value of accrued (accumulated) benefits as of the valuation date. The relevant amounts as of June 30, 1983 are:

Actuarial present value of accrued
benefits:

Vested benefits

Participants currently receiving payments	\$ 797,592,218
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Other participants	<u>678,746,156</u>
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	\$ 1,476,338,374
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Nonvested benefits	<u>150,078,301</u>
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Total	\$ 1,626,416,675
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The actuarial present value of vested and nonvested accrued benefits is based on an interest rate of 9%. This rate represents the estimated constant equivalent rate of return for the periods during which payment of these benefits will be deferred based on the interest rates in use as of the valuation date to calculate the Pension Benefit Guaranty

Corporation's annuity values for terminating plans covered by the
Employee Retirement Income Security Act of 1974.

SCHEDULE A

RESULTS OF THE VALUATION AS OF JUNE 30, 1983

(1) Actuarial Liabilities		
Present value of prospective benefits payable in respect of:		
(a) Present retired members and beneficiaries	\$	902,510,325
(b) Present active and inactive members		<u>4,430,771,532</u>
(c) Total actuarial liabilities	\$	5,333,281,857
(2) Assets of the System		<u>2,700,202,783</u>
(3) Unfunded Value of Prospective Benefits = (1)(c) - (2)	\$	2,633,079,074
(4) Present Value of Future Contributions by Members		<u>1,406,574,794</u>
(5) Total Prospective Contributions by Employers = (3) - (4)	\$	1,226,504,280
(6) Present Values of 1 Per Cent of Future Compensation		
(a) Class One Service	\$	1,899,936
(b) Class Two Service: State		214,427,753
(c) Class Two Service: Others		34,087,424
(7) Present Value of Future Normal Contributions by Employers at		<i>256415113 -</i>
(a) 2.22% = (6)(a) x 2.22	\$	4,217,858
(b) 3.41% = (6)(b) x 3.41		731,198,638
(c) 3.02% = (6)(c) x 3.02		<u>102,944,020</u>
(d) Total	\$	838,360,516
(8) Present Value of Accrued Liability Contributions by Employers = (5) - (7)(d)	\$	<u>388,143,764</u>
(9) Accrued Liability Rates (effective 7/1/83)		
(a) Class One Service		.98%
(b) Class Two Service: State		3.09
(c) Class Two Service: Others		2.63
(10) Accrued Liability Liquidation Period		9 years
(11) Pre-retirement Death Benefit Contribution Rate		.30%
(12) Post-retirement Increase Special Fund Contribution Rate		.50%

SCHEDULE B

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

INTEREST RATE: 7% per annum, compounded annually.

SEPARATIONS FROM SERVICE AND SALARY INCREASES: Representative values of the assumed annual rates of separation and annual rates of salary increase are as follows:

Age	<u>Annual Rate of</u>							
	<u>With- drawal</u>	<u>Death</u>	<u>Disa- bility</u>	<u>Service Retirement</u>	<u>With- drawal</u>	<u>Death</u>	<u>Disa- bility</u>	<u>Service Retirement</u>
	<u>Men Teachers</u>				<u>Women Teachers</u>			
20	11.11%	.04%	.01%		13.79%	.03%	.02%	
25	9.97	.05	.01		12.83	.03	.03	
30	7.91	.08	.02		9.12	.04	.04	
35	6.06	.12	.03		5.61	.06	.04	
40	4.67	.18	.06		3.43	.08	.07	
45	3.67	.25	.11		2.33	.13	.12	
50	2.83	.35	.20	4.00%	1.74	.20	.20	4.00%
55	2.03	.50	.34	5.50	1.18	.29	.35	6.00
60		.70	.59	7.50		.45	.61	8.00
64		.92	.94	20.00		.66	.82	35.00

Age	<u>With- drawal</u>	<u>Death</u>	<u>Disa- bility</u>	<u>Service Retirement</u>	<u>Salary Increase</u>
		<u>Employees</u>			
20	11.11%	.07%	.04%		11.31%
25	9.97	.09	.04		10.40
30	7.91	.11	.06		9.00
35	6.06	.14	.08		7.30
40	4.67	.18	.10		6.51
45	3.67	.28	.15		6.10
50	2.83	.46	.25	2.00%	5.80
55	2.03	.75	.40	3.50	5.60
60		1.08	.61	5.00	5.40
65		1.36	.85	17.50	5.30

DEATHS AFTER RETIREMENT: Combined Annuity Mortality Tables, Modified and Makehamized, for service retirement and dependent beneficiaries with a 2 year setback in ages for men employees, a 3 year setback for women employees, men teachers and men dependents and a 4 year setback for women teachers and women dependents. A special mortality table is used for disability retirements.

LOADING OR CONTINGENCY RESERVES: None.

VALUATION METHOD: Projected benefit with level percentage entry age normal cost and open-end unfunded accrued liability. Gains and losses are reflected in the period remaining to liquidate the unfunded accrued liability. Lump sum death benefits are provided on a one-year term cost basis.

ASSET VALUATION METHOD: Adjusted amortized cost.

SCHEDULE CSUMMARY OF MAIN SYSTEM PROVISIONS AS
INTERPRETED FOR VALUATION PURPOSESBACKGROUND

The South Carolina Retirement System was established as of July 1, 1945. There are two classes of employers and members under the System. Those employers becoming participants in the System on or after July 1, 1964 are Class Two employers. Class One employers include all employers who elected, by written notice to the Board not later than December 31, 1964, to remain and have their members remain under the provisions of the System as in effect on June 30, 1964. Class Two employers include all employers who elect, by written notice to the Board in allowable election periods, to participate and have their members participate as Class Two members provided such employers and employees in their employ make additional required contributions.

A summary of the main benefit provisions of the System, as interpreted in preparing the actuarial valuation, and a summary of the sources of revenue from which benefits are paid is presented in the following digest. "Average final compensation" means the average annual earnable compensation of a member during the three consecutive fiscal years of his creditable service producing the highest such average. "Prior service" means service prior to July 1, 1945 for which credit is allowed. "Membership service" means service rendered while a member of the System for which credit is allowed. The term "creditable service" means the sum of prior service and membership service.

BENEFITS

Service Retirement Allowance

Condition for Allowance

A retirement allowance is payable upon the request of any teacher or employee who has attained age 60 or has rendered 30 or more years of creditable service.

A member must retire at age 70 except that with the approval of both his employer and the Board, the member may remain in service to the end of the fiscal year in which he reaches his seventy-second birthday.

Amount of Allowance

Effective July 1, 1976 on service retirement, a Class One member receives a retirement allowance equal to 1% of the portion of his average final compensation not in excess of \$4,800, plus 1.30% of such compensation in excess of \$4,800, multiplied by the number of years of his creditable service.

On service retirement, a Class Two member receives a retirement allowance equal to 1.25% of the portion of his average final compensation not in excess of \$4,800, plus 1.65% of the portion of such compensation in excess of \$4,800, multiplied by the number of years of his creditable service.

If a member has not attained age 65 or completed 30 years of creditable service at the time of retirement, his allowance is reduced $\frac{5}{12}$ of 1% for each month by which his age at retirement is less than age 65.

In no event will a Class One member who retires on or subsequent to July 1, 1976 or a Class Two member whose creditable service commenced on or before June 30, 1964 receive a smaller retirement allowance than he would have received under the benefit provisions applicable to a Class One member in effect prior to July 1, 1976.

Effective July 1, 1975 out-of-State service means service as a teacher or employee rendered by a member of the System for any state, territory or other governmental subdivision under the jurisdiction of the United States other than this State.

Effective July 1, 1975 out-of-State service is creditable irrespective of when it was performed at a cost of 10% of current annual earnable compensation for each year established, provided that the earnable compensation used cannot be less than his earnable compensation in any one of the three preceding fiscal years.

If the member's creditable service does not, at his retirement, exceed his out-of-State service, the employer annuity based on his total out-of-State service before and after July 1, 1945 shall be reduced in the proportion which his creditable service bears to his out-of-State service.

Disability Retirement Allowance

Condition for Allowance

A disability retirement allowance is payable to any member who while in service becomes permanently incapacitated for duty mentally or physically, and who has had 5 or more years of creditable service.

Amount of Allowance

Upon disability retirement, on or after July 1, 1976, a Class One or a Class Two member receives a service retirement allowance if he has attained age 65 otherwise he receives a disability retirement allowance equal to the service retirement allowance which would have been payable had he continued in service to age 65, minus the actuarial equivalent of the contributions he would have made during such continued service. The compensation to be used for purposes of computing this benefit is the average final compensation as of the date of disability.

In no event will a Class One member whose creditable service commenced prior to July 1, 1976 receive a smaller allowance

than he would have received under the disability benefit provisions applicable to Class One members prior to July 1, 1976.

In no event will a Class Two member whose creditable service commenced on or before June 30, 1964 receive a smaller allowance than he would have received under the disability benefit provisions applicable to a Class One member.

Deferred Retirement Allowance

Condition for Allowance

A deferred retirement allowance, commencing at age 60, is payable to any member who ceases to be a teacher or an employee after he has rendered at least 5 years of creditable service, provided he leaves his contributions in the System.

Amount of Allowance

The deferred retirement allowance is computed like a service retirement allowance, except that the employee annuity is the actuarial equivalent at age 60 of the member's contributions with such interest credits as are allowed.

Supplemental Minimum Allowance

Upon retirement after 20 or more years of creditable service a supplemental monthly sum is paid, in addition to the regular allowance and any amount provided from the general funds of the State, to provide a minimum of \$150 per month plus \$1 per month for each completed year of service in excess of 20, reduced by 5/12 of 1% for each month by which the member's age at retirement is less than age 65 unless he has completed 35 years of creditable service.

Return of Contributions and Optional Death Benefit

Upon the withdrawal of a member without a retirement benefit, he is paid his total contributions with the accumulated regular interest thereon.

Upon the death of a member before retirement, his accumulated contributions are payable to his designated beneficiary or to his estate.

Upon the death of a member before retirement who had 30 years of creditable service or had attained age 65, or who had 20 years of creditable service and attained age 60, the person nominated to receive the amount of the member's accumulated contributions may elect to receive, in lieu of such accumulated contributions, an allowance for life in an amount as if the member had retired on the date of his death under Option 2 as described below. If such a person has received a refund of the member's accumulated contributions, he may, upon repayment of such refund in a single sum, receive the allowance under Option 2 from the time of the repayment of the contributions to the System.

Upon the death of a member before retirement who had 15 years of creditable service, the person nominated to receive the amount of the member's accumulated contributions may elect to receive, in lieu of such accumulated contributions and the Group Life Insurance payment, an allowance for life in an amount as if the member had retired on the date of his death and had elected for payments to commence at age 60 under Option 2 as described below. The compensation to be used for purposes of computing this benefit is the average final compensation as of the date of death.

Upon the death of a retired member who has not elected an optional form of allowance, a lump sum amount equal to the excess, if any, of his total accumulated contributions at the time his retirement allowance commenced over the sum of the retirement allowance payments made to him, is paid to his designated beneficiary or estate.

Lump Sum Death Benefit

Upon the death of a contributing member in service after the completion of one year of membership service or at any time if death is a result of an injury arising out of and in the course of the performance of duty, a lump sum equal to the member's annual earnable compensation at the time of death is paid to the person he has nominated for the refund of his

accumulated contributions or estate, provided the member's employer is a participant in the Pre-retirement Death Benefit Program. Benefits under this program are to be provided in the form of group life insurance.

Optional Allowance

Until the first payment on account of any benefit becomes normally due, any member may elect to receive his retirement allowance in accordance with one of the following forms, which are computed to be actuarially equivalent:

Option 1. A reduced retirement allowance payable during the retired member's life, with the provision that, if he dies within 10 years from his retirement date, an amount equal to his accumulated contributions at retirement, less 1/120 for each month he received a retirement allowance payment, shall be paid to a designated person.

Option 2. A reduced retirement allowance payable during the retired member's life, with the provision that after his death the reduced retirement allowance is to be continued to a designated beneficiary.

Option 3. A reduced retirement allowance payable during the retired member's life, with the provision that after his death one-half the reduced retirement allowance is to be continued to a designated beneficiary.

Option 4. A retirement allowance in such amount that, together with his Social Security benefit, he will receive approximately the same income per annum before and after the earliest age at which he is eligible for a Social Security benefit. A member who makes an election of this Option 4 shall be deemed to have made a further election of Option 1.

Option 5. A member may elect Option 2 or Option 3 with the added provision that in the event the designated beneficiary predeceases the member, the retirement allowance payable to the member after the designated beneficiary's death shall be equal to the retirement allowance which

would have been payable had the member not elected the option.

Post-Retirement
Increases in Allowances

If the increase in the Consumer Price Index for the previous year ending December 31 equals or exceeds 3%, the retirement allowance of each beneficiary in receipt of an allowance for at least one year as of said December 31 is to be increased by 4%. Any increase in allowance granted hereunder through July 1, 1980 is to be permanent, irrespective of any subsequent decrease in the Consumer Price Index, and is to be included in determining any subsequent increase. Effective July 1, 1981 all subsequent increases in allowances will be paid from the post-retirement increase special fund and are guaranteed only to the extent of the assets in that fund.

The allowance of a surviving annuitant of a beneficiary whose allowance is increased under this section is to be increased by the same percent, when and if payable.

CONTRIBUTIONS

By Members

Effective July 1, 1964, without regard to the member's Social Security coverage, Class One members contribute at the rate of 3% of earnable compensation not in excess of \$4,800, and 5% of the portion in excess of \$4,800, and Class Two members contribute at the rate of 4% of earnable compensation not in excess of \$4,800, and 6% of the portion in excess of \$4,800.

By Employers

Employers make annual contributions consisting of a "normal contribution" and an "accrued liability contribution". The "normal contribution" rate is determined by the actuary after each valuation. The "accrued liability contribution" rate is determined by the first actuarial valuation of the System, provided, however, that such rate shall be increased on the basis of subsequent valuations if benefits are increased. Such rate may be decreased if the actuary engaged by the

Board certifies that such reduction will not impair the System. Each year's accrued liability payment is to be at least 3% greater than the preceding annual accrued liability payment subject to the preceding sentence. On and after July 1, 1946, all employers' contributions for teachers are paid by the State.

Effective July 1, 1981, .30% of payroll will be diverted from the accrued liability rate to the post-retirement increase special fund and employers will make an additional .20% of payroll contribution to that fund.

SCHEDULE D

TABLE 1

THE NUMBER AND EARNABLE COMPENSATION
OF MEMBERS DISTRIBUTED BY
AGE AS OF JUNE 30, 1983

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
16	25	27,108	15	14,383
17	12	157,674	3	43,149
18	17	223,524	20	259,991
19	165	1,839,816	104	1,181,252
20	290	3,136,961	230	2,426,300
21	442	4,560,096	436	4,240,222
22	597	6,104,253	671	6,601,702
23	756	8,226,487	1,356	13,740,399
24	959	10,570,681	1,935	20,773,360
25	1,070	12,439,174	2,296	25,971,542
26	1,201	14,381,662	2,678	31,362,390
27	1,314	16,213,072	2,783	33,979,531
28	1,384	17,841,162	2,899	36,380,208
29	1,432	19,358,833	3,166	40,540,164
30	1,515	21,669,831	3,180	41,607,929
31	1,643	24,463,481	3,308	44,430,355
32	1,622	25,764,176	3,267	44,734,619
33	1,720	27,976,748	3,201	44,688,842
34	1,772	30,827,925	3,178	44,684,282
35	1,741	31,230,321	3,006	42,381,828
36	1,875	34,745,864	3,317	47,259,365
37	1,669	31,715,416	2,890	40,916,878
38	1,363	26,741,822	2,359	33,055,052
39	1,331	26,537,507	2,304	32,274,814
40	1,329	27,421,558	2,305	32,752,000
41	1,209	24,831,998	2,199	31,028,212
42	1,122	23,535,610	1,911	27,246,209
43	1,086	23,199,681	1,850	26,185,683
44	1,032	21,067,000	1,826	25,527,625
45	1,068	22,518,800	1,712	24,106,721
46	947	19,037,234	1,652	23,023,287
47	1,021	20,993,229	1,544	21,638,130
48	1,020	20,284,009	1,640	23,002,646
49	1,034	21,104,841	1,592	22,111,239
50	1,017	20,384,246	1,529	21,852,135
51	1,096	21,813,803	1,603	22,661,901
52	912	18,892,755	1,470	21,121,906
53	994	19,468,140	1,434	20,627,565
54	921	18,755,760	1,451	20,702,461
55	929	18,032,814	1,431	20,538,681

THE NUMBER AND EARNABLE COMPENSATION
OF MEMBERS DISTRIBUTED BY
AGE AS OF JUNE 30, 1983

CONTINUED

AGE	NUMBER	MEN		WOMEN	
		NUMBER	AMOUNT	NUMBER	AMOUNT
56	888	\$	16,873,282	1,474	\$ 21,243,227
57	829		16,322,313	1,252	17,802,543
58	865		16,275,814	1,277	18,324,422
59	810		15,953,289	1,228	17,570,862
60	779		14,739,091	970	13,752,381
61	767		14,593,832	954	13,621,235
62	714		14,258,257	709	10,123,414
63	484		9,668,536	595	8,588,230
64	340		6,774,517	453	6,601,210
65	296		5,764,790	267	3,798,074
66	161		3,548,058	190	2,560,712
67	118		2,323,215	134	1,781,268
68	106		2,073,354	85	1,096,529
69	73		1,366,142	67	866,657
70	59		1,095,925	64	805,616
71	52		831,169	27	338,582
72	26		359,166	14	160,369
73	16		245,215	8	107,186
74	4		48,605	3	58,194
75	6		83,845	1	12,725
76	4		57,532		
77	5		71,046		
78	1		15,649		
79	3		60,890		
80	1		10,560	1	16,297
82	2		52,211		
TOTAL	50,038	\$	881,561,375	85,510	\$1,156,904,691

SUMMARY

EMPLOYEES	37,699	\$	666,904,952	39,573	\$	523,414,068
TEACHERS	12,339	\$	214,656,423	45,937	\$	633,490,623

SEE FOOTNOTE TABLE I

TABLE 2

THE NUMBER AND EARNABLE COMPENSATION
OF MEMBERS DISTRIBUTED BY
YEARS OF SERVICE AS OF JUNE 30, 1983

YEARS OF SERVICE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
0	2,164\$	27,579,960	2,259\$	27,610,257
1	4,910	57,990,312	7,791	84,322,789
2	4,612	64,190,978	7,849	94,481,006
3	4,155	61,881,648	7,391	90,209,505
4	4,258	65,831,698	8,090	99,098,648
5	3,523	58,102,533	7,203	92,790,030
6	2,838	47,887,437	5,593	73,325,053
7	2,156	38,004,403	4,340	57,655,310
8	2,007	37,523,914	3,597	48,177,186
9	2,227	41,276,706	4,191	56,839,163
10	2,132	41,800,270	3,466	49,425,604
11	1,770	36,557,197	3,032	44,106,418
12	1,515	32,240,088	2,785	41,694,504
13	1,359	29,077,539	2,487	36,838,749
14	1,338	28,204,900	2,116	32,966,753
15	1,001	21,972,944	1,791	27,916,295
16	954	21,464,515	1,442	22,894,882
17	878	20,323,396	1,408	21,916,914
18	720	16,491,425	955	16,139,460
19	590	13,105,540	967	16,157,534
20	513	11,929,282	775	13,502,843
21	481	11,517,604	664	11,556,322
22	413	9,948,634	577	10,178,571
23	426	10,016,026	524	9,238,823
24	385	9,101,018	530	9,523,756
25	358	8,778,720	404	7,363,808
26	375	9,262,304	464	8,701,647
27	318	7,645,830	429	7,593,124
28	317	7,482,777	450	8,165,519
29	235	5,732,799	326	6,103,090
30	209	4,809,407	338	6,339,657
31	134	2,871,185	210	3,950,010
32	180	4,335,722	232	4,285,704
33	141	3,753,960	171	3,091,039
34	139	3,578,968	164	3,061,553
35	83	2,440,669	111	2,222,576

TABLE 2

THE NUMBER AND EARNABLE COMPENSATION
OF MEMBERS DISTRIBUTED BY
YEARS OF SERVICE AS OF JUNE 30, 1983

CONTINUED

YEARS OF SERVICE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
36	64\$	1,976,332	100\$	1,847,980
37	49	1,532,858	73	1,367,775
38	26	707,593	64	1,249,176
39	26	722,015	34	691,338
40	14	380,211	35	662,148
41	12	339,338	30	607,688
42	13	436,313	24	492,904
43	10	386,586	12	281,291
44	3	111,057	6	108,634
45	2	88,492	4	73,293
46	2	65,663	1	12,019
47			2	26,405
48	2	67,591	1	14,352
49	1	35,018	1	15,624
50			1	9,962
TOTAL	50,038\$	881,561,375	85,510\$	1,156,904,691

SUMMARY

EMPLOYEES	37,699\$	666,904,952	39,573\$	523,414,068
TEACHERS	12,339\$	214,656,423	45,937\$	633,490,623

SEE FOOTNOTE TABLE I

TABLE 3

THE DISTRIBUTION OF THE NUMBER AND ANNUAL
RETIREMENT ALLOWANCES OF RETIRED MEMBERS
AND BENEFICIARIES BY AGE AS OF JUNE 30, 1983

SERVICE RETIREMENTS AND BENEFICIARIES

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
6	1	\$ 2,779		
7			1	\$ 3,000
11	1	2,546		
12			1	191
13			1	3,744
14	1	7,043		
16			1	5,414
17			2	2,745
18	1	2,502	2	3,065
19	1	196	2	1,883
20			2	4,178
21			1	925
22	1	4,648		
23	1	691	1	450
24	1	749	2	11,711
25			1	1,063
26	5	18,847	1	2,370
27	1	4,035	2	1,848
28	3	8,496	6	20,258
29	2	1,134	3	6,978
30	1	5,302		
31	2	3,774	3	8,069
32	5	6,830	8	22,436
33			2	2,651
34	3	6,753	1	56
35	5	6,975	1	3,781
36	6	14,298	4	11,627
37	2	1,935	4	2,931
38	2	2,882	6	11,482
39	1	157	1	3,761
40	5	10,295	2	1,313
41	3	6,444	7	18,822
42	2	1,928	4	3,952
43	3	6,051	7	18,728
44	1	1,892	5	8,676
45	2	1,181	7	21,147
46	2	5,858	4	4,347
47	6	7,755	9	27,963
48	3	20,710	7	20,966
49	6	29,018	4	11,422
50	12	58,000	12	40,385
51	8	64,010	18	65,984
52	3	58,119	21	58,746
53	16	112,270	57	356,516
54	26	291,877	58	428,057

TABLE 3

THE DISTRIBUTION OF THE NUMBER AND ANNUAL
RETIREMENT ALLOWANCES OF RETIRED MEMBERS
AND BENEFICIARIES BY AGE AS OF JUNE 30, 1983

SERVICE RETIREMENTS AND BENEFICIARIES

CONTINUED

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
55	23	\$ 203,730	71	\$ 511,235
56	37	390,714	101	769,142
57	53	590,628	121	959,618
58	83	826,614	114	859,887
59	75	831,295	139	1,041,639
60	72	681,516	211	1,431,393
61	125	1,022,428	325	1,964,255
62	192	1,317,655	471	2,223,247
63	300	1,478,386	629	2,668,351
64	346	1,795,129	645	2,756,970
65	395	2,009,271	684	2,736,352
66	456	2,095,692	789	3,166,383
67	533	2,574,379	854	3,176,848
68	476	2,187,367	798	3,190,479
69	462	1,811,469	797	3,098,887
70	465	1,977,431	762	2,810,274
71	424	1,655,435	817	2,910,918
72	418	1,618,844	771	2,802,971
73	413	1,638,105	756	2,613,050
74	357	1,434,576	738	2,737,883
75	292	1,222,705	726	2,465,197
76	247	867,937	696	2,520,128
77	251	947,487	581	1,863,762
78	219	753,835	584	1,799,393
79	186	631,686	532	1,654,745
80	145	452,076	435	1,326,013
81	139	361,810	379	979,103
82	95	371,632	330	884,064
83	89	295,291	273	667,402
84	59	162,302	220	514,761
85	51	191,213	206	487,145
86	39	105,444	150	327,504
87	34	93,711	140	275,176
88	37	76,967	128	233,170
89	14	41,141	109	217,581

TABLE 3

THE DISTRIBUTION OF THE NUMBER AND ANNUAL
RETIREMENT ALLOWANCES OF RETIRED MEMBERS
AND BENEFICIARIES BY AGE AS OF JUNE 30, 1983

SERVICE RETIREMENTS AND BENEFICIARIES

CONTINUED

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
90	28	\$ 71,042	87	\$ 157,162
91	18	42,628	60	110,591
92	4	17,322	43	83,117
93	0	25,487	45	79,071
94	5	8,993	29	45,877
95	2	6,519	12	11,779
96	5	10,370	14	23,659
97	1	702	5	8,498
98	2	3,376	4	4,085
99			3	5,480
100	1	807	1	3,013
101			2	3,455
102			2	3,733
103			1	1,645
104			1	239
TOTAL	7,824	\$ 35,641,635	16,672	\$ 62,410,171

SUMMARY

LIFE ANNUITY	3,474	\$ 12,183,924	11,392	\$ 40,016,462
CASH REFUND	1,115	4,906,095	1,668	6,876,244
100% J+S	1,199	4,747,671	437	1,272,711
50% J+S	1,214	8,027,056	439	2,002,384
SOC. SEC. LEVELING	424	4,187,661	976	7,563,318
BENEFICIARIES	248	639,000	1,698	4,359,197
100% POP-UP	82	464,241	33	154,155
50% POP-UP	67	485,987	29	165,700

TABLE 4

THE DISTRIBUTION OF THE NUMBER AND ANNUAL
RETIREMENT ALLOWANCES OF RETIRED MEMBERS BY
AGE AS OF JUNE 30, 1983

DISABILITY RETIREMENTS

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
27	1	\$ 1,594	1	\$ 2,551
28	1	2,951	1	3,140
29	2	3,165	2	3,681
30	1	1,644	1	2,132
31	1	1,271	2	7,210
32	2	5,015	3	6,543
33	4	7,683	3	12,563
34	3	8,285	7	3,230
35	3	14,247	5	17,119
36	3	11,206	5	13,919
37	4	16,534	6	19,164
38	6	23,962	7	24,100
39	7	22,276	7	27,154
40	5	23,689	9	35,392
41	5	19,197	12	35,774
42	11	34,265	9	34,701
43	12	45,695	10	57,431
44	8	30,680	7	19,730
45	17	52,962	10	23,664
46	11	44,013	9	28,101
47	14	67,706	13	41,951
48	17	63,970	13	44,124
49	17	64,345	19	83,054
50	23	110,232	27	104,234
51	31	136,132	26	115,757
52	34	184,457	28	141,407
53	39	201,081	30	126,342
54	50	224,505	37	163,098
55	50	261,208	53	242,199
56	44	215,551	56	248,369
57	49	206,101	67	273,843
58	65	256,878	64	283,303
59	65	282,103	59	244,099
60	78	330,637	74	309,847
61	86	318,996	90	328,135
62	110	496,196	114	465,387
63	98	383,438	97	422,066
64	113	414,367	111	394,536
65	100	342,991	114	361,830
66	80	280,625	89	343,805

TABLE 4

THE DISTRIBUTION OF THE NUMBER AND ANNUAL
RETIREMENT ALLOWANCES OF RETIRED MEMBERS BY
AGE AS OF JUNE 30, 1983

DISABILITY RETIREMENTS

CONTINUED

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
67	87	\$ 293,164	86	\$ 285,793
68	55	174,245	71	255,559
69	54	144,322	65	204,131
70	49	158,886	47	146,601
71	29	67,306	43	109,795
72	15	39,272	27	72,997
73	15	38,902	24	54,163
74	3	14,035	17	39,929
75	5	7,327	9	12,860
76	5	8,671	9	14,629
77			7	7,146
78	5	6,825	7	8,314
79	1	554	3	3,216
80	2	3,815	3	5,905
81			5	5,134
82	2	3,259		
83			3	4,493
84			4	2,625
85	1	5,203	2	1,408
86	1	322	3	2,296
88	1	1,536	5	3,142
89			1	422
91			1	829
92	1	10,733	1	923
TOTAL	1,606	\$ 6,203,230	1,735	\$ 6,355,995

SUMMARY

LIFE ANNUITY	837	\$ 3,374,515	1,400	\$ 5,209,984
CASH REFUND	202	795,256	160	623,336
100% J+S	318	841,070	111	283,472
50% J+S	219	1,008,595	56	199,526
SOC. SEC. LEVELING			1	5,957
100% POP-UP	13	73,604	3	11,289
50% POP-UP	17	110,190	4	22,431