SOUTH CAROLINA RETIREMENT SYSTEM
REPORT OF THE ACTUARY ON
THE FORTIETH VALUATION
PREPARED AS OF JULY 1, 1991



February 25, 1992

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

Gentlemen:

We transmit herewith our report on the fortieth actuarial valuation of the South Carolina Retirement System, prepared as of July 1, 1991.

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 Two employers the total contribution rates should be 7.70 per cent of earnable compensation by the State and 6.85 per cent of earnable compensation by other employers.

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

Respectfully submitted,

(Signed) DONALD M. OVERHOLSER

Donald M. Overholser Consulting Actuary

TABLE OF CONTENTS

<u>Section</u>	<u>ltem</u>	<u>Page No.</u>
1	Summary of Principal Results	1
II	Membership Data	2
Ш	Assets	4
IV	Comments on the Valuation	4
٧	Contributions Payable Under the System	5
VI	Valuation Basis	6
VII	Accounting Information .	6
Schedule		
Α	Results of the Valuation as of July 1, 1991	9
В	Outline of Actuarial Assumptions and Methods	10
C	Summary of Main System Provisions as Interpreted for Valuation Purposes	12
D	Membership Data Tabulations	17

REPORT ON AN ACTUARIAL VALUATION OF THE SOUTH CAROLINA RETIREMENT SYSTEM PREPARED AS OF JULY 1, 1991

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 (all dollar amounts are in thousands):

	•	······································
<u>Valuation Date</u>	7/1/91	7/1/90
Number of active members Annual earnable compensation	165,751 \$ 3,664,611	162,176 \$ 3,484,578
Number of retired members and beneficiaries Annual allowances	42,067 \$ 358,141	40,176 \$ 322,108
Assets for valuation purposes	\$ 7,612,942	\$ 6,813,695
Unfunded accrued liability (UAL) UAL liquidation period (years)	\$ 2,262,865 30	\$ 2,082,758 27
Normal contribution as per cent of compensation	3.93%	3.81%
UAL contribution as per cent of compensation: State Others	3.62% 2.77	3.74% 2.89
Pre-retirement death benefit contribution as per cent of compensation	.15%	.15%
Total contributions as per cent of compensation:* State Others	7.70% 6.85	7.70% 6.85

^{*}Special rates for Class 1 members

2. Comments on the valuation results as of July 1, 1991 are given in Section IV and further discussion of the contribution levels is set out in Section V. The System was amended since the previous valuation to allow service credit for up to ninety days of unused sick leave.

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

- Data needed with respect to each active member, retired member and beneficiary of the System and also with respect to terminations during the valuation year were furnished to the actuary by the Retirement System office on a magnetic tape.
- 2. From the data, tabulations were made showing as of July 1, 1991 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 as of July 1, 1991 classified by age. These tabulations are presented in Schedule D.
- 3. The following table shows the number and annual earnable compensation of active members of the Retirement System as of July 1, 1991.

TABLE I

THE NUMBER AND EARNABLE COMPENSATION OF ACTIVE MEMBERS
AS OF JULY 1, 1991

GROUP	MEN	WOMEN	TOTAL
EMPLOYEES Number Earnable Compensation (\$1,000's)	41,967	53,110	95,077
	\$ 1,054,466	\$ 1,046,410	\$ 2,100,876
TEACHERS Number Earnable Compensation (\$1,000's)	13,158	57,516	70,674
	\$ 352,789	\$ 1,210,946	\$ 1,563,735
TOTAL Number Earnable Compensation (\$1,000's)	55,125 \$ 1,407,255	110,626 \$ 2,257,356	165,751 \$ 3,664,611

NOTE: There are in addition 109,945 inactive members. 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 July 1, 1991.

TABLE II

THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF RETIRED MEMBERS AND BENEFICIARIES ON THE ROLL AS OF JULY 1, 1991

	GROUP	NUMBER	TOTAL ANNUAL RETIREMENT ALLOWANCES (\$1,000'S)			
		Service Ret	irements			
Tea	oloyees: Men Women chers: Men Women	8,582 7,129 3,581 15,033 34,325	\$ 87,483 49,466 43,533 			
	Disability Retirements					
Teac	loyees: Men Vomen hers: Men Vomen Total	1,493 1,175 458 1,291 4,417	\$ 9,978 7,335 3,823 9,003 \$ 30,139			
<u>Bene</u>	Beneficiaries of Deceased Retired Members and Active Members					
Men Wome To	en otal	493 <u>2,832</u> <u>3,325</u>	\$ 2,560 16,389 \$ 18,949			
Gi	and Total	<u>42,067</u>	<u>\$ 358,141</u>			

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.

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 July 1, 1991, these assets amounted to \$2,044,630,000.

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 \$5,568,312,000 as of July 1, 1991.

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 July 1, 1991. The following comments on the valuation are pertinent (all dollar amounts are in thousands):

The schedule shows that the System has actuarial liabilities of \$13,936,250, of which \$4,056,100 is for the prospective benefits payable on account of present retired members and beneficiaries and \$9,880,150 is for the prospective benefits payable on account of present active and inactive members. These liabilities include the reserves for all current and future cost-of-living increases to current retired members and beneficiaries and active members currently eligible for service retirement. Against these liabilities, the System has present assets of \$7,612,942 and anticipated future contributions by members of \$2,453,004 leaving a balance of \$3,870,304 to be provided by future contributions of the employers. Of this amount, \$1,607,439 represents the present value of normal contributions by the employers and the balance of \$2,262,865 represents the present value of unfunded 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 unfunded 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:

For Class One employers, the total employer contribution rate should be 4.25 per cent of earnable compensation, of which 2.79 per cent is attributable to the normal contribuiton and 1.46 per cent is attributable to the unfunded accrued liability contribution for the period July 1, 1991 to June 30, 1992.

For Class Two employers, the total contribution rate should be 7.55 per cent payable by the State and 6.70 per cent by other employers. Of the total rates, 3.93 per cent is attributable to normal contributions of the State and other employers. The unfunded accrued liability rates are therefore 3.62 per cent for the State and 2.77 per cent for other employers for the period July 1, 1991 to June 30, 1992.

On the basis of the above unfunded accrued liability contribution rates and assuming that active payroll will increase by 4% each year, it is anticipated that the unfunded accrued liability of \$2,262,865 shown in the valuation balance sheet will be liquidated within a period of approximately 30 years from the valuation date.

We recommend that the rate for employers participating in the Pre-retirement Death Benefit Program remain at .15 per cent of earnable compensation in addition to the appropriate rate above.

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	61 4 66	CLASS TWO		
TATES OF CONTRIBUTION	CLASS ONE	STATE	OTHERS	
Normal Unfunded Accrued Liability Pre-retirement Death Benefit Total	2.79% 1.46 <u>15</u> 4.40%	3.93% 3.62 <u>.15</u> 7.70%	3.93% 2.77 15 6.85%	

SECTION VI - VALUATION BASIS

The valuation of the Retirement System was made on the basis of the rates of separation and mortality tables adopted by the Board on December 14, 1989 and a salary scale and 8% interest rate adopted by the Board on July 18, 1989. An outline of the actuarial assumptions and methods employed is presented in Schedule B.

SECTION VII - ACCOUNTING INFORMATION

1. Governmental Accounting Standards Board Statement No. 5 sets forth certain items of information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

NUMBER OF ACTIVE AND RETIRED MEMBERS
AS OF JULY 1, 1991

GROUP	NUMBER
Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving benefits	152,012
Active Members: Vested Non-vested	100,905 64,846
Total Actives	165,751

2. Another such item is the pension benefit obligation, a standardized measure of the System's liabilities. It is the amount owed for benefits allocated to employee service before the balance sheet date, when total projected benefits (including the effects of projected salary increases) are allocated equally over all years of employee service before and after the balance sheet date. The pension benefit obligation, prepared in accordance with Governmental Accounting Standards Board Statement No. 5, and a comparison with net assets available for benefits as of July 1, 1991 are presented below. The amounts

\$ 2,983,329

shown reflect post-retirement increases in allowances already granted and at 4 per cent per year in the future for all retired and active members.

Pension Benefit Obligation (in \$ thousand)

•	Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving benefits	\$ 4,377,804
•	Current employees: Accumulated contributions Employer-financed vested Employer-financed nonvested	1,883,778 884,342 <u>3,450,347</u>
	Total Pension Benefit Obligation	\$ 10,596,271
•	Net assets available for benefits	\$ 7,612,942

3. The following first six years of the ten-year historical trend information, prepared in accordance with Governmental Accounting Standards Board Statement No. 5, provides information on progress made in accumulating sufficient assets to pay benefits when due. A purpose of the chart is to establish a consistent method for analyzing and making comparisons among different public retirement systems.

Unfunded Pension Benefit Obligation

Required Supplementary Information Analysis of Funding Progress (in \$ million)

Net Assets vailable	Danalaa	Percent-	Unfunded Pension		Unfunded PBO as %
	Deseilen	Percent-	Donoion		
vailable	Danalas		rension		of `
	Pension	age	Benefit	Annual	Covered
for	Benefit	Funded	Obligation	Covered	Payroll
<u>Benefits</u>	<u>Obligation</u>	$(1) \div (2)$	<u>(2) - (1)</u>	<u>Payroll</u>	$(4) \div (5)$
	\$5,747.5	73.1%	\$1,545.1	\$2,634.4	58.7%
805.4	6,447.5	74.5	1,642.1	2,796.5	58.7
413.7	7,377.8	73.4	1,964.1	3,023.4	65.0
068.6	8,646.1	70.2	2,577.5	3,305.4	78.0
813.7	9,496.7	71.7	2,683.0	3,484.6	77.0
612.9	10,596.3	71.8	2,983.4	3,664.6	81.4
	enefits 202.4 805.4 413.7 068.6 813.7	denefits Obligation 202.4 \$5,747.5 805.4 6,447.5 413.7 7,377.8 068.6 8,646.1 813.7 9,496.7	denefits Obligation (1) ÷ (2) 202.4 \$5,747.5 73.1% 805.4 6,447.5 74.5 413.7 7,377.8 73.4 068.6 8,646.1 70.2 813.7 9,496.7 71.7	denefits Obligation (1) ÷ (2) (2) - (1) 202.4 \$5,747.5 73.1% \$1,545.1 805.4 6,447.5 74.5 1,642.1 413.7 7,377.8 73.4 1,964.1 068.6 8,646.1 70.2 2,577.5 813.7 9,496.7 71.7 2,683.0	denefits Obligation (1) ÷ (2) (2) - (1) Payroll 202.4 \$5,747.5 73.1% \$1,545.1 \$2,634.4 805.4 6,447.5 74.5 1,642.1 2,796.5 413.7 7,377.8 73.4 1,964.1 3,023.4 068.6 8,646.1 70.2 2,577.5 3,305.4 813.7 9,496.7 71.7 2,683.0 3,484.6

Analysis of the dollar amounts of net assets available for benefits, pension benefit obligation, and unfunded pension benefit obligation in isolation can be misleading. Expressing the net assets available for benefits as a percentage of the pension benefit obligation provides one indication of the Retirement System's funding status on a going-concern basis. Analysis of this percentage over time indicates whether the System is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the Retirement System.

SCHEDULE A

RESULTS OF THE VALUATION AS OF JULY 1, 1991 (All dollar amounts are in thousands)

(1)) Actuarial liabilities					
	Present value of prospective benefits payable in respect of:					
	(a) Present retired members and beneficiaries	\$ 4,056,100				
	(b) Present active and inactive members	9,880,150				
	(c) Total actuarial liabilities	\$ 13,936,250				
(2)	Assets of the System	7,612,942				
(3)	Present value of future contributions = (1)(c) - (2)	\$ 6,323,308				
(4)	Present value of future contributions by members	2,453,004				
(5)	Present value of future contributions by employers = (3) - (4)	\$ 3,870,304				
(6)	Present value of future normal contributions by employers	\$ 1,607,439				
(7)	Present value of unfunded accrued liability contributions by employers = (5) - (6)	\$ 2,262,865				
(8)	Unfunded accrued liability rates					
	(a) Class One Service (b) Class Two Service: State (c) Class Two Service: Others	1.46% 3.62 2.77				
(9)	Unfunded accrued liability liquidation period	30 years				
(10)	Pre-retirement death benefit contribution rate					

SCHEDULE B

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

INTEREST RATE: 8% 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:

				Annual	Rates of			
<u>Age</u>	With- <u>drawa</u>		Dis- th abilit		- With-	<u>Death</u>	Dis- ability	Service Retire- _ment*
		Men	Teachers			Women	Teachers	
20	11.119	6 <u>.</u> 049	% .01%	6	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	5.00%	1.74	.20	.20	5.00%
55	2.03	.50	.34	5.00	1.18	.29	.35	5.00
60		.70	.59	10.00		.45	.61	15.00
64		.92	.94	20.00		.66	.82	20.00
<u>Age</u>	Withd		<u>Death</u> Employees	Disability	Service Retirement*		alary Inco	rease Imployees
	<u>Men</u>	<u>Women</u>						
20	13.94%	12.55%	.07%	.04%			11.819	%
25	12.46	11.21	.09	.04			10.90	, o
30	9.78	8.80	.11	.06			9.50	
35	7.38	6.64	.14	.08			7.81	
40	5.57	5.01	.18	.10	•		7.00	• .
45	4.27	3.84	.28	.15			6.60	
50	3.18	2.86	.46	.25	5.00%		6.30	
55	2.14	1.93	.75	.40	5.00		6.10	
60			1.08	.61	10.00		5.90	
64			1.36	.85	20.00		5.80	

^{*}Plus 0.15 in year when first eligible for unreduced early retirement.

DEATHS AFTER RETIREMENT: 1971 Group Annuity Mortality Tables, rated back one year, for service retirement and dependent beneficiaries. 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 openend 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.

COST-OF-LIVING INCREASES: For funding purposes, 4% per year for current retirees and active members eligible to retire; for GASB, 4% per year after assumed retirement for all members.

SCHEDULE C

SUMMARY OF MAIN SYSTEM PROVISIONS AS INTERPRETED FOR VALUATION PURPOSES

BACKGROUND

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 twelve consecutive quarters 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 Retirement

A retirement allowance is payable upon the request of any teacher or employee who has met one of the following conditions:

- a) rendered 30 or more years of creditable service,
- b) attained age 60.
- c) attained age 55 and rendered 25 or more years of creditable service.

Amount of Allowance

A Class One member receives a retirement allowance equal to 1.45% of average final compensation, multiplied by the number of years of his creditable service.

A Class Two member receives a retirement allowance equal to 1.82% of average final compensation, multiplied by the number of years of his creditable service.

If a member retiring under condition (b) above has not attained age 65 or completed 30 years of creditable service at the time of retirement, his allowance is reduced 5/12 of 1% for each month by which his age at retirement is less than age 65.

If a member retiring under condition (c) above has not completed 30 years of service at the time of retirement, his allowance is reduced by 4/12 of 1% for each month of service credit less than 30 years.

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.

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.

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 attained age 65 or 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, an allowance for life in the same amount as if the member had retired at the time of his death and had named the person as beneficiary under Option 2. For purposes of the benefit calculation, a member under age 60 with less than 30 years' credit is assumed to be 60 years of age.

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 the following July 1 is to be increased by 4%, provided such increase in allowance

BUCS CONSULTANTS will not result in an increase in the employer contribution rate. Any increase in allowance granted hereunder through July 1, 1980 is permanent, irrespective of any subsequent decrease in the Consumer Price Index, and is included in determining any subsequent increase. No increase will be granted on a service retirement allowance until the second July 1st after the member attains age 60 or would have completed 30 years of creditable service.

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

Class One members contribute at the rate of 5% of earnable compensation, and Class Two members contribute at the rate of 6% of earnable compensation.

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.

SCHEDULE D

TABLE 1

THE NUMBER AND EARNABLE COMPENSATION OF ACTIVE MEMBERS DISTRIBUTED BY AGE AS OF JULY 1, 1991

		MEN		WOMEN
AGE	NUMBER	AMOUNT	NUMBER	AMOUNT
16 17 18 19 20 21 22 23 24 25 27 28 29 30 31 32 33 34 35 36 37 38 39 40	6 9 23 115 256 406 497 638 789 902 1,037 1,309 1,300 1,331 1,398 1,427 1,518 1,653 1,653 1,714 1,777 1,795	\$ 28,668 35,274 104,526 1,007,036 2,631,364 4,459,088 6,161,809 8,900,723 11,669,281 14,239,628 17,254,631 21,330,961 23,935,923 24,507,894 25,416,265 28,251,192 29,379,567 33,032,263 34,747,640 36,953,515 36,724,897 39,437,454 42,916,375 46,070,111 47,926,730	4 8 25 77 202 377 656 1,258 1,771 2,014 2,246 2,437 2,682 2,771 2,955 2,914 3,035 3,117 3,534 3,652 3,842 4,083 4,088 4,244 4,203	\$ 10,847 46,945 104,298 569,989 1,848,648 3,951,359 7,580,406 19,414,817 28,676,633 33,631,671 38,753,436 43,242,676 48,940,128 51,297,252 55,193,880 55,117,160 57,651,270 60,558,074 67,914,699 73,118,194 78,749,715 84,178,004 85,344,552 92,345,052 91,957,658
41	1,813	49,623,365	4,186	93,446,290
42	1,935	54,753,398	4,117	92,495,485
43	1,902	54,878,354	4,028	89,734,700
44	2,037	60,688,578	4,342	99,107,491
45	1,843	56,383,187	3,738	84,107,212
46	1,503	45,270,110	2,998	66,714,732
47	1,470	45,020,838	2,976	66,235,737
48	1,417	45,294,830	2,875	63,901,559
49	1,359	42,146,539	2,694	59,403,599
50	1,202	38,055,177	2,376	52,961,436
51	1,182	37,917,029	2,137	47,144,980

TABLE 1

THE NUMBER AND EARNABLE COMPENSATION OF ACTIVE MEMBERS DISTRIBUTED BY AGE AS OF JULY 1, 1991

CONTINUED

		MEN		WOMEN
AGE	NUMBER	AMOUNT	NUMBER	AMOUNT
52 53 54 55 56 57 58 59 61 62 63 64 66 67 68 69 71 72 73 74 75 77 78 81 83 84 86	1,080 1,123 959 976 950 927 902 874 713 719 578 383 340 261 108 100 80 56 41 36 23 15 12 6 5	\$ 33,267,300 35,465,355 28,680,357 29,025,980 28,385,219 28,428,512 25,981,035 24,356,042 21,076,887 20,338,908 17,014,929 11,060,037 9,501,217 7,814,967 4,997,637 3,843,024 2,527,835 2,333,622 2,354,055 1,325,129 768,522 723,775 336,952 210,948 95,047 64,169 79,208 29,071 6,576 145 6,400 2,129	1,993 1,874 1,747 1,608 1,571 1,448 1,321 1,367 1,151 937 740 593 515 304 204 167 113 95 71 49 30 36 13 11 2 3	\$ 43,404,334 40,418,693 36,947,330 33,045,068 31,752,600 29,093,012 26,437,571 26,820,705 22,510,870 17,418,612 14,355,937 11,156,970 10,149,172 5,650,121 3,602,649 3,013,849 1,820,019 1,467,864 851,671 832,764 335,311 485,290 168,564 125,473 22,310 15,826 3,118
TOTAL	55,125	\$1,407,255,209	110,626	\$2,257,356,287
SUMMARY				
EMPLOYEES TEACHERS	41,967 13,158	\$1,054,466,455 \$ 352,788,754		\$1,046,410,465 \$1,210,945,822

TABLE 2

THE NUMBER AND EARNABLE COMPENSATION OF MEMBERS DISTRIBUTED BY YEARS OF CREDITED SERVICE AS OF JULY 1, 1991

YEARS OF	MEN		WOMEN		
SERVICE	NUMBER	AMOUNT	NUMBER	AMOUNT	
0	2,470	\$ 22,744,406	4,170	\$ 37,895,375	
1	6,402	109,871,849	12,924	207,081,541	
2	4,844	89,527,640	10,096	166,284,849	
2 3 4	3,958	79,736,374	8,456	144,915,511	
4	3,228	69,543,040	6,414	116,897,360	
5 6	2,996	71,578,239	5,816	110,934,428	
6	2,744	66,314,381	5,640	109,977,652	
7	2,527	63,576,346	5,589	111,840,216	
8	1,918	48,086,037	3,721	77,536,210	
9	1,498	39,817,284	3,253	70,256,705	
10	1,696	46,282,245	3,498	76,993,903	
11	1,664	46,853,571	3,662	80,117,469	
12	1,876	52,108,115	4,196	91,006,397	
13	1,695	49,598,087	3,850	87,850,219	
14	1,461	43,550,939	3,323	77,050,333	
15	1,339	40,482,865	2,997	71,325,669	
16	1,185	39,022,825	2,892	70,842,310	
17	1,464	47,840,165	3,187	80,516,288	
18	1,428	48,400,813	2,805	72,174,954	
19	1,282	45,698,799	2,456	65,390,331	
20	1,080	39,890,326	2,121	56,501,290	
21	957	34,826,862	1,796	48,580,035	
22	867	31,425,624	1,497	41,627,702	
23	711	26,439,601	1,229	34,093,981	
24	598	22,334,573	1,011	28,164,878	
25	564	21,489,760	895	25,222,736	
26	490	18,979,315	654	19,740,170	
27	376	14,916,673	580	17,675,322	
28	356	14,694,651	482	14,667,133	
29	301	11,708,262	385	11,653,207	
30	243	10,318,636	314	9,943,172	
31	192	7,724,205	154	4,657,978	
32	160	6,808,411	133	4,152,824	
33	130	5,758,826	76	2,370,302	
34	94	4,161,373	73	2,360,830	
35	79	3,591,734	83	2,787,566	

TABLE 2

THE NUMBER AND EARNABLE COMPENSATION OF MEMBERS DISTRIBUTED BY YEARS OF CREDITED SERVICE AS OF JULY 1, 1991

CONTINUED

YEARS OF		MEN		WOMEN
SERVICE	NUMBER	AMOUNT	NUMBER	AMOUNT
36	62		43	\$ 1,239,988
37	46	1,927,306	36	1,257,320
38	41	1,941,127	29	840,399
39	27	1,069,572	21	652,499
40	26	1,170,275	27	794, 192
41	10	485,761	13	445,873
42	14	588,153		300,151
43	6	347,163	9 7 5 4	305,475
44	6 5 5 1 1 1 2	297,185	5	172,110
45	5	213,950	4	124,722
46	5	227,396		•
47	1	46,084		
48	1	111,108	1	47,335
49	1	67,832	1 2	59,648
50	2	154,306		,
53		•	1	29,729
TOTAL	55,125	\$1,407,255,209	110,626	\$2,257,356,287
SUMMARY				
EMPLOYEES	41,967	\$1,054,466,455	53,110	\$1,046,410,465
TEACHERS		\$ 352,788,754	57,516	\$1,210,945,822

SEE FOOTNOTE TABLE I

TABLE 3

THE DISTRIBUTION OF THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF RETIRED MEMBERS AND BENEFICIARIES BY AGE AS OF JULY 1, 1991

SERVICE RETIREMENTS AND BENEFICIARIES

	M	MEN		WOMEN	
AGE	NUMBER	AMOUNT	NUMBER	AMOUNT	
9			1 \$	510	
10	2 6	12 014	1	963	
11 12	2 \$	12,914	3	7,945	
13	1	4,627	1	14,342	
14	1 2 1	7,906	•	14,042	
15	ī	2,753	1	5,025	
16	1	2,623		16,160	
18		•	3 1	4,567	
19			1	6,287	
20	1	1,844	4	15,055	
21	2	10,624	4	30,504	
22 23	4 3	20,148	5	28,747	
23 24	3 4	16,273 31,428	1	33,468 1,084	
25	7	31,420	ភ្នំ	13,783	
26	3	9,595	6 1 5 3 2 6	26,732	
27	4	9,169	3	19,181	
28	2 3 2 3	14,054	2	12,430	
29	3	9,431		30,491	
30	2	12,215	4	6,364	
31	3	17,701	2	6,995	
32	4	10,579	2 5 4	10,539	
33 34	7	41,863		11,938	
3 4 35	5 5 4	24,874 40,234	5 8	28,424 32,353	
36	4	25,620	7	36,786	
37	7	33,548	4	29,961	
38	6	31,174	10	23,705	
39	6	44,572	12	70,931	
40	6	29,375	17	74,968	
41	<u>6</u>	18,719	9	43,497	
42	5	28,318	5	15,844	
43	14	51,811	12	66,612	
44 45	10	59,457	15 22	91,914	
45 46	8 5	52,027 20,886	16	94,572	
47	<u>5</u> 3	16,236	15	101,985 118,082	
48	12	78,270	18	82,092	
49	15	87,621	24	181,879	
				-	

TABLE 3

THE DISTRIBUTION OF THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF RETIRED MEMBERS AND BENEFICIARIES BY AGE AS OF JULY 1, 1991

SERVICE RETIREMENTS AND BENEFICIARIES

CONTINUED

	MEN		WOMEN	
AGE	NUMBER	AMOUNT	NUMBER	AMOUNT
50 51 52 53 55 55 56 57 58 59 61 62 63 64 66 67 71 72 73 74 75 77 78	12 \$ 34 38 60 79 93 1143 159 2178 257 3201 564 709 665 694 689 660 533 564 478 439 384 363	170,420 561,088 613,436 1,220,631 1,444,622 1,831,678 2,246,539 2,929,050 3,304,786 4,597,094 3,905,818 4,261,845 5,118,135 5,559,715 5,625,076 6,331,726 6,975,171 7,617,666 7,012,996 6,895,473 6,895,473 6,864,753	NUMBER 32 \$ 36 46 84 92 112 205 190 244 295 328 516 653 836 985 1,027 1,134 1,203 1,110 1,224 1,150 1,175 1,063 923 900 946 814 797 734	AMOUNT 273,105 352,850 595,938 1,066,003 1,409,342 1,649,941 3,389,096 3,183,165 3,961,145 4,864,641 5,130,923 6,639,418 7,015,540 6,838,371 8,103,769 8,382,965 8,940,111 8,807,161 8,161,578 8,921,235 7,829,391 8,163,034 7,516,816 6,156,318 5,938,158 5,910,659 5,512,975 5,421,797 4,721,608
79	316	2,230,427	752	4,899,483
80	287	2,084,781	681	4,427,512
81	242	1,790,115	640	3,967,205
82	218	1,635,240	590	4,200,226
83	182	1,520,414	581	3,813,354
84	133	983,994	495	3,487,520
85	134	1,012,117	394	2,669,680
86	90	690,481	351	2,335,497
87	87	632,592	302	2,126,218
88	57	401,718	241	1,526,909
89	49	324,707	209	1,151,261

TABLE 3 THE DISTRIBUTION OF THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF RETIRED MEMBERS AND BENEFICIARIES BY AGE AS OF JULY 1, 1991

SERVICE RETIREMENTS AND BENEFICIARIES

CONTINUED

	MEN		, WOMEN	
AGE	NUMBER	AMOUNT	NUMBER	AMOUNT
90	31 \$	224,905	159	
91	30	206,284	123	686,145
92	15	79,645	88	411,167
93	12	76,959	83	480,238
94	10	58,556	47	246,234
95	9	41,884	33	186,742
96	5	32,737	34	199,874
97	2	19,862	25	128,086
98	3	18,975	14	70,530
99	5 2 3 1 3	6,369	12	71,266
100	3	6,576	7	49,598
101			6	34,985
102	1	6,145	2 3 1	12,067
103			3	17,385
105			1	6,276
TOTAL	12,656 \$13	3,576,416	24,994	\$194,426,012
SUMMARY				
LIFE ANNUITY	5,124 \$ 4		16,194	\$114,194,596
CASH REFUND	990	9,569,011	1,479	12,094,912
100% J&S		7,278,489	483	
50% J&S	1,351	19,463,983	380	
SEC. LEVELING		25,902,639	2,974	38,972,614
DENCETATABLES	100	2 560 363	2 022	16 200 671

2,560,362

7,662,725 10,615,103

493

772

710

SOC. SEC. LEVELING

BENEFICIARIES

100% POP-UP

50% POP-UP

2,832

273

379

16,388,571

2,408,638 4,269,333

TABLE 4

THE DISTRIBUTION OF THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF RETIRED MEMBERS BY AGE AS OF JULY 1, 1991

DISABILITY RETIREMENTS

	MEN		WOMEN	
AGE	NUMBER	AMOUNT	NUMBER	AMOUNT
27901233333344444444455555555566666667 279012345678901234456789012345555556666666666666666666666666666666	1 2 2 3 3 1 9 1 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1	518 6,683 5,362 11,511 9,745 10,504 18,494 11,737 42,574 61,847 32,580 24,590 67,471 85,871 207,191 121,136 118,595 191,852 162,392 155,311 211,446 252,653 269,350 208,218 221,497 280,913 340,203 413,075 326,076 418,282 421,822 487,943 593,361 752,584 516,513 576,278 590,521 543,780 708,755 509,526	2 \$ 1 4 1 8 7 9 12 16 13 19 20 17 28 24 35 22 25 31 37 37 35 31 32 43 46 61 62 81 79 86 88 88 117 111 106 102 89 90	5,283 5,043 14,395 2,193 39,922 34,411 37,435 58,628 79,889 83,744 101,044 135,731 117,862 114,669 167,510 174,677 248,419 173,669 160,910 245,612 238,593 248,163 258,029 198,489 197,709 254,668 330,098 328,362 449,167 569,965 494,788 631,668 609,969 567,107 739,722 736,134 792,464 703,456 629,771 593,313
68 69	70 54	554,054 355,178		574,140

TABLE 4

THE DISTRIBUTION OF THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF RETIRED MEMBERS BY AGE AS OF JULY 1, 1991

DISABILITY RETIREMENTS

CONTINUED

		MEN		WOMEN	
AGE	NUMBER	AMOUNT	NUMBER	AMOUNT	
70 71 72 73 74 75 76 77 78 79 80 81 82 84 87 88	86 \$ 66 69 50 35 39 33 30 19 4 3	581,518 510,900 431,700 325,314 260,269 281,344 203,700 161,395 110,296 11,206 13,605 848	97 \$ 83 87 72 71 61 52 38 39 7 4 3 2 1	667,194 652,199 544,337 439,616 502,863 340,581 369,989 230,709 234,341 41,224 25,720 8,671 4,381 10,412 5,587 11,211 28,536	
90 91 92 93 95 98 99	1	5,662	2 1 5 1 1 1 1	11,211 5,624 28,271 5,847 5,587 5,736 5,773 5,662	
TOTAL SUMMARY	1,951 \$	13,801,336	2,466 \$	16,338,103	
LIFE ANNUITY CASH REFUND 100% J&S 50% J&S SOC. SEC. LEVELING 100% POP-UP 50% POP-UP	1,094 \$ 168 336 164 1 95 93	7,968,239 1,303,947 1,774,771 1,439,130 9,958 527,703 777,588	2,027 \$ 167 147 59 1 32 33	13,533,162 1,198,130 704,548 420,651 10,717 167,724 303,171	