

REPORT ON AN ACTUARIAL VALUATION OF THE  
STATE TEACHERS RETIREMENT SYSTEM OF OHIO  
PREPARED AS OF JULY 1, 1987

November 10, 1987

The Retirement Board  
The State Teachers  
Retirement System of Ohio  
275 East Broad Street  
Columbus, Ohio 43215

Ladies and Gentlemen:

This report presents the results of the actuarial valuation of the assets and liabilities of The State Teachers Retirement System of Ohio as of July 1, 1987, prepared in accordance with Section 3307.20 of Chapter 3307 of the Ohio Revised Code.

The valuation was based on the revised rates of separation recommended in the report on the experience investigation for the period July 1, 1980 through June 30, 1985, the interest rate assumption of 7-3/4% per annum, and annual rates of salary increases adopted by the Board effective July 1, 1981.

The valuation indicates that the unfunded accrued liability of the System is equal to \$6,381 million as of July 1, 1987. On the basis of an assumed annual growth rate of the STRS payroll of 5.50% per annum, the unfunded amount of \$6,381 million will be liquidated over a period of 35 years from July 1, 1987.

The valuation reflects the Board's decision to set aside \$250 million of the investment income of the Fund for specific purposes. The special reserves of \$250 million are to be used as follows: (i) \$100 million is to be used to strengthen the reserves of the Health Care Stabilization Fund; (ii) \$50 million is to be used to cover the cost of the proposed ad hoc cost-of-living increase to certain annuitants who retired prior to 1980; and (iii) \$100 million is to be held in reserve to cover the cost of future purchase of service transactions by the members.

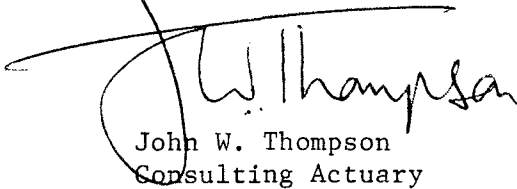
If the special reserves of \$250 million had not been established, the unfunded accrued liability of the System would have decreased to \$6,131 million as of July 1, 1987 and the liquidation period would have decreased to exactly 33 years.

The Retirement Board  
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In making the special provision of \$50 million for the ad hoc COLA, the Board recognized that as of July 1, 1987 there is an actuarial gain to the System of approximately \$66 million on account of a 3% COLA not being granted to certain annuitants who retired after June 30, 1983. Thus, the special provision, when combined with the actuarial gain, produces a broadly neutral fiscal impact on the finances of the System.

The Table of Contents, which immediately follows, outlines the material contained in the report.

Respectfully submitted,



John W. Thompson  
Consulting Actuary

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STATE TEACHERS RETIREMENT SYSTEM OF OHIO  
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SECTION I - SUMMARY OF PRINCIPAL RESULTS

1. This report presents the results of an actuarial valuation of The State Teachers Retirement System of Ohio prepared as of July 1, 1987. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized in Table I below.

TABLE I

<u>Valuation Date</u>	7/1/87	7/1/86
Active members included in valuation:		
Number	150,607	149,428
Annual salaries	\$ 4,074,129,054	\$ 3,788,136,615
Number of inactive members included in valuation:		
Eligible for pensions	15,568	15,012
Eligible for refunds only	63,015	60,484
Retirees and beneficiaries in receipt of benefits as of the valuation date:		
Number	62,819	60,960
Annual allowances	\$ 640,566,254	\$ 588,109,760
Assets (book value)	\$12,911,071,860	\$10,895,158,195
Normal Contribution Rate (excluding Health Care)	14.28%	14.28%
One year term cost of Health Care as % of payroll	2.00%	2.00%
Unfunded Accrued Liability (excluding Health Care)	\$ 6,380,719,832	\$ 6,414,042,454
Liquidation Period	35 years	39.5 years

2. The valuation balance sheet showing the results of the valuation is presented in Table V of Section IV.

3. Comments on the valuation results are presented in Section V, while the gain and loss analysis during the valuation year is presented in Section VI.
4. Exhibit A of this report outlines the full set of actuarial assumptions and methods employed. Exhibit B presents a summary of the benefit and contribution provisions of the System.

SECTION II - MEMBERSHIP DATA

Data regarding the membership of the System which was used as a basis for the valuation were furnished by the System's office. The following tables summarize the membership of the System as of July 1, 1987 upon which the valuation was based. Detailed tabulations of the data are given in Exhibit C.

Table II following shows the number and annual salaries of active members as of July 1, 1987.

TABLE II

THE NUMBER AND ANNUAL SALARIES OF ACTIVE  
MEMBERS AS OF JULY 1, 1987

GROUP	NUMBER	ANNUAL SALARIES
Men	55,319	\$ 1,791,552,325
Women	95,288	\$ 2,282,576,729
Total	150,607	\$ 4,074,129,054

Table III following shows the number of inactive members as of July 1, 1987.

TABLE III

THE NUMBER OF INACTIVE MEMBERS  
AS OF JULY 1, 1987

GROUP	ELIGIBLE FOR ALLOWANCES	ELIGIBLE FOR REFUNDS ONLY
Men	4,455	19,768
Women	11,113	43,247
Total	15,568	63,015

Table IV on the following page shows the number and annual retirement allowances of retirees and beneficiaries as of July 1, 1987.

TABLE IV

THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF  
RETIRES AND BENEFICIARIES AS OF JULY 1, 1987

GROUP	NUMBER	ANNUAL ALLOWANCES AS OF JULY 1, 1987		
		Basic	Cost-of-Living Increases	Total
Superannuation retirees:				
Men	16,249	\$ 207,302,743	\$ 28,807,905	\$ 236,110,648
Women	36,181	260,313,204	51,847,797	312,161,001
Subtotal	52,430	\$ 467,615,947	\$ 80,655,702	\$ 548,271,649
Disability retirees:				
Men	1,485	\$ 19,684,689	\$ 2,804,357	\$ 22,489,046
Women	2,479	22,862,984	3,505,259	26,368,243
Subtotal	3,964	\$ 42,547,673	\$ 6,309,616	\$ 48,857,289
Beneficiaries receiving optional allowances:				
Men	663	\$ 2,963,322	\$ 759,168	\$ 3,722,490
Women	2,640	15,676,939	4,324,118	20,001,057
Subtotal	3,303	\$ 18,640,261	\$ 5,083,286	\$ 23,723,547
Total	59,697	\$ 528,803,881	\$ 92,048,604	\$ 620,852,485
Survivors' Benefit Fund beneficiaries:				
Men	704	\$ 3,001,744	\$ 670,503	\$ 3,672,247
Women	2,054	11,855,797	2,626,089	14,481,886
Orphans	364	\$ 1,341,005	218,631	1,559,636
Total	3,122	\$ 16,198,546	\$ 3,515,223	\$ 19,713,769
Grand Total	62,819	\$ 545,002,427	\$ 95,563,827	\$ 640,566,254

In addition, 211 beneficiaries of deceased active members entitled to annual deferred allowances of \$680,170 were included in the valuation.



SECTION III - EMPLOYEE DATA

1. The valuation was based on detailed data submitted by the System covering 150,607 active members with annual compensation of \$4,074,129,054, 59,697 retired members and beneficiaries in receipt of total annual retirement allowances of \$620,852,485, 3,122 beneficiaries covered under the Survivors' Benefit Fund who are in receipt of annual retirement allowances of \$19,713,769, 211 beneficiaries of deceased active members entitled to annual deferred allowances of \$680,170, 15,568 inactive members eligible for allowances and 63,015 inactive members eligible for refunds only.
2. Tables 1 and 2 of Exhibit C show the number and annual compensation of active members distributed by age and years of service as of July 1, 1987. Table 3 shows the number of inactive members eligible for allowances distributed by age, while Table 4 shows the number of inactive members eligible for refunds distributed by age as of July 1, 1987. Tables 5 through 8 of Exhibit C show the number and annual retirement allowances of retired members and contingent annuitants included in the valuation. Table 9 of Exhibit C shows the number and annual allowances of children without an eligible parent distributed by age as of July 1, 1987.

SECTION IV - VALUATION BALANCE SHEET

The following valuation balance sheet shows the assets and liabilities of the Retirement System as of July 1, 1987.

The liabilities of the funds are equal to the actuarially determined present values of benefits payable. The assets of \$2,565,080,688 in the Employers' Trust Fund reflect the transfer of \$100 million made to the Health Care Stabilization Fund.

TABLE V

VALUATION BALANCE SHEET SHOWING THE PRESENT  
AND PROSPECTIVE ASSETS AND LIABILITIES OF THE  
STATE TEACHERS RETIREMENT SYSTEM OF OHIO  
PREPARED AS OF JULY 1, 1987

## TABLE V

VALUATION BALANCE SHEET SHOWING THE PRESENT  
AND PROSPECTIVE ASSETS AND LIABILITIES OF THE  
STATE TEACHERS RETIREMENT SYSTEM OF OHIO  
PREPARED AS OF JULY 1, 1987

LIABILITIES		
Present value of benefits payable on account of present retirees and beneficiaries from the following funds:		:
Annuity and Pension Reserve Fund		:
[See Note (4)]	\$ 6,855,961,696	:
Survivors' Benefit Fund	223,917,966	:
Total liabilities for retirees and beneficiaries		:
		\$ 7,079,879,662
Reserves held in the Health Care Stabilization Fund		:
		321,585,373
Reserves for proposed ad hoc cost-of- living increases		:
		50,000,000
Reserves for employers' cost on account of future purchases of service by members		:
		100,000,000
Present value of benefits payable on account of active and inactive members from contributions to the Teachers' Savings Fund and Employers' Trust Fund:		:
Superannuation allowances	\$ 15,859,819,584	:
Disability allowances	1,135,449,340	:
Survivor benefits	500,951,248	:
Refunds	762,713,291	:
Retirement death benefits	5,782,715	:
Total liabilities for active and inactive members		:
		\$ 18,264,716,178
Total Liabilities		\$ 25,816,181,213

Note (4): Includes \$170,057,759 less an amount of \$62,965,369, or a net amount of \$107,092,390 attributable to the dedicated bond portfolio.

SECTION V - COMMENTS ON VALUATION

The valuation balance sheet gives the following information in regard to the funds of the System as of July 1, 1987.

Annuity and Pension Reserve Fund

The Annuity and Pension Reserve Fund is the fund from which is paid all retirement allowances for which reserves have been transferred from the Teachers' Savings Fund and the Employers' Trust Fund. The present assets credited to the fund as of July 1, 1987 amounted to \$6,901,158,984, which included \$170,057,759 attributable to the dedicated bond portfolio established July 1, 1985. In addition, future state appropriations to finance House Bills 204 (1979) and 248 (1971) amounted to \$43,747,745. Therefore, the present and future assets amounted to \$6,944,906,729. The liabilities of the fund amounted to \$6,855,961,696 as of July 1, 1987. The difference between the assets and liabilities, or \$88,945,033, represents the surplus in the fund as of July 1, 1987. It should be noted that this surplus represents the effect of inter-fund transfers within STRS in excess of the amount actually required to meet the liabilities of the fund. It is recommended that periodic ad hoc transfers be continued out of the fund into the Employers' Trust Fund in order to bring the fund more closely into balance. Such a transfer would have a neutral effect on the unfunded accrued liability of STRS, since any surplus in the fund is applied to reduce the unfunded in the Employers' Trust Fund.

Survivors' Benefit Fund

The Survivors' Benefit Fund is the fund from which is paid the benefits to survivors of members who die in active service or after disability retirement. The liabilities of the fund were equal to \$223,917,966 as of July 1, 1987. The present assets credited to the fund as of July 1, 1987 amounted to \$222,649,205

and future state appropriations to finance House Bills 204 (1979) and 248 (1971) amounted to \$1,268,761. Therefore, the total present and future assets were also equal to \$223,917,966. Thus, the Survivors' Benefit Fund is in balance as of July 1, 1987.

Health Care Stabilization Fund

The assets of the Health Care Stabilization Fund as of July 1, 1987 are equal to \$321,585,373, including a transfer of \$100,000,000 from the Employers' Trust Fund. The one year term cost to provide health care is equivalent to 2.00% of payroll.

Teachers' Savings Fund

The Teachers' Savings Fund is the fund to which members' contributions are credited and from which is paid all refunds of members' contributions upon withdrawal or upon death where no other survivor benefit is payable. Upon retirement a member's contributions are transferred from this fund to the Annuity and Pension Reserve Fund and upon death where a benefit is paid to a survivor, his contributions are transferred to the Survivors' Benefit Fund.

The present assets credited to the Teachers' Savings Fund amounted to \$2,900,597,610 as of July 1, 1987.

Employers' Trust Fund

The Employers' Trust Fund is the fund to which the employers' contributions are credited. At retirement or death the reserves necessary to provide the benefits payable less the members' contributions are transferred from this fund to the Annuity and Pension Reserve Fund, or to the Survivors' Benefit Fund. The assets in the Employers' Trust Fund amounted to \$2,565,080,688 as of July 1, 1987.

The Board has directed that a portion of the investment income of the Fund for the year ended June 30, 1987 equal to \$250 million be set aside for specific purposes. The amount of \$250 million, which without the Board action would have been credited to the Employers' Trust Fund to meet future benefit payments from the System, is to be specifically utilized as follows:

- (i) \$100 million is to be used to pay health care benefits. As a result, the current balance of the Employers' Trust Fund reflects a transfer of \$100 million to the Health Care Stabilization Fund.
- (ii) \$50 million is to be established as a reserve in the Employers' Trust Fund to cover the cost of the proposed ad hoc cost-of-living increases to certain annuitants who retired prior to 1980.
- (iii) \$100 million is to be established as a reserve in the Employers' Trust Fund to assist in covering the cost to the employers of future purchase of service transactions by the members.

The balance of the assets in the Employers' Trust Fund are available to pay for any and all benefits of the System without any special provision.

#### Employers' Future Contributions

The present value of the liabilities to be covered by contributions to the Teachers' Savings Fund and Employers' Trust Fund amounts to \$18,264,716,178 for active and inactive members, plus \$150,000,000, as previously mentioned, to cover the cost of proposed ad hoc cost-of-living increases and future purchase of service transactions, or a total of \$18,414,716,178. If the present assets of \$2,900,597,610 in the Teachers' Savings Fund plus \$2,565,080,688 in the Employers' Trust Fund, or a total of \$5,465,678,298, are subtracted from these liabilities, there remains \$12,949,037,880 to be met by future contributions of members and employers. The present value of members' future contributions was

\$3,970,203,810 as of the valuation date, leaving \$8,978,834,070 to be met by future contributions of the employers. The normal rate payable based upon the entry age of members with less than two years of service was determined as of July 1, 1985 to be 14.28%, of which 8.75% of payroll is met by members' contributions and the remainder, or 5.53% of payroll, is met by employers. A detailed breakdown of the normal contribution rate by liability category is presented below.

TABLE VI  
NORMAL CONTRIBUTION RATE

CATEGORY	RATE AS % OF PAYROLL
Superannuation Allowances	10.96%
Disability Allowances	1.28
Survivor Benefits	.61
Refunds	1.42
Retirement Death Benefits	.01
Total	14.28%

Future normal contributions by employers have a present value of \$2,509,169,205. If this amount is subtracted from \$8,978,834,070, the present value of future contributions by employers, there remains \$6,469,664,865 as the total amount of unfunded accrued liability exclusive of the surplus in the Annuity and Pension Reserve Fund. If the surplus of \$88,945,033 in the Annuity and Pension Reserve Fund is subtracted from the amount of \$6,469,664,865, the resulting net unfunded accrued liability is equal to \$6,380,719,832. Employers pay 14.00% of payroll, of which 5.53% is payable toward the normal contribution and 2.00% is payable for health care, leaving 6.47% of payroll available to liquidate the unfunded accrued liability. Based upon an assumed increase in payroll of 5.50% per annum, the unfunded accrued liability would be liquidated in 35 years.



SECTION VI - GAIN AND LOSS ANALYSIS

The expected unfunded accrued liability as of July 1, 1987 amounts to \$6,656 million, based on an expected deficiency period equal to last year's period of 39-1/2 years less 1 year, or 38-1/2 years. The actual unfunded accrued liability is \$6,381 million, reflecting the special reserves established by the Board of \$250 million. Thus, there is a decrease of \$6,656 million minus \$6,381 million, or \$275 million in the expected deficiency. The sources of this decrease are analyzed below.

(i) Investment Income

Income on investments during the year ended June 30, 1987, net of expenses, was earned at a rate of 16.27% based on book value of assets, but excluding the effect of the dedicated bond portfolio.

The Board has directed that \$250 million of the investment income, after meeting the valuation rate of 7.75%, be used as a reserve for the specific purposes described under the Employers' Trust Fund subsection of Section V.

Further, the Board has directed that sufficient investment income be utilized in order to bring the funding period of the deficiency down to 35 years. The investment rate of return required to achieve this is 10.25%. The required rate of 10.25% produces a required investment income of \$272 million in excess of the valuation interest rate of 7.75%.

The investment income in excess of the required rate of 10.25% less the special reserves of \$250 million amounts to \$404 million. Of this excess investment income, approximately \$42 million will be paid out to eligible retirees and beneficiaries in December, 1987, leaving a net gain of \$362 million.

(ii) Salary Increases

Salary increases to active members were in excess of those expected and increased the unfunded accrued liability by approximately \$305 million.

(iii) Retiree Mortality

Mortality and termination experience among retirees and beneficiaries resulted in a gain of approximately \$15 million.

(iv) Separation Experience Among Active Members and New Entrants

The actual number of members who retired on account of both service and disability was greater than expected. In addition, the actual number of withdrawals and deaths was less than expected. This overall experience resulted in net losses to the System of approximately \$50 million.

There was a loss of approximately \$15 million from new entrants.

(v) Purchase of Service

The purchase of service by members during the year ended June 30, 1987 produced an additional liability to the System not covered by the premiums paid by the members of approximately \$70 million.

(vi) 3% COLA Not Required

It is the practice in the valuation procedure to assume that eligible retirees will receive a 3% COLA each year in the future. In the fiscal year 1987-88, certain retirees will not receive a 3% COLA. However, reserves had been established in last year's valuation to provide for this cost. This produced a release of reserves of approximately \$66 million as of July 1, 1987.

The above analysis may be summarized as follows:

	<u>Amount in Millions</u>
Items that <u>increased</u> the unfunded accrued liability:	
Salary increases above those expected	\$ 305
Separation experience	50
New entrants	15
Purchase of service	<u>70</u>
Total increases	\$ 440
Items that <u>decreased</u> the unfunded accrued liability:	
Required investment earnings	\$ 272
Additional excess investment earnings	362
Experience among retirees and beneficiaries	15
3% COLA not required	<u>66</u>
Total decreases	<u>715</u>
Net decrease in unfunded accrued liability	\$ 275

#### Deficiency Period

If there had been no actuarial gains or losses during the year ended June 30, 1987, the expected remaining period to fund the unfunded accrued liability as of July 1, 1987 would have been 38-1/2 years, i.e., one year less than the period of 39-1/2 years as of the previous valuation date.

The net actuarial gain of \$275 million described above has the effect of decreasing the funding period by approximately 2.3 years. In addition, because the payroll of the total membership increased at a rate (7.5%) greater than the expected rate of 5.5%, the application of the accrued liability rate of 6.47% to the increased payroll base will generate contribution income greater than expected in the future. This actuarial gain in the form of increased income has

the effect of reducing the required funding period by about 1.2 years. The net effect of these two factors is to decrease the expected funding period by 2.3 years plus 1.2 years, or 3.5 years. This produces a new funding period as of July 1, 1987 of 38.5 years minus 3.5 years, or 35 years.

These points may be summarized as follows:

	<u>Funding Period</u>
Expected period as of July 1, 1987	38.5 years
Decrease due to actuarial gain of \$275 million	(2.3)
Decrease due to additional accrued liability contribution income	<u>(1.2)</u>
Actual funding period	35.0 years

SECTION VII - ACCOUNTING INFORMATION

The actuarial present value of benefits has been calculated in accordance with NCGA Statement 6 for the Retirement System. The relevant amounts as of July 1, 1987 are shown below:

Actuarial present value of projected benefits payable to current retirees and beneficiaries	\$ 7,079,879,662
Actuarial present value of projected benefits payable to terminated vested members	<u>711,607,388</u>
Total	\$ 7,791,487,050
Actuarial present value of credited projected benefits for active members:	
Member contributions	\$ 2,714,584,440
Employer financed	<u>7,094,389,991</u>
Total	\$ 9,808,974,431
Total Actuarial Present Value of Credited Projected Benefits	\$ 17,600,461,481

The actuarial present value of credited projected benefits for active members is the portion of the total projected benefits allocated to the accrued liability using the unit credit actuarial cost method.

The actuarial present value of projected benefits as of July 1, 1987 is based on an interest rate of 7-3/4%.

EXHIBIT A

## STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

INTEREST RATE: 7-3/4% per annum, compounded annually.

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

<u>Age</u>	<u>Withdrawal</u>	<u>Death</u>	<u>Disability</u>	<u>ANNUAL RATES OF</u>			<u>Salary Increase</u>
				<u>Superannuation</u>			
				<u>30 Years Service</u>	<u>25-29 Years Service</u>	<u>Under 25 Years Service</u>	
<u>MEN</u>							
20	.0855	.0009	-	-	-	-	.1050
30	.0655	.0010	.0003	-	-	-	.0850
40	.0295	.0016	.0009	-	-	-	.0650
50	.0150	.0035	.0054	.2250	-	-	.0530
55	.0153	.0054	.0077	.2070	.0495	-	.0500
60	.0163	.0096	-	.2475	.0675	.0765	.0475
65	.0163	.0177	-	.3825	.3600	.2565	.0450
70	-	.0309	-	.3600	.3600	.3150	.0450
<u>WOMEN</u>							
20	.0566	.0003	-	-	-	-	.1050
30	.0599	.0004	.0005	-	-	-	.0850
40	.0248	.0007	.0012	-	-	-	.0650
50	.0149	.0016	.0048	.2250	-	-	.0530
55	.0126	.0029	.0070	.2250	.0900	-	.0500
60	.0117	.0054	-	.2610	.1305	.1440	.0475
65	.0123	.0099	-	.4050	.3600	.2970	.0450
70	-	.0174	-	.3600	.3150	.2700	.0450

DEATH AFTER RETIREMENT: According to the 1955 American Annuity Table with ages set back two years for men and seven years for women. Special mortality tables are used for the period after disability retirement.

VALUATION METHOD: Projected benefit method with level percentage entry age normal cost and open-end unfunded accrued liability. Gains and losses are reflected in the accrued liability.

ASSET VALUATION METHOD: Cost value.

PAYROLL GROWTH: Assumed to grow at 5.50% per annum for purposes of determining the liquidation period of the unfunded accrued liability.

EXHIBIT B

## SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS

Eligibility for membership                    Immediate

Service Retirement

    Eligibility                                    Age 60 with 5 years of service, or age 55 with 25 years of service, or 30 years of service regardless of age.

    Benefits                                      Greater of 2% of average annual salary for the three highest paid years or \$86, multiplied by years of service credit and adjusted by the following percentage:

<u>Attained</u> <u>Age</u>	or	<u>Years</u> <u>of Ohio</u> <u>Service</u> <u>Credit</u>	<u>% of</u> <u>Base</u> <u>Amount</u>
58		25	75%
59		26	80
60		27	85
61		28	88
62		29	90
63		30	91
64		31	94
65		32	95
		33	97
		34 or more	99

Maximum benefit - 90% of average annual salary for three highest paid years.

Minimum benefit - the sum of the annuity provided by the member's accumulated contributions, a pension equal to the annuity and an additional pension of \$40 multiplied by the number of years of prior and military service.

Optional Forms of Benefit

Option 1 - 100% joint and survivorship. If the beneficiary dies before the member or if the beneficiary is the spouse and the marriage is terminated the member will receive the benefit before optional modification.

Option 2 - A joint and survivorship annuity payable during the lifetime of the member, with the designated beneficiary to receive a lesser annuity if living at the death of the member.

If the beneficiary dies before the member or if beneficiary is the spouse and marriage is terminated the member will receive the benefit without optional modification.

Option 3 - A life annuity payable during the lifetime of the member, with a guarantee that at least an elected number of monthly payments will be paid in any event.

Option 4 - Any other benefit arrangement approved by the Board and certified by the actuary to be an actuarially equivalent benefit.

### Disability Retirement

#### Eligibility

Completion of 5 or more years of service, under age 60 and permanently incapacitated for the performance of duty.

#### Benefits

- (1) Annuity with a reserve equal to the member's accumulated contributions plus
- (2) The difference between (1) and the greater of 2% of the average salary during the 3 highest paid years or \$86 times total service plus years and months from date of disability to age 60. Maximum allowance is 75% of final average salary. Minimum allowance is 30% of final average salary.

### Death after Retirement

Lump sum payment of \$500 upon death after service or disability retirement.

### Survivor's Benefit

#### Eligibility

Upon death after at least 1-1/2 years of credit for Ohio service with at least 1/4 year of such service in the 2-1/2 years preceding death or upon death of a disability retiree.

#### Benefits

If member eligible for retirement, spouse or other sole dependent beneficiary may elect to receive option 1 benefit in lieu of return of contributions.



If member not eligible for retirement certain designated beneficiaries may elect to receive following benefits in lieu of return of contributions.

<u>Number of Qualified Dependents</u>	<u>% of Average Annual Salary for 3 Highest Paid Years</u>	<u>Minimum Annual Benefit</u>
1	25%	\$ 1,152
2	40	2,232
3	50	2,832
4	55	2,832
5 or more	60	2,832

Qualified beneficiaries are spouse, dependent children and/or dependent parents over age 65.

#### Refund of Contributions

A member's contributions are refunded upon termination of employment where no other benefit is payable. Upon death after retirement or upon death of a survivor in receipt of benefits, the member's accumulated contributions at retirement less payments made are returned to the designated beneficiary.

#### Cost-of-living Benefits

The basic benefit is increased by 3% each year provided the change in Consumer Price Index equals or exceeds 3%.

#### Health Care

Retirants, their spouses and dependent children are covered by comprehensive medical expense health care plan.

#### Contribution:

By Members

8.75% of salary.

By Employers

14.00% of salaries of their employees who are members.

EXHIBIT C

DISTRIBUTIONS OF  
ACTIVE MEMBERS, INACTIVE MEMBERS,  
RETIRED MEMBERS AND BENEFICIARIES

TABLE 1

THE NUMBER AND ANNUAL SALARIES  
OF ACTIVE MEMBERS DISTRIBUTED BY  
AGE AS OF JULY 1, 1987

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
18		\$	1	\$ 3,379
19			1	19,852
20	1	1,140	1	11,730
21	2	19,085	1	15,500
22	7	60,899	43	270,675
23	175	2,050,711	757	8,678,012
24	372	5,211,064	1,388	18,363,302
25	550	8,721,952	1,653	24,513,635
26	645	10,849,380	1,769	28,297,794
27	666	11,974,946	1,714	28,491,641
28	673	12,797,511	1,723	29,820,402
29	787	16,447,054	1,855	34,407,326
30	1,004	22,376,927	2,174	41,954,846
31	1,115	25,657,317	2,248	45,089,562
32	1,274	30,837,212	2,622	55,410,542
33	1,357	34,468,494	2,765	58,763,087
34	1,569	41,714,785	3,074	68,599,051
35	1,942	53,252,404	3,762	86,238,265
36	2,164	62,744,845	4,006	95,238,008
37	2,230	66,430,997	4,287	101,804,717
38	2,536	78,290,624	4,476	106,671,902
39	2,571	80,949,876	4,317	104,429,113
40	3,144	102,067,143	4,794	113,536,602
41	2,645	87,864,648	3,996	98,295,205
42	2,107	71,593,588	3,162	78,241,764
43	2,041	70,091,740	3,036	76,703,385
44	2,237	77,881,351	3,266	83,291,972
45	2,136	76,591,753	3,228	82,614,393
46	1,923	69,282,077	2,763	72,205,510
47	1,705	63,094,839	2,435	64,395,605
48	1,607	59,632,935	2,273	61,089,021
49	1,542	59,015,725	2,290	62,581,856
50	1,437	55,078,225	2,115	57,940,565
51	1,431	54,090,189	1,979	54,864,360
52	1,257	49,895,759	1,736	48,055,354
53	1,138	43,924,880	1,654	46,164,998
54	977	37,953,755	1,376	38,624,848
55	948	36,481,164	1,412	40,829,433

TABLE 1

THE NUMBER AND ANNUAL SALARIES  
OF ACTIVE MEMBERS DISTRIBUTED BY  
AGE AS OF JULY 1, 1987

CONTINUED

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
56	877	34,443,241	1,389	40,100,262
57	837	33,182,569	1,369	39,156,036
58	701	28,055,442	1,159	33,375,091
59	598	23,493,971	1,060	30,675,612
60	531	20,422,720	1,005	28,870,005
61	399	15,571,528	762	22,666,310
62	378	14,733,826	650	19,381,409
63	298	11,979,805	485	14,612,816
64	226	9,296,175	380	11,326,925
65	168	6,647,186	278	8,463,184
66	141	5,470,606	202	6,106,445
67	95	3,781,248	145	4,263,743
68	50	2,069,542	92	2,732,011
69	42	1,511,659	67	1,943,246
70	24	851,770	50	1,470,806
71	9	229,138	14	440,663
72	3	30,456	7	158,820
73	9	88,551	9	104,386
74	1	64,255	8	144,133
75	7	76,202	1	37,278
76	3	38,099	2	12,184
77	2	8,182	1	4,240
78	3	61,112		
83	1	40,674	1	3,912
84	1	7,374		
TOTAL	55,319	\$1,791,552,325	95,288	\$2,282,576,729

TABLE 1A

THE NUMBER AND ANNUAL SALARIES  
OF ACTIVE MEMBERS DISTRIBUTED BY  
AGE AS OF JULY 1, 1987

AGE	NUMBER	AMOUNT
18	1\$	3,379
19	1	19,852
20	2	12,870
21	3	34,585
22	50	331,574
23	932	10,728,723
24	1,760	23,574,366
25	2,203	33,235,587
26	2,414	39,147,174
27	2,380	40,466,587
28	2,396	42,617,913
29	2,642	50,854,380
30	3,178	64,331,773
31	3,363	70,746,879
32	3,896	86,247,754
33	4,122	93,231,581
34	4,643	110,313,836
35	5,704	139,490,669
36	6,170	157,982,853
37	6,517	168,235,714
38	7,012	184,962,526
39	6,888	185,378,989
40	7,938	215,603,745
41	6,641	186,159,853
42	5,269	149,835,352
43	5,077	146,795,125
44	5,503	161,173,323
45	5,364	159,206,146
46	4,686	141,487,587
47	4,140	127,490,444
48	3,880	120,721,956
49	3,832	121,597,581
50	3,552	113,018,790
51	3,410	108,954,549
52	2,993	97,951,113
53	2,792	90,089,878
54	2,353	76,578,603
55	2,360	77,310,597

TABLE 1A

THE NUMBER AND ANNUAL SALARIES  
OF ACTIVE MEMBERS DISTRIBUTED BY  
AGE AS OF JULY 1, 1987

CONTINUED

AGE	NUMBER	AMOUNT
56	2,266	74,543,503
57	2,206	72,338,605
58	1,860	61,430,533
59	1,658	54,169,583
60	1,536	49,292,725
61	1,161	38,237,838
62	1,028	34,115,235
63	783	26,592,621
64	606	20,623,100
65	446	15,110,370
66	343	11,577,051
67	240	8,044,991
68	142	4,801,553
69	109	3,454,905
70	74	2,322,576
71	23	669,801
72	10	189,276
73	18	192,937
74	9	208,388
75	8	113,480
76	5	50,283
77	3	12,422
78	3	61,112
83	2	44,586
84	1	7,374
TOTAL	150,607	\$4,074,129,054

THE NUMBER AND ANNUAL SALARIES  
OF ACTIVE MEMBERS DISTRIBUTED BY  
YEARS OF SERVICE AS OF JULY 1, 1987

YEARS OF SERVICE	NUMBER	AMOUNT
0	2,256\$	8,143,902
1	10,432	138,907,256
2	8,613	153,014,631
3	7,429	145,871,111
4	6,072	125,865,306
5	4,685	101,117,502
6	4,522	102,083,039
7	5,461	130,908,051
8	5,857	145,331,530
9	6,240	161,916,869
10	5,895	157,791,476
11	5,582	153,933,263
12	5,693	159,111,268
13	5,860	171,531,094
14	6,234	188,132,797
15	6,265	196,867,421
16	5,439	173,355,583
17	5,447	177,019,053
18	5,725	190,558,373
19	5,031	168,387,504
20	4,507	153,292,459
21	3,970	136,221,643
22	3,460	120,592,767
23	3,069	107,103,012
24	2,761	96,457,226
25	2,406	83,518,575
26	2,141	75,337,900
27	1,816	64,985,642
28	1,620	58,247,254
29	1,375	49,126,451
30	1,207	44,849,436
31	903	33,203,460
32	622	23,140,197
33	497	19,176,412
34	368	13,989,265
35	294	11,324,541

THE NUMBER AND ANNUAL SALARIES  
OF ACTIVE MEMBERS DISTRIBUTED BY  
YEARS OF SERVICE AS OF JULY 1, 1987

CONTINUED

YEARS OF SERVICE	NUMBER	AMOUNT
36	240	9,049,512
37	176	6,963,613
38	122	4,954,175
39	103	4,307,294
40	71	2,850,453
41	50	2,042,407
42	27	1,022,093
43	16	646,891
44	20	823,838
45	15	587,589
46	6	236,897
47	1	34,705
48	4	130,727
50	1	35,296
51	1	30,295
TOTAL	150,607	\$4,074,129,054



TABLE 2

THE NUMBER AND ANNUAL SALARIES  
OF ACTIVE MEMBERS DISTRIBUTED BY  
YEARS OF SERVICE AS OF JULY 1, 1987

YEARS OF SERVICE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
0	649\$	2,621,265	1,607\$	5,522,637
1	3,190	52,759,143	7,242	86,148,113
2	2,668	60,046,011	5,945	92,968,620
3	2,228	53,962,609	5,201	91,908,502
4	1,779	46,264,447	4,293	79,600,859
5	1,334	37,912,846	3,351	63,204,656
6	1,355	39,371,968	3,167	62,711,071
7	1,620	48,645,841	3,841	82,262,210
8	1,711	51,926,554	4,146	93,404,976
9	1,846	57,781,294	4,394	104,135,575
10	1,766	55,806,165	4,129	101,985,311
11	1,811	58,130,577	3,771	95,802,686
12	1,895	61,711,608	3,798	97,399,660
13	1,962	64,151,829	3,898	107,379,265
14	2,105	71,356,305	4,129	116,776,492
15	2,411	83,460,515	3,854	113,406,906
16	2,128	75,562,481	3,311	97,793,102
17	2,132	76,967,653	3,315	100,051,400
18	2,572	93,751,218	3,153	96,807,155
19	2,335	85,370,111	2,696	83,017,393
20	2,127	80,126,936	2,380	73,165,523
21	1,904	71,504,749	2,066	64,716,894
22	1,621	62,320,678	1,839	58,272,089
23	1,509	57,560,434	1,560	49,542,578
24	1,374	52,327,648	1,387	44,129,578
25	1,166	44,351,116	1,240	39,167,459
26	1,035	40,176,549	1,106	35,161,351
27	912	35,825,881	904	29,159,761
28	810	32,019,276	810	26,227,978
29	710	27,736,433	665	21,390,018
30	668	27,306,771	539	17,542,665
31	495	19,876,067	408	13,327,393
32	330	13,433,442	292	9,706,755
33	278	11,805,654	219	7,370,758
34	195	8,025,925	173	5,963,340
35	178	7,347,322	116	3,977,219

TABLE 2

THE NUMBER AND ANNUAL SALARIES  
OF ACTIVE MEMBERS DISTRIBUTED BY  
YEARS OF SERVICE AS OF JULY 1, 1987

## CONTINUED

YEARS OF SERVICE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
36	132	5,508,563	108	3,540,949
37	119	5,009,159	57	1,954,454
38	73	3,279,780	49	1,674,395
39	73	3,293,319	30	1,013,975
40	45	1,970,205	26	880,248
41	26	1,266,663	24	775,744
42	11	512,329	16	509,764
43	11	455,718	5	191,173
44	10	508,044	10	315,794
45	7	322,997	8	264,592
46	3	120,227	3	116,670
47			1	34,705
48			4	130,727
50			1	35,296
51			1	30,295
TOTAL	55,319	\$1,791,552,325	95,288	\$2,282,576,729

TABLE 3  
 THE NUMBER OF INACTIVE MEMBERS ELIGIBLE FOR  
 FUTURE ALLOWANCES DISTRIBUTED BY  
 AGE AS OF JULY 1, 1987

AGE	MEN	WOMEN
28	3	16
29	7	65
30	23	142
31	36	204
32	40	270
33	44	340
34	67	367
35	87	443
36	92	513
37	133	558
38	138	538
39	164	519
40	196	545
41	197	404
42	141	356
43	188	352
44	206	389
45	185	379
46	163	373
47	149	317
48	155	320
49	190	312
50	164	346
51	160	283
52	153	307
53	166	264
54	165	251
55	157	296
56	156	283
57	170	316
58	152	285
59	135	293
60	101	222
61	42	62
62	33	50
63	29	30
64	20	33

TABLE 3

THE NUMBER OF INACTIVE MEMBERS ELIGIBLE FOR  
FUTURE ALLOWANCES DISTRIBUTED BY  
AGE AS OF JULY 1, 1987

CONTINUED

AGE	MEN	WOMEN
65	15	18
66	12	14
67	3	7
68	2	8
69	1	9
70	7	1
71	3	3
72		1
73	2	2
76	1	2
77	1	2
79	1	1
81		1
85		1
TOTAL	4,455	11,113

TABLE 3A  
THE NUMBER OF INACTIVE MEMBERS ELIGIBLE FOR  
FUTURE ALLOWANCES DISTRIBUTED BY  
AGE AS OF JULY 1, 1987

AGE	NUMBER
28	19
29	72
30	165
31	240
32	310
33	384
34	434
35	530
36	605
37	691
38	676
39	683
40	741
41	601
42	497
43	540
44	595
45	564
46	536
47	466
48	475
49	502
50	510
51	443
52	460
53	430
54	416
55	453
56	439
57	486
58	437
59	428
60	323
61	104
62	83
63	59
64	53

TABLE 3A

THE NUMBER OF INACTIVE MEMBERS ELIGIBLE FOR  
FUTURE ALLOWANCES DISTRIBUTED BY  
AGE AS OF JULY 1, 1987

CONTINUED

AGE	NUMBER
65	33
66	26
67	10
68	10
69	10
70	8
71	6
72	1
73	4
76	3
77	3
79	2
81	1
85	1
TOTAL	15,568

TABLE 4

THE NUMBER OF INACTIVE MEMBERS ELIGIBLE  
FOR REFUNDS ONLY DISTRIBUTED BY  
AGE AS OF JULY 1, 1987

AGE	MEN	WOMEN
19		2
20	3	3
21	4	10
22	27	97
23	109	329
24	161	516
25	254	651
26	296	844
27	333	969
28	376	1,087
29	428	1,163
30	524	1,294
31	567	1,251
32	606	1,304
33	701	1,472
34	710	1,635
35	806	1,845
36	816	1,915
37	894	1,791
38	907	1,925
39	942	1,899
40	1,021	2,211
41	819	1,885
42	635	1,483
43	616	1,430
44	595	1,500
45	549	1,367
46	475	1,122
47	384	998
48	370	830
49	349	748
50	328	742
51	316	663
52	306	554
53	289	558
54	248	465
55	271	470
56	227	422

TABLE 4

THE NUMBER OF INACTIVE MEMBERS ELIGIBLE  
FOR REFUNDS ONLY DISTRIBUTED BY  
AGE AS OF JULY 1, 1987

CONTINUED

AGE	MEN	WOMEN
57	265	454
58	226	391
59	230	390
60	207	321
61	181	301
62	180	245
63	149	222
64	163	165
65	139	159
66	115	146
67	113	131
68	88	110
69	69	101
70	62	76
71	46	66
72	41	72
73	39	62
74	31	43
75	29	46
76	19	34
77	16	40
78	14	36
79	17	28
80	17	17
81	7	22
82	10	21
83	3	20
84	5	18
85	4	16
86	6	8
88	3	12
89	3	8
90	4	5
91	3	4
92	1	6
93	1	1
TOTAL	19,768	43,247



TABLE 4A  
THE NUMBER OF INACTIVE MEMBERS ELIGIBLE  
FOR REFUNDS ONLY DISTRIBUTED BY  
AGE AS OF JULY 1, 1987

AGE	NUMBER
19	2
20	6
21	14
22	124
23	438
24	677
25	905
26	1,140
27	1,302
28	1,463
29	1,591
30	1,818
31	1,818
32	1,910
33	2,173
34	2,345
35	2,651
36	2,731
37	2,685
38	2,832
39	2,841
40	3,232
41	2,704
42	2,118
43	2,046
44	2,095
45	1,916
46	1,597
47	1,382
48	1,200
49	1,097
50	1,070
51	979
52	860
53	847
54	713
55	741
56	649
57	719

TABLE 4A

THE NUMBER OF INACTIVE MEMBERS ELIGIBLE  
FOR REFUNDS ONLY DISTRIBUTED BY  
AGE AS OF JULY 1, 1987

CONTINUED

AGE	NUMBER
58	617
59	620
60	528
61	482
62	425
63	371
64	328
65	298
66	261
67	244
68	198
69	170
70	138
71	112
72	113
73	101
74	74
75	75
76	53
77	56
78	50
79	45
80	34
81	29
82	31
83	23
84	23
85	20
86	14
88	15
89	11
90	9
91	7
92	7
93	2
TOTAL	63,015

TABLE 5  
THE NUMBER AND ANNUAL RETIREMENT  
ALLOWANCES OF BENEFICIARIES  
DISTRIBUTED BY AGE AS OF JULY 1, 1987

AGE	MEN		WOMEN	
	NUMBER	ANNUAL ALLOWANCE	NUMBER	ANNUAL ALLOWANCE
48	1	\$ 21,336		
50	7	155,635	6	\$ 99,114
51	40	818,125	40	663,458
52	107	2,079,521	81	1,415,964
53	203	4,076,093	117	2,006,163
54	271	5,490,690	139	2,412,391
55	353	7,135,906	165	2,778,704
56	426	8,561,909	253	3,900,952
57	451	8,748,745	301	4,768,127
58	509	9,951,052	361	5,386,668
59	543	10,601,137	377	5,541,757
60	663	12,160,301	541	6,875,030
61	744	12,502,551	780	7,932,522
62	806	13,346,099	866	9,151,940
63	784	12,760,334	906	9,100,223
64	758	11,769,003	992	9,603,393
65	722	10,977,088	1,079	11,027,380
66	729	10,893,040	1,236	11,876,950
67	682	9,849,685	1,257	12,176,807
68	504	7,198,635	1,240	11,704,563
69	582	8,065,231	1,404	13,056,235
70	558	7,157,616	1,376	12,166,843
71	468	5,711,383	1,366	12,002,151
72	503	6,472,512	1,334	11,659,525
73	471	5,543,567	1,350	11,297,708
74	447	5,478,838	1,365	10,871,567
75	400	4,507,042	1,442	11,190,991
76	378	4,077,112	1,308	9,750,584
77	351	3,732,148	1,400	10,711,218
78	364	3,858,884	1,346	10,015,689
79	357	3,573,986	1,513	10,769,131
80	344	3,341,434	1,364	9,803,599
81	292	2,800,571	1,293	8,928,655
82	268	2,480,241	1,307	9,110,400
83	226	2,006,149	1,108	7,526,168
84	201	1,868,818	1,001	6,701,053
85	154	1,318,783	841	5,425,651

THE NUMBER AND ANNUAL RETIREMENT  
ALLOWANCES OF BENEFICIARIES  
DISTRIBUTED BY AGE AS OF JULY 1, 1987

SUPERANNUATION RETIREES

CONTINUED

AGE	MEN		WOMEN	
	NUMBER	ANNUAL ALLOWANCE	NUMBER	ANNUAL ALLOWANCE
86	152	\$ 1,392,910	701	\$ 4,659,020
87	88	767,263	555	3,807,524
88	76	651,393	433	2,887,800
89	70	612,704	389	2,669,733
90	49	416,594	294	2,152,079
91	29	245,432	259	1,844,991
92	38	301,536	189	1,280,125
93	27	223,312	140	962,877
94	7	60,128	114	814,042
95	12	102,917	90	587,847
96	13	96,458	53	359,193
97	12	103,292	42	269,849
98	4	19,462	30	211,817
99	1	2,364	13	73,590
100	2	14,376	12	83,263
101			7	52,733
102	1	6,180	3	21,972
103			2	13,272
106	1	3,127		
<b>TOTAL</b>	<b>16,249</b>	<b>\$236,110,648</b>	<b>36,181</b>	<b>\$312,161,001</b>

SUMMARY

NO OPTION	4,216	\$ 49,688,568	26,955	\$224,327,919
OPTION 1	6,231	93,080,400	3,622	29,516,027
OPTION 2	5,236	84,821,766	4,533	48,577,018
OPTION 3	566	8,519,914	1,071	9,740,037

TABLE 5A  
 THE NUMBER AND ANNUAL RETIREMENT  
 ALLOWANCES OF BENEFICIARIES  
 DISTRIBUTED BY AGE AS OF JULY 1, 1987

SUPERANNUATION RETIREES

AGE	NUMBER	AMOUNT
48	1 \$	21,336
50	13	254,749
51	80	1,481,583
52	188	3,495,485
53	320	6,082,256
54	410	7,903,081
55	518	9,914,610
56	679	12,462,861
57	752	13,516,872
58	870	15,337,720
59	920	16,142,894
60	1,204	19,035,331
61	1,524	20,435,073
62	1,672	22,498,039
63	1,690	21,860,557
64	1,750	21,372,396
65	1,801	22,004,468
66	1,965	22,769,990
67	1,939	22,026,492
68	1,744	18,903,198
69	1,986	21,121,466
70	1,934	19,324,459
71	1,834	17,713,534
72	1,837	18,132,037
73	1,821	16,841,275
74	1,812	16,350,405
75	1,842	15,698,033
76	1,686	13,827,696
77	1,751	14,443,366
78	1,710	13,874,573
79	1,870	14,343,117
80	1,708	13,145,033
81	1,585	11,729,226
82	1,575	11,590,641
83	1,334	9,532,317
84	1,202	8,569,871
85	995	6,744,434

TABLE 5A

THE NUMBER AND ANNUAL RETIREMENT  
ALLOWANCES OF BENEFICIARIES  
DISTRIBUTED BY AGE AS OF JULY 1, 1987

SUPERANNUATION RETIREES

CONTINUED

AGE	NUMBER	AMOUNT
86	853	\$ 6,051,930
87	643	4,574,787
88	509	3,539,193
89	459	3,282,437
90	343	2,568,673
91	288	2,090,423
92	227	1,581,661
93	167	1,186,189
94	121	874,170
95	102	690,764
96	66	455,651
97	54	373,141
98	34	231,279
99	14	75,954
100	14	97,639
101	7	52,733
102	4	28,152
103	2	13,272
106	1	3,127
TOTAL	52,430	\$548,271,649

SUMMARY

NO OPTION	31,171	\$274,016,487
OPTION 1	9,853	122,596,427
OPTION 2	9,769	133,398,784
OPTION 3	1,637	18,259,951

TABLE 6  
 THE NUMBER AND ANNUAL RETIREMENT  
 ALLOWANCES OF BENEFICIARIES  
 DISTRIBUTED BY AGE AS OF JULY 1, 1987

AGE	MEN		WOMEN	
	NUMBER	ANNUAL ALLOWANCE	NUMBER	ANNUAL ALLOWANCE
30			4	\$ 46,868
31			6	76,340
32	2	\$ 26,849	7	92,067
33			11	156,822
34	3	37,871	9	111,982
35	2	23,896	24	298,512
36	5	69,428	18	250,736
37	8	114,617	16	212,029
38	12	188,096	37	494,846
39	20	286,588	26	346,992
40	15	224,457	38	507,757
41	17	279,581	33	470,367
42	16	287,300	27	380,830
43	22	359,911	28	394,486
44	25	347,650	45	607,386
45	25	428,451	45	609,157
46	24	367,218	34	433,074
47	22	355,660	34	474,365
48	31	621,778	55	746,904
49	29	475,039	53	719,820
50	27	476,179	53	671,218
51	40	694,047	41	593,986
52	41	719,067	56	803,821
53	50	831,965	73	945,503
54	54	912,235	54	746,100
55	65	1,133,506	66	871,423
56	64	1,157,823	81	1,006,412
57	70	1,251,505	75	912,362
58	63	1,031,487	90	970,640
59	78	1,218,985	92	1,069,531
60	69	1,114,998	119	1,313,502
61	82	1,185,716	104	1,079,707
62	86	1,299,820	97	1,006,324
63	67	993,384	89	865,718
64	52	770,736	84	783,790
65	56	702,318	84	752,130

TABLE 6

THE NUMBER AND ANNUAL RETIREMENT  
ALLOWANCES OF BENEFICIARIES  
DISTRIBUTED BY AGE AS OF JULY 1, 1987

## DISABILITY RETIREES

## CONTINUED

AGE	MEN		WOMEN	
	NUMBER	ANNUAL ALLOWANCE	NUMBER	ANNUAL ALLOWANCE
66	60	\$ 732,122	76	\$ 697,535
67	26	335,381	74	642,710
68	31	391,035	67	509,739
69	25	275,894	78	574,916
70	24	200,113	44	274,830
71	12	90,896	50	333,239
72	13	97,853	48	287,774
73	10	106,805	27	162,347
74	4	39,544	35	192,055
75	2	10,812	28	167,650
76	4	26,969	17	95,742
77	3	12,192	21	115,380
78	4	30,224	9	50,927
79			10	48,192
80	6	44,259	17	78,924
81	2	7,871	14	56,503
82	2	9,015	12	57,680
83	4	21,760	10	46,929
84	1	8,882	12	65,182
85	4	21,717	7	28,450
86	3	22,514	4	13,659
87			2	6,044
88			2	13,013
89			3	11,211
90	1	3,661	1	2,811
91	1	6,570		
92			1	6,165
94			1	2,696
95	1	4,796		
96			1	2,433
TOTAL	1,485	\$ 22,489,046	2,479	\$ 26,368,243



**TABLE 6A**  
**THE NUMBER AND ANNUAL RETIREMENT**  
**ALLOWANCES OF BENEFICIARIES**  
**DISTRIBUTED BY AGE AS OF JULY 1, 1987**

**DISABILITY RETIREES**

AGE	NUMBER	AMOUNT
30	4 \$	46,868
31	6	76,340
32	9	118,916
33	11	156,822
34	12	149,853
35	26	322,408
36	23	320,164
37	24	326,646
38	49	682,942
39	46	633,580
40	53	732,214
41	50	749,948
42	43	668,130
43	50	754,397
44	70	955,036
45	70	1,037,608
46	58	800,292
47	56	830,025
48	86	1,368,682
49	82	1,194,859
50	80	1,147,397
51	81	1,288,033
52	97	1,522,888
53	123	1,777,468
54	108	1,658,335
55	131	2,004,929
56	145	2,164,235
57	145	2,163,867
58	153	2,002,127
59	170	2,288,516
60	188	2,428,500
61	186	2,265,423
62	183	2,306,144
63	156	1,859,102
64	136	1,554,526
65	140	1,454,448
66	136	1,429,657
67	100	978,091
68	98	900,774
69	103	850,810

TABLE 6A

THE NUMBER AND ANNUAL RETIREMENT  
ALLOWANCES OF BENEFICIARIES  
DISTRIBUTED BY AGE AS OF JULY 1, 1987

## DISABILITY RETIREES

## CONTINUED

AGE	NUMBER	AMOUNT
70	68 \$	474,943
71	62	424,135
72	61	385,627
73	37	269,152
74	39	231,599
75	30	178,462
76	21	122,711
77	24	127,572
78	13	81,151
79	10	48,192
80	23	123,183
81	16	64,374
82	14	66,695
83	14	68,689
84	13	74,064
85	11	50,167
86	7	36,173
87	2	6,044
88	2	13,013
89	3	11,211
90	2	6,472
91	1	6,570
92	1	6,165
94	1	2,696
95	1	4,796
96	1	2,433
TOTAL	3,964 \$	48,857,289

**TABLE 7**  
**THE NUMBER AND ANNUAL RETIREMENT**  
**ALLOWANCES OF BENEFICIARIES**  
**DISTRIBUTED BY AGE AS OF JULY 1, 1987**

AGE	MEN		WOMEN	
	NUMBER	ANNUAL ALLOWANCE	NUMBER	ANNUAL ALLOWANCE
25			1	\$ 16,830
27	1	\$ 5,150		
28			1	17,561
32			2	5,801
33	1	6,800	1	2,908
35	2	13,552		
37	1	10,559	2	18,481
38			1	3,319
39			4	27,814
40	2	7,916	1	2,393
41	2	19,638	1	5,973
42			1	8,325
43	2	10,442	1	11,251
44	1	5,739	2	38,270
45			1	8,344
46			2	13,053
47	1	6,033	3	21,598
48			3	34,210
49			1	6,448
50	1	4,845	3	62,066
51	1	6,424	6	42,944
52			5	66,169
53	2	12,843	6	76,808
54			8	104,976
55	3	22,118	8	77,881
56			12	158,386
57			16	224,225
58	4	29,039	17	241,138
59	2	38,706	22	225,713
60	5	16,726	24	261,587
61	4	26,936	33	389,839
62	7	46,798	35	258,690
63	6	42,849	44	490,517
64	6	60,357	43	409,167
65	8	51,906	47	507,192
66	14	96,343	46	492,780
67	16	105,852	61	477,611
68	15	84,680	55	426,949
69	30	172,769	60	472,281
70	24	144,402	76	568,508

TABLE 7

THE NUMBER AND ANNUAL RETIREMENT  
ALLOWANCES OF BENEFICIARIES  
DISTRIBUTED BY AGE AS OF JULY 1, 1987

## CONTINGENT ANNUITANTS

## CONTINUED

AGE	MEN		WOMEN	
	NUMBER	ANNUAL ALLOWANCE	NUMBER	ANNUAL ALLOWANCE
71	34	\$ 173,417	74	\$ 636,454
72	27	118,838	90	683,732
73	35	179,392	82	582,606
74	29	167,209	109	807,354
75	26	172,363	112	763,341
76	26	139,988	102	681,558
77	34	177,891	117	772,256
78	20	106,762	117	818,762
79	29	156,665	121	820,175
80	32	190,438	118	774,431
81	34	166,022	105	710,233
82	33	160,942	123	811,130
83	26	131,344	90	638,805
84	25	139,546	98	659,378
85	13	74,621	82	546,008
86	15	95,583	78	529,294
87	16	72,352	65	475,126
88	11	50,208	67	476,619
89	15	90,591	52	343,160
90	7	30,306	36	244,905
91	3	15,862	33	224,809
92	4	20,056	29	196,917
93	2	14,102	21	127,099
94	1	6,412	15	98,932
95	2	8,826	9	54,312
96	1	2,807	13	85,130
97	1	4,108	4	28,129
98	1	6,417	9	47,682
99			4	20,195
100			6	37,737
101			1	6,600
102			1	6,597
103			1	6,597
104			1	6,988
TOTAL	663	\$ 3,722,490	2,640	\$ 20,001,057

TABLE 7A  
 THE NUMBER AND ANNUAL RETIREMENT  
 ALLOWANCES OF BENEFICIARIES  
 DISTRIBUTED BY AGE AS OF JULY 1, 1987

CONTINGENT ANNUITANTS

AGE	NUMBER	AMOUNT
25	1 \$	16,830
27	1	5,150
28	1	17,561
32	2	5,801
33	2	9,708
35	2	13,552
37	3	29,040
38	1	3,319
39	4	27,814
40	3	10,309
41	3	25,611
42	1	8,325
43	3	21,693
44	3	44,009
45	1	8,344
46	2	13,053
47	4	27,631
48	3	34,210
49	1	6,448
50	4	66,911
51	7	49,368
52	5	66,169
53	8	89,651
54	8	104,976
55	11	99,999
56	12	158,386
57	16	224,225
58	21	270,177
59	24	264,419
60	29	278,313
61	37	416,775
62	42	305,488
63	50	533,366
64	49	469,524
65	55	559,098
66	60	589,123
67	77	583,463
68	70	511,629
69	90	645,050
70	100	712,910

TABLE 7A

THE NUMBER AND ANNUAL RETIREMENT  
ALLOWANCES OF BENEFICIARIES  
DISTRIBUTED BY AGE AS OF JULY 1, 1987

## CONTINGENT ANNUITANTS

## CONTINUED

AGE	NUMBER	AMOUNT
71	108 \$	809,871
72	117	802,570
73	117	761,998
74	138	974,563
75	138	935,704
76	128	821,546
77	151	950,147
78	137	925,524
79	150	976,840
80	150	964,869
81	139	876,255
82	156	972,072
83	116	770,149
84	123	798,924
85	95	620,629
86	93	624,877
87	81	547,478
88	78	526,827
89	67	433,751
90	43	275,211
91	36	240,671
92	33	216,973
93	23	141,201
94	16	105,344
95	11	63,138
96	14	87,937
97	5	32,237
98	10	54,099
99	4	20,195
100	6	37,737
101	1	6,600
102	1	6,597
103	1	6,597
104	1	6,988
TOTAL	3,303 \$	23,723,547

TABLE 8

THE NUMBER AND ANNUAL RETIREMENT  
ALLOWANCES OF BENEFICIARIES  
DISTRIBUTED BY AGE AS OF JULY 1, 1987

BENEFICIARIES RECEIVING ALLOWANCES  
UNDER SURVIVORS BENEFIT FUND

AGE	MEN		WOMEN	
	NUMBER	ANNUAL ALLOWANCE	NUMBER	ANNUAL ALLOWANCE
13	1	\$ 1,776		
15	1	1,776	1	\$ 2,581
16	2	8,356	2	3,904
17			2	5,218
18	2	3,348	3	10,065
19	3	7,998	2	6,307
20	2	8,243	2	8,295
21	3	4,500	1	2,133
22			1	1,116
24			1	16,449
26			2	9,622
28			1	7,332
29			1	6,453
32	4	14,254	1	6,935
33	1	4,388	2	11,192
34	4	13,978	1	1,501
35	3	11,488	6	38,703
36	4	18,376	5	23,611
37	5	19,474	6	30,643
38	1	4,846	6	58,066
39	2	10,036	10	70,913
40	3	13,370	11	53,782
41	5	13,323	11	64,021
42			20	134,255
43			15	101,836
44	8	27,795	21	146,692
45	5	30,308	14	112,308
46	7	31,587	16	159,580
47	7	31,568	19	163,728
48	3	10,848	19	142,348
49	10	41,065	22	176,165
50	6	34,126	26	210,381
51	6	35,128	32	242,283
52	7	38,871	30	266,147
53	9	48,332	32	284,439
54	8	39,988	23	207,587
55	12	57,479	48	465,772
56	17	105,302	48	470,492
57	13	58,151	56	572,955

TABLE 8

THE NUMBER AND ANNUAL RETIREMENT  
ALLOWANCES OF BENEFICIARIES  
DISTRIBUTED BY AGE AS OF JULY 1, 1987

BENEFICIARIES RECEIVING ALLOWANCES  
UNDER SURVIVORS BENEFIT FUND

CONTINUED

AGE	MEN		WOMEN	
	NUMBER	ANNUAL ALLOWANCE	NUMBER	ANNUAL ALLOWANCE
58	19	\$ 124,088	59	\$ 446,055
59	15	99,906	56	479,895
60	21	123,949	62	581,496
61	22	135,342	55	522,694
62	21	120,791	64	459,146
63	28	144,608	56	433,837
64	25	148,695	60	438,439
65	25	145,511	69	551,116
66	27	140,827	69	546,577
67	32	147,777	57	334,353
68	27	144,034	24	280,820
69	20	151,076	49	328,510
70	24	129,684	57	337,671
71	22	112,261	43	234,337
72	38	200,788	50	269,600
73	17	85,720	51	315,603
74	14	68,271	56	327,610
75	22	100,299	47	255,348
76	16	75,991	56	266,008
77	15	69,843	52	289,100
78	11	61,703	49	274,696
79	13	61,427	68	371,898
80	10	53,639	57	290,771
81	13	61,088	41	208,829
82	9	43,763	36	186,472
83	8	28,468	39	229,277
84	6	35,363	37	207,963
85	4	23,785	22	129,937
86	4	32,880	23	152,106
87	2	8,275	16	106,011
88	4	15,898	16	104,724
89	5	20,077	9	53,303
90			9	53,179
91	1	6,342	6	31,540
92			5	27,204
93			2	14,294
94			4	25,418
95			2	5,497
96			1	6,595
98			1	8,147
TOTAL	704	\$ 3,672,247	2,054	\$ 14,481,886



TABLE 8A

THE NUMBER AND ANNUAL RETIREMENT  
ALLOWANCES OF BENEFICIARIES  
DISTRIBUTED BY AGE AS OF JULY 1, 1987

BENEFICIARIES RECEIVING ALLOWANCES  
UNDER SURVIVORS BENEFIT FUND

AGE	NUMBER	AMOUNT
13	1 \$	1,776
15	2	4,357
16	4	12,260
17	2	5,218
18	5	13,413
19	5	14,305
20	4	16,538
21	4	6,633
22	1	1,116
24	1	16,449
26	2	9,622
28	1	7,332
29	1	6,453
32	5	21,189
33	3	15,580
34	5	15,479
35	9	50,191
36	9	41,987
37	11	50,117
38	7	62,912
39	12	80,949
40	14	67,152
41	16	77,344
42	20	134,255
43	15	101,836
44	29	174,487
45	19	142,616
46	23	191,167
47	26	195,296
48	22	153,196
49	32	217,230
50	32	244,507
51	38	277,411
52	37	305,018
53	41	332,771
54	31	247,575
55	60	523,251
56	65	575,794
57	69	631,106
58	78	570,143
59	71	579,801
60	83	705,445

THE NUMBER AND ANNUAL RETIREMENT  
ALLOWANCES OF BENEFICIARIES  
DISTRIBUTED BY AGE AS OF JULY 1, 1987

BENEFICIARIES RECEIVING ALLOWANCES  
UNDER SURVIVORS BENEFIT FUND

CONTINUED

AGE	NUMBER	AMOUNT
61	77 \$	658,036
62	85	579,937
63	84	578,445
64	85	587,134
65	94	696,627
66	96	687,404
67	89	482,130
68	51	424,854
69	69	479,586
70	81	467,355
71	65	346,598
72	88	470,388
73	68	401,323
74	70	395,881
75	69	355,647
76	72	341,999
77	67	358,943
78	60	336,399
79	81	433,325
80	67	344,410
81	54	269,917
82	45	230,235
83	47	257,745
84	43	243,326
85	26	153,722
86	27	184,986
87	18	114,286
88	20	120,622
89	14	73,380
90	9	53,179
91	7	37,882
92	5	27,204
93	2	14,294
94	4	25,418
95	2	5,497
96	1	6,595
98	1	8,147
TOTAL	2,758 \$	18,154,133

TABLE 9

THE DISTRIBUTION OF THE NUMBER AND ANNUAL ALLOWANCES BY AGE AS OF JULY 1, 1987  
CHILDREN WITHOUT AN ELIGIBLE PARENT

AGE OF YOUNGEST CHILD	NUMBER OF CHILDREN AGE																						TOTAL	ANNUAL ALLOWANCES	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22 AND OVER			
1	-																						-	-	
2		-																						-	-
3			3			1							1				1		1				7	\$ 38,547	
4				2		1																	3	10,086	
5					2		2		1	1													6	24,776	
6						7						1											8	41,144	
7							4	1		1	1		1										8	49,691	
8								9		1		1	2		1		1	1					16	66,327	
9									8		2		4	1		2							17	64,276	
10										7		2		2									11	38,610	
11											11		1	3	1	3		1	1		1		22	111,327	
12												10			2	2	6	2		2	1		25	103,847	
13													14		3	2	1	2	1	1			24	104,586	
14														13		4	2	1		1			21	90,813	
15															18		2	5	1	2	1		29	122,684	
16																24	2	5	2	1	2		36	144,635	
17																	31	5	6	4			46	201,398	
18																		22	1	5	4		32	116,011	
19																			20	1	1		22	101,188	
20																				14			14	58,258	
21																					17		17	71,432	
22 & OVER																							-	-	
TOTAL	-	-	3	2	2	9	6	10	9	10	14	14	22	20	25	37	46	44	33	31	27	-	364	\$1,559,636	



THE STATE TEACHERS RETIREMENT SYSTEM OF OHIO  
275 East Broad Street Columbus 43215-3771

ACCEPTANCE OF ACTUARIAL VALUATION AS OF JULY 1, 1987

STRS Actuary, John Thompson of Buck Consultants, presented the Actuarial Valuation as of July 1, 1987, which will be made a part of the minutes by reference.

Following the report, Dr. Bowers moved, seconded by Mr. Koenig, to accept the Actuarial Valuation as of July 1, 1987, which includes the following allocations from investment income:

1. \$100 million to strengthen the reserves of the Health Care Stabilization Fund.
2. \$50 million (approximately) to cover cost of the proposed ad hoc cost-of-living increase to certain annuitants who retired prior to 1980, as provided in S.B.305 or H.B.653.
3. \$100 million to provide advance reserves for future purchase of service transactions by members.

Upon roll call the vote was as follows: Dr. Bowers, yes; Mr. Koenig, yes; Mr. Williams, yes; Mr. Taylor, yes; Ms. Augusta, yes; Mr. McDonald, yes; Mrs. Peters, yes; Mr. Jewell, yes; Mr. Casey, yes. Motion carried.