

SOUTH CAROLINA RETIREMENT SYSTEM

REPORT OF THE ACTUARY ON

THE THIRTY-THIRD VALUATION

PREPARED AS OF JUNE 30, 1984

BUCK  
CONSULTANTS

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

BUCK  
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Gentlemen:

We transmit herewith our report on the thirty-third actuarial valuation of the South Carolina Retirement System, prepared as of June 30, 1984.

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, 1984

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>6/30/84</u>	<u>6/30/83</u>
Number of active members:		
Men	51,093	50,038
Women	88,617	85,510
Total	139,710	135,548
Annual earnable compensation of active members during year:		
Men	\$ 918,725,667	\$ 881,561,375
Women	1,179,538,433	1,156,904,691
Total	\$ 2,098,264,100	\$ 2,038,466,066
Number of retired members and beneficiaries	29,402	27,837
Annual retirement allowances	\$ 122,284,319	\$ 110,611,031
Assets for valuation purposes	\$ 3,084,231,278	\$ 2,700,202,783
Normal contribution as per cent of compensation:		
Class One Service	2.32%	2.22%
Class Two Service:		
State	3.74	3.41
Others	3.19	3.02
Unfunded accrued liability (UAL)	\$ 241,369,533	\$ 388,143,764
Unfunded accrued liability contribution as per cent of compensation:		
Class One Service	.88%	.98%
Class Two Service:		
State	2.76	3.09
Others	2.46	2.63
Unfunded accrued liability liquidation period (years)	5	9
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% diverted from the regular funding to the post-retirement increase special fund established by legislation effective July 1, 1981. Remainder is additional contribution required of all employers.

2. Comments on the valuation results as of June 30, 1984 are given in Section IV and further discussion of the contribution levels is set out in Section V. There were no amendments made to the provisions of the Retirement System since the June 30, 1983 valuation that affected the valuation results.
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, 1984, 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, 1984 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, 1984 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, 1984.

TABLE I  
THE NUMBER AND EARNABLE COMPENSATION OF ACTIVE MEMBERS  
AS OF JUNE 30, 1984

GROUP	TOTAL		TEACHERS		EMPLOYEES	
	Number	Earnable Compensation	Number	Earnable Compensation	Number	Earnable Compensation
Men	51,093	\$ 918,725,667	12,470	\$ 219,144,512	38,623	\$ 699,581,155
Women	88,617	1,179,538,433	47,378	618,679,869	41,239	560,858,564
Total	139,710	\$2,098,264,100	59,848	\$ 837,824,381	79,862	\$1,260,439,719

NOTE: There are in addition 75,719 inactive members and 8,816 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, 1984.

TABLE II

THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF  
RETIRED MEMBERS AND BENEFICIARIES ON THE ROLL  
AS OF JUNE 30, 1984

GROUP	NUMBER	TOTAL ANNUAL RETIREMENT ALLOWANCES
Service Retirements		
Teachers:		
Men	2,455	\$ 13,640,294
Women	11,424	48,337,349
Employees:		
Men	5,679	26,774,168
Women	4,356	15,044,179
Total	23,914	\$ 103,795,990
Disability Retirements		
Teachers:		
Men	358	\$ 1,660,453
Women	1,044	4,045,522
Employees:		
Men	1,248	4,628,455
Women	743	2,554,210
Total	3,393	\$ 12,888,640
Beneficiaries of Deceased Retired Members and Active Members		
Men	271	\$ 741,720
Women	1,824	4,857,969
Total	2,095	\$ 5,599,689
Grand Total	29,402	\$ 122,284,319

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, 1984, these assets amounted to \$858,693,659.

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 \$2,225,537,619 as of June 30, 1984.

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, 1984. The following comments on the valuation are pertinent:

The schedule shows that the System has actuarial liabilities of \$5,722,179,833, of which \$1,000,569,553 is for the prospective benefits payable on account of present retired members and beneficiaries and \$4,721,610,280 is for the prospective benefits payable on account of present active and inactive members. Against these liabilities, the System has present assets of \$3,084,231,278 and anticipated future contributions by members of \$1,451,684,549, leaving a balance of \$1,186,264,006 to be provided by future contributions of the employers. Of this amount, \$944,894,473



represents the present value of normal contributions by the employers and the balance of \$241,369,533 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 2.32 per cent is attributable to the normal contribution and .88 per cent is attributable to the accrued liability contribution for the period July 1, 1984 to June 30, 1985.

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, 3.74 per cent and 3.19 per cent are attributable to normal contributions of the State and other employers, respectively. The accrued liability rates are therefore 2.76 per cent for the State and 2.46 per cent for other employers for the period July 1, 1984 to June 30, 1985.

On the basis of the above accrued liability contribution rates it is anticipated that the accrued liability of \$241,369,533 shown in the valuation balance sheet will be liquidated within a period of 5 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 \$28,803,234 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 established by legislation effective July 1, 1981. In addition, all employers are required by Law to make an additional contribution of .20 per cent of compensation to this fund which had assets in the amount of \$11,602,115 as of June 30, 1984. 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	2.32%	3.74%	3.19%
Accrued Liability	.88	2.76	2.46
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, 1984 are:

Actuarial present value of accrued  
benefits:

Vested benefits

Participants currently receiving payments	\$ 858,811,789
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Other participants	<u>675,368,639</u>
	\$ 1,534,180,428

Nonvested benefits	<u>179,170,254</u>
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Total	\$ 1,713,350,682
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The actuarial present value of vested and nonvested accrued benefits is based on an interest rate of 9-1/2%. 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, 1984

## (1) Actuarial Liabilities

Present value of prospective benefits payable  
in respect of:

(a) Present retired members and beneficiaries	\$ 1,000,569,553
(b) Present active and inactive members	<u>4,721,610,280</u>
(c) Total actuarial liabilities	\$ 5,722,179,833
(2) Assets of the System	<u>3,084,231,278</u>
(3) Unfunded Value of Prospective Benefits = (1)(c) - (2)	\$ 2,637,948,555
(4) Present Value of Future Contributions by Members	<u>1,451,684,549</u>
(5) Total Prospective Contributions by Employers = (3) - (4)	\$ 1,186,264,006
(6) Present Values of 1 Per Cent of Future Compensation	
(a) Class One Service	\$ 2,142,871
(b) Class Two Service: State	221,860,465
(c) Class Two Service: Others	34,534,443
(7) Present Value of Future Normal Contributions by Employers at	
(a) $2.32\% = (6)(a) \times 2.32$	\$ 4,971,461
(b) $3.74\% = (6)(b) \times 3.74$	829,758,139
(c) $3.19\% = (6)(c) \times 3.19$	<u>110,164,873</u>
(d) Total	\$ 944,894,473
(8) Present Value of Accrued Liability Contributions by Employers = (5) - (7)(d)	\$ 241,369,533
(9) Accrued Liability Rates (effective 7/1/84)	
(a) Class One Service	.88%
(b) Class Two Service: State	2.76
(c) Class Two Service: Others	2.46
(10) Accrued Liability Liquidation Period	5 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 Rates of</u>							
	<u>With- drawal</u>	<u>Death</u>	<u>Disa- bility</u>	<u>Service Retire- ment</u>	<u>With- drawal</u>	<u>Death</u>	<u>Disa- bility</u>	<u>Service Retire- ment</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 Retire- ment</u>	<u>Salary Increase</u>
	<u>Employees</u>				<u>Teachers and 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, 1984

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
16	4 \$	3,930	3 \$	1,916
17	8	21,604	5	10,744
18	29	118,286	15	92,834
19	194	1,289,927	115	753,388
20	332	2,376,860	262	1,851,400
21	415	3,210,798	418	3,198,626
22	602	5,050,592	706	6,083,475
23	808	7,775,795	1,404	14,045,184
24	935	9,807,038	1,851	19,580,231
25	1,111	12,384,988	2,270	25,215,533
26	1,184	13,909,681	2,472	28,730,088
27	1,274	15,815,866	2,772	32,790,981
28	1,427	18,367,444	2,915	36,690,562
29	1,445	19,373,340	3,022	38,257,533
30	1,526	21,700,437	3,260	42,694,868
31	1,582	23,624,386	3,272	43,314,520
32	1,678	26,455,976	3,404	46,272,137
33	1,661	27,286,408	3,344	46,539,889
34	1,733	29,836,635	3,277	45,811,630
35	1,816	33,096,875	3,299	46,441,907
36	1,745	32,905,920	3,163	44,805,818
37	1,897	37,093,156	3,462	48,731,025
38	1,692	34,084,256	3,016	42,586,943
39	1,372	28,233,379	2,403	33,971,146
40	1,342	28,001,261	2,394	33,439,384
41	1,338	28,943,657	2,403	33,820,336
42	1,231	26,524,010	2,283	31,684,657
43	1,157	25,037,009	2,000	28,374,949
44	1,095	24,517,475	1,909	26,746,019
45	1,052	22,649,647	1,845	25,368,443
46	1,085	24,309,090	1,760	24,195,057
47	991	20,205,320	1,676	23,045,662
48	1,014	21,822,111	1,586	21,802,534
49	1,009	20,982,956	1,695	23,242,112
50	1,041	22,300,817	1,624	22,186,035
51	1,031	21,577,796	1,525	21,420,014
52	1,104	22,855,550	1,599	21,920,820
53	892	19,360,751	1,478	20,922,399
54	1,004	20,282,173	1,413	19,818,931
55	908	19,272,404	1,402	19,212,093

TABLE 1  
THE NUMBER AND EARNABLE COMPENSATION  
OF MEMBERS DISTRIBUTED BY  
AGE AS OF JUNE 30, 1984

CONTINUED

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
56	919	\$ 18,235,395	1,424	\$ 19,365,880
57	866	17,218,149	1,424	19,905,448
58	804	16,418,176	1,201	16,327,533
59	822	15,879,437	1,207	16,650,776
60	759	15,428,405	1,118	15,459,767
61	722	14,291,757	857	11,672,597
62	669	13,506,076	775	10,605,278
63	513	10,965,562	537	7,100,002
64	371	7,621,880	472	6,403,090
65	250	5,243,315	316	4,044,854
66	174	3,385,818	170	2,034,576
67	105	2,207,557	118	1,267,904
68	99	1,820,351	96	1,074,662
69	83	1,676,075	58	666,331
70	56	1,044,454	47	542,373
71	40	473,930	42	424,651
72	32	414,232	19	157,044
73	14	176,325	6	54,206
74	7	47,280	4	41,674
75	6	38,293	3	51,324
76	3	7,920		
77	4	4,837		
78	4	25,957		
79	1	15,326		
80	3	48,698		
81	1	10,560	1	16,640
83	2	54,298		
TOTAL	51,093	\$ 918,725,667	88,617	\$1,179,538,433

SUMMARY

EMPLOYEES	38,623	\$ 699,581,155	41,239	\$ 560,858,564
TEACHERS	12,470	\$ 219,144,512	47,378	\$ 618,679,869

SEE FOOTNOTE TABLE I



TABLE 2  
THE NUMBER AND EARNABLE COMPENSATION  
OF MEMBERS DISTRIBUTED BY  
YEARS OF SERVICE AS OF JUNE 30, 1984

YEARS OF SERVICE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
0	2,530	\$ 25,866,478	3,294	\$ 32,276,189
1	5,459	61,414,701	8,633	83,659,265
2	3,828	51,343,888	6,556	73,605,291
3	3,897	57,272,071	6,810	79,195,507
4	3,371	51,917,948	6,333	73,844,178
5	3,524	56,449,592	6,797	80,842,997
6	2,953	49,977,238	6,046	76,476,018
7	2,444	43,304,860	4,975	64,715,143
8	2,042	37,323,048	4,250	56,506,751
9	1,928	38,402,602	3,993	53,798,742
10	2,283	45,272,406	4,560	65,330,434
11	2,137	44,718,988	3,757	55,848,174
12	1,826	39,785,098	3,227	49,590,056
13	1,557	35,696,832	2,809	43,720,700
14	1,347	30,308,789	2,398	37,982,189
15	1,234	27,965,611	2,094	34,054,799
16	986	23,024,325	1,692	27,766,425
17	875	20,904,539	1,374	22,439,521
18	796	19,537,807	1,276	21,495,666
19	666	16,277,846	951	16,921,963
20	565	14,071,710	861	15,374,806
21	534	13,535,319	682	12,585,974
22	461	11,547,147	605	11,082,893
23	414	10,380,177	548	10,270,567
24	423	10,562,893	528	9,761,350
25	388	9,627,175	466	8,850,747
26	361	9,506,175	402	7,813,213
27	317	8,406,106	443	8,621,971
28	329	8,502,585	432	8,243,036
29	268	6,950,259	366	7,020,879
30	222	5,846,340	314	6,454,330
31	214	5,699,267	226	4,532,688
32	154	4,053,034	173	3,535,050
33	160	4,195,181	177	3,556,418
34	128	3,565,865	119	2,291,770
35	110	3,022,560	106	2,141,091

TABLE 2  
THE NUMBER AND EARNABLE COMPENSATION  
OF MEMBERS DISTRIBUTED BY  
YEARS OF SERVICE AS OF JUNE 30, 1984

CONTINUED

YEARS OF SERVICE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
36	91	\$ 2,919,487	84	\$ 1,788,843
37	71	2,426,660	73	1,494,171
38	53	1,726,971	48	1,050,998
39	44	1,623,963	41	947,268
40	41	1,423,437	18	377,404
41	21	905,795	26	563,276
42	16	509,040	20	379,539
43	9	331,665	13	250,629
44	7	330,717	5	143,141
45	2	39,571	5	108,606
46	2	93,992	5	115,351
47	1	42,577	1	15,072
48	2	54,701	2	29,403
49	1	22,922	2	57,464
50	1	37,709	1	10,477
TOTAL	51,093	\$ 918,725,667	88,617	\$1,179,538,433
SUMMARY				
EMPLOYEES	38,623	\$ 699,581,155	41,239	\$ 560,858,564
TEACHERS	12,470	\$ 219,144,512	47,378	\$ 618,679,869

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, 1984

SERVICE RETIREMENTS AND BENEFICIARIES

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
13			1 \$	191
14			1	3,744
15	1 \$	7,043	1	14,678
17			1	5,414
18			2	2,745
19	1	2,502	2	3,065
20	2	753	2	1,883
21			2	4,178
22	1	5,425	1	925
23	1	4,648		
24	1	691	1	450
25	2	9,902	2	11,711
26			2	2,830
27	5	11,396	2	7,461
28	3	18,357	2	1,848
29	3	8,496	6	20,258
30	3	10,342	3	4,180
31	1	5,302	1	1,241
32	2	3,774	3	8,069
33	3	6,830	9	22,965
34			2	2,651
35	4	11,997	1	56
36	7	10,387	2	5,939
37	6	14,298	5	15,293
38	2	1,935	5	3,170
39	3	5,336	6	11,482
40	1	157	1	3,761
41	5	10,295	2	1,313
42	4	16,312	8	19,765
43	2	1,928	5	4,205
44	3	6,051	8	20,936
45	3	6,031	6	9,068
46	2	1,181	8	22,748
47	3	18,035	7	8,777
48	7	22,701	11	37,846
49	7	44,333	10	29,558
50	9	50,277	7	30,869
51	17	94,895	15	45,090
52	12	107,842	30	148,695
53	21	211,269	30	138,035
54	21	179,895	72	518,855

TABLE 3

THE DISTRIBUTION OF THE NUMBER AND ANNUAL  
RETIREMENT ALLOWANCES OF RETIRED MEMBERS  
AND BENEFICIARIES BY AGE AS OF JUNE 30, 1984

SERVICE RETIREMENTS AND BENEFICIARIES

CONTINUED

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
55	44	\$ 568,122	87	\$ 695,129
56	37	385,359	94	742,958
57	59	690,178	137	1,137,042
58	70	832,699	158	1,395,639
59	103	1,140,354	151	1,258,180
60	105	1,295,556	224	1,688,104
61	132	1,176,982	316	1,979,826
62	188	1,335,255	464	2,621,299
63	366	2,243,704	646	2,740,969
64	407	2,119,626	754	3,207,749
65	413	2,230,652	768	3,325,632
66	515	2,596,223	777	3,164,251
67	502	2,441,509	855	3,391,893
68	541	2,610,941	893	3,343,675
69	478	2,233,933	824	3,268,723
70	462	1,837,045	817	3,155,510
71	462	2,075,776	773	2,818,748
72	417	1,669,891	819	2,906,341
73	406	1,591,420	769	2,788,204
74	396	1,551,084	749	2,573,185
75	337	1,330,246	723	2,687,514
76	278	1,194,638	715	2,468,561
77	237	842,804	679	2,466,973
78	223	863,346	569	1,829,984
79	201	710,058	562	1,734,254
80	173	576,189	515	1,614,536
81	130	403,546	414	1,260,298
82	130	339,001	366	942,666
83	86	349,681	323	859,378
84	80	273,486	256	634,871
85	47	129,614	212	495,835
86	44	173,331	188	447,321
87	36	100,725	135	296,639
88	32	88,678	127	263,604
89	29	66,008	114	207,849

TABLE 3

THE DISTRIBUTION OF THE NUMBER AND ANNUAL  
RETIREMENT ALLOWANCES OF RETIRED MEMBERS  
AND BENEFICIARIES BY AGE AS OF JUNE 30, 1984

SERVICE RETIREMENTS AND BENEFICIARIES

CONTINUED

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
90	11 \$	31,634	86 \$	176,320
91	20	46,457	74	130,833
92	16	39,634	50	93,863
93	4	17,322	38	72,323
94	8	23,645	37	66,027
95	5	8,993	24	35,805
96	1	1,569	9	7,067
97	3	2,497	12	19,993
98			5	8,498
99	2	3,376	3	3,812
100			3	5,480
102			2	3,455
103			2	3,733
107	1	2,779		
108			1	3,000
TOTAL	8,405 \$	41,156,182	17,604 \$	68,239,497

SUMMARY

LIFE ANNUITY	3,665 \$	13,456,913	11,933 \$	42,983,708
CASH REFUND	1,085	4,921,410	1,654	6,873,666
100% J+S	1,280	5,551,951	445	1,296,466
50% J+S	1,228	8,433,878	444	2,070,912
SOC. SEC. LEVELING	545	5,596,307	1,176	9,425,125
BENEFICIARIES	271	741,720	1,824	4,857,969
100% POP-UP	174	1,054,681	61	306,790
50% POP-UP	157	1,399,322	67	424,861

TABLE 4

THE DISTRIBUTION OF THE NUMBER AND ANNUAL  
RETIREMENT ALLOWANCES OF RETIRED MEMBERS BY  
AGE AS OF JUNE 30, 1984

## DISABILITY RETIREMENTS

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
26			1 \$	1,512
28	1 \$	1,594	1	2,551
29	1	2,951	1	3,140
30	3	4,681	4	9,273
31	1	1,644	1	2,132
32	1	1,271	2	7,210
33	2	5,015	3	6,543
34	5	9,892	3	7,434
35	3	8,285	2	3,230
36	4	11,281	7	22,348
37	3	11,206	7	21,070
38	5	13,891	6	19,164
39	6	23,962	7	24,100
40	9	28,049	8	33,938
41	5	23,689	12	35,894
42	4	17,329	14	44,569
43	12	40,737	10	39,944
44	14	51,218	9	33,240
45	8	30,850	9	39,517
46	20	77,130	12	27,199
47	12	66,728	12	38,454
48	15	59,610	14	53,742
49	23	88,066	19	60,014
50	17	67,317	19	82,179
51	24	126,006	29	106,655
52	32	128,935	27	111,623
53	39	198,116	27	136,471
54	42	213,663	36	159,174
55	51	219,306	38	166,643
56	54	274,471	56	246,356
57	48	233,264	63	304,344
58	54	241,637	73	313,800
59	68	296,992	75	322,333
60	66	292,759	66	287,539
61	79	351,979	85	341,178
62	90	327,364	95	342,273
63	116	504,659	117	463,116
64	91	367,236	95	422,522
65	108	379,770	107	383,357
66	92	313,071	111	351,448

TABLE 4

THE DISTRIBUTION OF THE NUMBER AND ANNUAL  
RETIREMENT ALLOWANCES OF RETIRED MEMBERS BY  
AGE AS OF JUNE 30, 1984

## DISABILITY RETIREMENTS

CONTINUED

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
67	73	\$ 265,159	87	\$ 340,729
68	80	271,432	79	254,867
69	51	164,167	68	248,954
70	47	131,830	64	203,345
71	48	157,835	44	142,209
72	25	54,213	40	103,229
73	14	37,193	27	72,997
74	12	32,827	23	52,006
75	7	13,489	17	38,929
76	5	7,327	8	10,076
77	5	8,671	8	14,017
78			7	7,146
79	4	5,739	7	8,314
80	1	554	3	3,216
81	1	2,117	3	6,410
82			5	5,134
83	2	3,259		
84			2	2,584
85			3	1,672
86	1	5,203	1	754
87			1	1,021
89	1	1,536	5	3,142
92			1	829
93	1	10,733	1	923
TOTAL	1,606	\$ 6,288,908	1,787	\$ 6,599,732

## SUMMARY

LIFE ANNUITY	846	\$ 3,424,764	1,446	\$ 5,405,889
CASH REFUND	192	761,850	164	649,135
100% J+S	310	827,236	111	294,025
50% J+S	211	1,011,896	55	193,742
SOC. SEC. LEVELING			1	5,957
100% POP-UP	22	93,348	3	13,902
50% POP-UP	25	169,814	7	37,082