

STATE EMPLOYEES' RETIREMENT SYSTEM

Actuarial Valuation
as of
December 31, 1978

HUGGINS
& COMPANY, INC.

CONSULTING ACTUARIES • EMPLOYEE BENEFIT PLAN CONSULTANTS

1401 WALNUT STREET • PHILADELPHIA PA 19102 • (215) 665-1401

May 15, 1979

Mr. Richard L. Witmer, Secretary
State Employees' Retirement Board
204 Labor and Industry Building
Harrisburg, Pennsylvania 17120

STATE EMPLOYEES' RETIREMENT SYSTEM

Actuarial Valuation as of December 31, 1978

Dear Mr. Witmer:

Herewith please find the valuation report showing statements of assets, account balances and actuarial liabilities of the State Employees' Retirement System as of December 31, 1978, together with an actuarial balance sheet in which these statements are consolidated. Reserve liabilities and statistical tables were determined based upon the data submitted by the Commonwealth.

There are attached supporting schedules from A to R, inclusive.

Respectfully submitted,

HUGGINS & COMPANY, INC.

By



ROBERT H. SMITH, F.S.A.

Member American Academy of Actuaries

RHS:lb

PART I - VALUATION AS OF DECEMBER 31, 1978

A complete actuarial valuation of the State Employees' Retirement System was made as of December 31, 1978 in which the actuarial liabilities were calculated, based on the contributions and benefits in effect on that date. These results were compared with the account balances as of that date and, after adjusting the account balances for deficiencies or surpluses, an actuarial balance sheet was prepared.

This Part I consists of the following three statements:

1. Assets of the Retirement Fund as of December 31, 1978.
2. Liabilities of the Retirement Fund as of December 31, 1978, showing the various account balances.
3. Actuarial liabilities as of December 31, 1978.

In the statement of the assets, it will be noted that the total book value of investments, after adjustment for amortization, amounted to \$2,465,322,524. In addition to the other items, it will be noted that there was an amount of \$63,452,377 of Accounts Receivable which represents amounts due from the Commonwealth. The total assets amount to \$2,567,413,663.

The account balances total \$2,567,413,663, matching the assets of the Retirement Fund, and are allocated as shown in the statement. The account balance in the State Annuity Accumulation Account of \$334,090,286 is before any transfers to adjust account balances.

Comments on the statement of actuarial liabilities are made following the statement. It will be noted that the total actuarial liabilities amount to \$6,385,913,639.

STATE EMPLOYEES' RETIREMENT FUND

STATEMENT OF ASSETS AS OF DECEMBER 31, 1978

Cash	\$	89,908
<u>Investments</u>		
Unmatured (Par Value) of investments	\$2,496,683,277	
Net Accrual on Investments after amortization	<u>31,360,753</u>	2,465,322,524
Interest due and accrued		35,573,835
Members contribution in transit		2,975,019
Accounts Receivable (Due from Commonwealth)		<u>63,452,377</u>
TOTAL ASSETS		<u>\$2,567,413,663</u>

STATE EMPLOYEES' RETIREMENT FUND

STATEMENT OF ACCOUNT BALANCES AS OF DECEMBER 31, 1978

Members' Savings Account	\$ 816,928,043
Annuity Reserve Account	1,352,941,417
State Police Benefit Account	139,803,045
Enforcement Officers Benefit Account	11,159,776
State Accumulation Account	334,090,286
Supplemental Annuity Account	(88,773,740)
Accounts payable (Miscellaneous Liability)	<u>1,264,836</u>
 TOTAL ACCOUNT BALANCES AND MISCELLANEOUS LIABILITIES	 <u>\$2,567,413,663</u>

STATE EMPLOYEES' RETIREMENT FUND

STATEMENT OF ACTUARIAL LIABILITIES AS OF DECEMBER 31, 1978

Present value of benefits payable on account of annuitants and beneficiaries from -

Annuity Reserve Account:

Superannuation	\$1,045,601,681	
Disability	66,818,016	
Withdrawal	<u>138,463,250</u>	
Sub-total		\$1,250,882,947
Supplemental Annuities		<u>73,384,435</u>
Total		\$1,324,267,382

State Police Benefit Account 96,568,128

Enforcement Officers Benefit Account 8,167,624

Total for annuitants and beneficiaries \$1,429,003,134

Present value of benefits to active and inactive members for -

Superannuation and withdrawal	\$4,411,329,398	
Disability	84,483,635	
Death	322,554,649	
Refunds	<u>137,277,987</u>	
Total for active and inactive members		\$4,955,645,669

Miscellaneous 1,264,836

TOTAL ACTUARIAL LIABILITIES \$6,385,913,639

Liability related to present annuitants and beneficiaries ... \$1,429,003,134

A breakdown of the liability of \$1,429,003,134 related to present annuitants and beneficiaries according to the type of benefit payment is shown in the following table.

<u>Category of Annuitants or Beneficiaries</u>	<u>Liability as of December 31, 1978 Total Annuity Reserve</u>
<u>Other Than State Police or Enforcement Officers</u>	
Superannuation	\$1,045,601,681
Disability	66,818,016
Withdrawal	<u>138,463,250</u>
Sub-total	\$1,250,882,947
Supplemental Annuities	<u>73,384,435</u>
Total	\$1,324,267,382
<u>State Police</u>	96,568,128
<u>Enforcement Officers</u>	<u>8,167,624</u>
Total Liabilities	<u>\$1,429,003,134</u>

It is interesting to compare the above liabilities with the corresponding amounts shown in the statement of account balance on page 3. The liabilities of \$1,324,267,382 must be compared with the Annuity Reserve Account balance of \$1,352,941,417 indicating a surplus of \$28,674,035 in the Annuity Reserve Account. A transfer of this surplus amount should be made from the Annuity Reserve Account as of December 31, 1978 in order to bring the account into balance with the corresponding liability.

The required reserves for benefits payable to retired State Police or their beneficiaries amount to \$96,568,128. The corresponding account balance is \$139,803,045 which produces a balance of assets over liabilities of \$43,234,917. In prior years two accounts were maintained for State Police: State Police Members' Annuity Reserve Account and State Police Benefit Account. Under Act 31 there is only one account, State Police Benefit Account. Reserves for annuitants are transferred to this account upon a member's re-

tirement. Special contributions for active members are also credited to this account. The balance of \$43,234,917 previously referred to is not a surplus but is a reserve for benefits payable to State Police members who are currently active or inactive.

The required reserves for benefits payable to retired Enforcement Officers and their beneficiaries amount to \$8,167,624. This reflects the reserves for both the members' portion and the State's portion as noted earlier in this report. The corresponding account balance is \$11,159,776 which produces a balance of assets over liabilities of \$2,992,152. One account, Enforcement Officers Benefit Account, is maintained under Act 31 for Enforcement Officers in the same manner as the State Police Benefit Account described above.

Liabilities for supplemental retirement allowances were created by Act 230, approved July 31, 1968, which also made provision for a Supplemental Retirement Allowance Account to receive the Commonwealth appropriations for supplemental and cost-of-living allowances. Act 31, approved March 1, 1974, made provision for additional supplemental allowances. When the liabilities for supplemental retirement allowances were created, corresponding funds were transferred to the Annuity Reserve Account. The transfer to the Annuity Reserve Account was charged to the Supplemental Annuity Account creating a deficiency in this account. As the Commonwealth appropriates moneys to fund supplemental retirement allowances, these amounts are credited to the Supplemental Annuity Account. The Supplemental Annuity Account shows a negative balance of \$88,773,740 as of December 31, 1978. The actuarial liabilities as of December 31, 1978 for Supplemental Annuities payable amount to \$73,384,435. This later amount represents the value as of December 31, 1978 of all supplemental annuities payable in the future as a result of Act 230 and Act 31 and is part of the total liability to be offset by the Annuity Reserve Account. The deficiency of \$88,773,740 in the Supplemental Annuity Account represents the unfunded portion of the original deficiency that existed in this account.

In the data received from the Commonwealth we were furnished the amounts of supplemental annuities which became effective under Act 31, approved March 1, 1974 as well as the amounts of supplemental annuities which became effective under Act 230, approved July 1, 1968. Of the total liability of \$73,384,435 shown above for supplemental annuities, \$4,993,774 represents the liability for supplemental annuities which became effective in 1968 and \$68,390,661 represents the liability for supplemental annuities which became effective in 1974.

The number of present annuitants and beneficiaries and their annual annuities as of December 31, 1978 are shown in the following table. This information reflects the data supplied us by the Commonwealth.

Category of Annuitants or Beneficiaries	Annual Annuities as of December 31, 1978				Total Annuity
	Number	Basic	Supplemental		
			1968	1974	
<u>Other Than State Police or Enforcement Officers</u>					
Superannuation	33,096	\$108,430,836	\$ 709,845	\$6,822,893	\$115,963,574
Disability	2,528	7,367,349	46,508	264,278	7,678,135
Withdrawal	<u>4,808</u>	<u>12,363,902</u>	<u>1,625</u>	<u>614,198</u>	<u>12,979,725</u>
Sub-total	40,432	\$128,162,087	\$ 757,978	\$7,701,369	\$136,621,434
<u>State Police</u>	1,450	8,460,000	104,540	718,903	9,283,443
<u>Enforcement Officers</u> ...	<u>115</u>	<u>846,018</u>	<u>4,480</u>	<u>55,453</u>	<u>905,951</u>
Totals	<u>41,997</u>	<u>\$137,468,105</u>	<u>\$ 866,998</u>	<u>\$8,475,725</u>	<u>\$146,810,828</u>

The age distributions of the annuitants and beneficiaries in the various kinds of retirement as supplied by the Commonwealth are shown in schedules at the end of this report, as listed in the Appendix.

Liability related to present active and inactive members \$4,955,645,669

The data related to the active and inactive members of the system as supplied by the Commonwealth are summarized briefly in the table below.

Active members:

	<u>Male</u>	<u>Female</u>	<u>Total</u>
Number	73,112	54,305	127,417
Salaries	\$1,146,108,973	\$643,908,572	\$1,790,017,545

Inactive Members:

There were 1,325 inactive members for whom a liability was calculated and included in the valuation results.

Miscellaneous \$ 1,264,836

This item is the total of the reserve for outstanding checks, member withdrawals payable, annuities payable and payroll deduction payable.

Total actuarial liabilities \$ 6,385,913,639

The total actuarial liability represents the present value of all obligations of the System for all expected future benefits, both those related to service prior to December 31, 1978 and those related to subsequent service.

A summary of the major benefit provisions and the provisions related to member contributions are shown in Schedule Q at the end of this report.

The actuarial assumptions used in this valuation are summarized in Schedule R at the end of this report. These are based on the experience of the Retirement System in 1971-1975 with interest assumed at 5½% per annum.

PART II - REQUIRED TRANSFERS TO ADJUST ACCOUNT BALANCE

In discussing the various account balances in Part I, reference was made to a reserve transfer that should be made as of December 31, 1978 in order to bring the accounts into balance. A summary of the account balances and actuarial liabilities, along with the corresponding surplus or deficiency, is as follows:

<u>Fund</u>	<u>Account Balance</u>	<u>Actuarial Liability</u>	<u>Surplus (+) or Deficiency (-)</u>
Annuity Reserve Account ...	\$1,352,941,417	\$1,324,267,382	(+) \$28,674,035

As previously mentioned in Part I, the adjustment to be made to the books to accord with the requirements of Act 31 of 1974 lead to the following transfer:

<u>From</u>	<u>To</u>	<u>Amount</u>
Annuity Reserve Account	State Accumulation Account	<u>\$28,674,035</u>

As result of this transfer the various account balances are as follows after adjustment:

	<u>Adjusted Account Balance</u>
Members' Annuity Savings Account	\$ 816,928,043
Annuity Reserve Account	1,324,267,382
State Police Benefit Account	139,803,045
Enforcement Officers Benefit Account	11,159,776
State Accumulation Account	362,764,321
Supplemental Annuity Account	(-) 88,773,740
Miscellaneous	<u>1,264,836</u>
Total Account Balances	<u>\$2,567,413,663</u>

These account balances are now ready for use in our actuarial balance sheet where they appear as "Present Assets" when compared with the actuarial liabilities. The actuarial balance sheet is presented on the following page.

ACTUARIAL BALANCE SHEET SHOWING PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES
of STATE EMPLOYEES' RETIREMENT SYSTEM as of DECEMBER 31, 1978

A S S E T S

L I A B I L I T I E S

<p><u>Present assets:</u></p> <p>Members' Annuity Savings Account \$ 816,928,043</p> <p>Annuity Reserve Account 1,324,267,382</p> <p>State Police Benefit Account 139,803,045</p> <p>Enforcement Officers Benefit Account 11,159,776</p> <p>State Accumulation Account 362,764,321</p> <p>Supplemental Annuity Account (-) 88,773,740</p> <p>Miscellaneous <u>1,264,836</u></p> <p>Total present assets (book value) \$2,567,413,663*</p> <p><u>Present value of future contributions</u></p> <p>Members' Savings Account (Employee) \$ 876,624,411</p> <p>State Accumulation Account (Employer) 2,853,101,825</p> <p>Supplemental Annuity Account (Employer) <u>88,773,740</u></p> <p>Total future assets <u>3,818,499,976</u></p> <p>TOTAL ASSETS <u>\$6,385,913,639</u></p> <p>*Total present assets (book value) distributed as follows:</p> <p>Cash \$ 89,908</p> <p>Investments (net of amortization) 2,465,322,524</p> <p>Interest due and accrued 35,573,835</p> <p>Members contribution in transit 2,975,019</p> <p>Due from Commonwealth <u>63,452,377</u></p> <p>Total present assets <u>\$2,567,413,663</u></p>	<p><u>Present value of benefits payable on account of annuitants and beneficiaries from</u></p> <p>Annuity Reserve Account:</p> <p>Superannuation \$ 1,045,601,681</p> <p>Disability 66,818,016</p> <p>Withdrawal 138,463,250</p> <p>Sub-total \$1,250,882,947</p> <p>Supplemental Annuities: 1968 4,993,774</p> <p>1974 <u>68,390,661</u></p> <p>Total \$1,324,267,382</p> <p>State Police Benefit Account 96,568,128</p> <p>Enforcement Officers Benefit Account ... <u>8,167,624</u></p> <p>Total for annuitants and beneficiaries . \$1,429,003,134</p> <p><u>Present value of benefits to active and inactive members for -</u></p> <p>Superannuation and withdrawal \$ 4,411,329,398</p> <p>Disability 84,483,635</p> <p>Death 322,554,649</p> <p>Refunds 137,277,987</p> <p>Total for active and inactive members . \$4,955,645,669</p> <p>Miscellaneous <u>1,264,836</u></p> <p>TOTAL LIABILITIES <u>\$6,385,913,639</u></p>
--	--

↑
1978 assets

PART III - CONTRIBUTION RATES

In the actuarial balance sheet submitted on page 10, the present assets of \$2,567,413,663, represented by the various account balances, are compared with the total liabilities of \$6,385,913,639. The difference of \$3,818,499,976 represents the future assets representing the present value of expected future member and employer contributions.

It will be noted that the present value of future employee contributions appears as \$876,624,411. In addition, the present value of the employer contributions to the State Accumulation Account is \$2,853,101,825 and to the Supplemental Annuity Account is \$88,773,740.

Section 5508(b) of the State Employees' Retirement Code states:

"The employer normal contribution rate shall be determined after each actuarial valuation on the basis of an annual five and one-half percent (5½%) interest rate and such mortality and other tables as shall be adopted by the board. Until all accrued liability contributions have been completed, the employer normal contribution rate shall be determined as a level percentage of the compensation of the average new active member, which percentage, if contributed on the basis of his prospective compensation throughout his entire period of active State service, would be sufficient to fund the liability for any prospective benefit payable to him, except a supplemental benefit as provided in Section 5708, in excess of that portion funded by his prospective member contributions. After all accrued liability contributions have been completed, the employer normal contribution rate shall be determined by deducting from the

present value of the liabilities for all prospective benefits, except supplemental benefits as provided in Section 5708, the sum of the total assets in the fund on the valuation date, excluding the balance in the supplemental annuity account, and the present value of prospective member contributions, and dividing the remainder by the present value of the future compensation of all active members."

Since accrued liability contributions have not been completed, we determined the employer normal contribution rate in accordance with the above provisions. We first obtained the normal contribution rate, as a level percentage of compensation, which would be required for new active members to fund the liability for any prospective benefit payable to such new members. In making this contribution we used data for all active members who had not yet completed one year of credited service. Using the entry age normal cost method, the normal cost contribution, expressed as a level percentage of future compensation of new employees, was determined as follows:

<u>Benefit</u>	<u>Normal Cost as a Percent of Payroll for Active Members</u>
Superannuation and Withdrawal	8.79%
Disability	0.20
Death	0.48
Refunds	<u>1.51</u>
Total normal cost percentage	10.98%

Section 5508(b) made reference to the normal contribution rate for prospective benefits in excess of that portion funded by the members' contributions. In determining what benefits are provided by a member's contributions as contrasted to the employer's contribution, it should be kept in mind that if a member withdraws before he has a non-forfeitable right to a benefit under the plan, his contributions are withdrawable. The corresponding employer contri-

butions made for such terminating employee remain in the fund. Thus, while all Class A members contribute five percent of pay, the present value of such future contributions is not as great as a corresponding contribution of five percent of total payroll by the employer. Therefore, in determining what benefits are provided by future member contributions, it is necessary to reduce such contribution rate by the value of the refunds which will be made to the withdrawing participants. This was determined to be 1.51% of payroll as indicated in the above table of normal cost percentages. Deducting this refund value of 1.51% of future compensation from the total contribution rate of 5% leaves a balance of 3.49% as the effective percentage of compensation which will be available as member contributions to provide benefits to a new participant. Deducting this effective net contribution of 3.49% from the total normal cost percentage of 10.98% shown above, leaves a balance of 7.49% as the employer normal contribution rate contemplated under Section 5508(b) of the State Employees Retirement Code.

As shown in the balance sheet on page 10, the present value of future employer contributions (i.e. future contributions to the State Accumulation Account) is \$2,853,101,825. Part of this represents the present value of future employer normal cost contributions, and part of this represents the value of future contributions to fund the unfunded accrued liability. This breakdown is shown below:

Present value of future employer contributions other than for Supplemental Retirement Allowances ...	\$2,853,101,825
Present value of future normal cost contributions (7.49% of future payroll)	<u>1,147,768,638</u>
Present value of future contributions to fund the Unfunded Accrued Liability	\$1,705,333,187

The present value of future contributions to fund the unfunded accrued liability of \$1,705,333,187 is the present unfunded accrued liability since the present value of all future contributions for this purpose must be equal to this liability.

The unfunded accrued liability of \$1,705,333,187 is composed of two parts: one part is to be funded over 30 years from July 1, 1969 and the other part over 30 years from July 1, 1974. The two parts and the amount required to fund each over the applicable period allowing for annual salary increases of 4% are as follows:

<u>Funding Period:</u> <u>30 Years from July 1</u>	<u>Amount of</u> <u>Liability</u>	<u>Annual Payment to Fund</u> <u>Amount</u>	<u>Percent*</u>
1969	\$1,216,248,751	\$71,717,009	3.80%
1974	<u>489,084,436</u>	<u>23,982,957</u>	<u>1.27</u>
	\$1,705,333,187	\$95,699,966	5.07%

*Payment for 1979 expressed as a percentage of the estimated total payroll for active members in 1979 of \$1,888,584,258.

The accrued liability for supplemental allowances is also composed of two parts: one part is to be funded over 20 years from July 1, 1969 and the other part over 20 years from July 1, 1974 on the basis of level payments for each part. This may be summarized as follows:

<u>Funding Period:</u> <u>20 Years from July 1</u>	<u>Amount of</u> <u>Liability</u>	<u>Annual Payment to Fund</u> <u>Amount</u>	<u>Percent*</u>
1969	\$ 5,621,171	\$ 719,188	0.04%
1974	<u>83,152,569</u>	<u>8,112,446</u>	<u>0.43</u>
	\$ 88,773,740	\$ 8,831,634	0.47%

*Payment for 1979 expressed as a percentage of the estimated total payroll for active members in 1979.

Section 5508(d) provides in part that, in addition to determining the contributions required for other members of the Retirement System "...The actuary shall determine the Commonwealth or other employer contributions required for active members of Class C and officers of the Pennsylvania State Police and enforcement officers and investigators of the Pennsylvania Liquor Control Board who are members of Class A to finance their benefits in excess of those to which other members of Class A are entitled. Such additional contributions shall be determined separately for officers and employees of the Pennsylvania State Police and for enforcement officers and investigators of the Pennsylvania Liquor Control Board."

As noted earlier in this report, the amounts currently carried in the State Police Benefit Account and the Enforcement Officers' Benefit Account exceed the liability for pensioners and beneficiaries corresponding to these two accounts. Thus, assets are currently on hand to meet at least part of the liability for the special benefit payable to these two categories of participants. The liability for the special benefit in excess of the assets on hand was expressed as a percentage of the future compensation of the two groups involved in order to determine the extra contribution to be made. In view of the assets held in the Enforcement Officers' Benefit Account in comparison to liabilities, it is recommended that no special contribution be made for enforcement officers. For State Police, the liability for special benefits in excess of assets currently on hand was expressed as a percent of payroll for State Police. This percent was found to be 3.25%. It should be pointed out that, in the past, the extra contribution for State Police and Enforcement Officers was expressed as a percentage of total payroll of all participants covered under the plan. The percentage contribution previously mentioned is to be applied to the total payroll for State Police only and not the total payroll of all covered participants under the plan.

The cost discussed above, excluding the special contribution to be made for State Police, expressed as a percentage of the total payroll of all active covered participants may be summarized as follows:

Total Normal Cost	10.98%
Member Deductions	<u>3.49</u>
Employer portion of Normal Costs	7.49%
Payment on Unfunded Accrued Liability other than for Supplemental Allowances	5.07
Payment on Unfunded Accrued Liability for Supplemental Allowances	<u>0.47</u>
Total Employer Contribution Rate	<u>13.03%</u>

PART IV - SUMMARY

In Part I of the report, we presented the statements of assets, account balances and actuarial liabilities as of December 31, 1978. The actuarial liabilities were discussed in some detail.

In Part II, we discussed the surplus or deficiency in each account and recommended a transfer as of December 31, 1978 in order to bring the Annuity Reserve Account into balance with the actuarial liability. This transfer is as follows:

<u>From</u>	<u>To</u>
Annuity Reserve Account	State Accumulation Account \$28,674,035

Using this adjusted account balance we developed an actuarial balance sheet in which we compared the present assets and the future assets with the total actuarial liability, with the future assets serving as the balancing item.

In Part III, we developed the following rates of employer contribution to the Retirement Fund:

Normal contribution rate-State Accumulation Account ..	7.49%
Accrued liability contribution rate - State	
Accumulation Account	<u>5.07</u>
Total contribution rate-State Accumulation Account ...	12.56
Accrued liability contribution rate -	
Supplemental Annuity Account	<u>0.47</u>
Total employer contribution rate	<u>13.03%</u>

The total unfunded accrued liability as of December 31, 1978 is \$1,705,333,187.

The special contribution for State Police was found to be 3.25% of the total payroll for State Police.

Shown below is a summary of the number of active participants together with their total salaries that have been used in the last four valuations. The average salary is also shown for each of these four years.

	As of December 31,			
	<u>1978</u>	<u>1977</u>	<u>1976</u>	<u>1975</u>
Number	127,417	126,831	128,675	129,396
Total salaries	\$1,790,017,545	\$1,729,237,182	\$1,627,627,072	\$1,474,081,506
Average salary	\$ 14,048	\$ 13,634	\$ 12,649	\$ 11,392

APPENDIX - SCHEDULES OF MEMBERSHIP as of DECEMBER 31, 1978

The following schedules of the membership as of December 31, 1978 are supporting schedules to the valuation because it was upon this membership that the liabilities were calculated. The schedules show the distribution of the membership by age nearest birthday as of December 31, 1978, separated according to whether or not they are contributors or annuitants. The schedules also show the annual salaries in the case of active members and the total amounts of annuities in the case of annuitants.

In Schedule A are shown, according to age nearest birthday and class of membership, the total number and annual salary of the male members still remaining in active membership. At the end of the schedule, their average age and average annual salary is shown.

In Schedule B are shown, according to age nearest birthday and class of membership, the total number and annual salary of the female members still remaining in active membership. At the end of the schedule, their average age and average salary is shown.

In Schedule C is shown a summary of the two preceding schedules, including the total number of active members and the total annual salaries both by sex and by class. Due to two new changes, a summary is given of Class A by category. One change is that all recently hired members will be put into Class A. Second, the categories take over the function of the old classes.

In Schedule D are shown, according to age nearest birthday, the number of male members who are receiving superannuation annuities and the total amounts of the basic monthly benefits and supplemental monthly benefits.

In Schedule E are shown, according to age nearest birthday, the number and amount of the basic monthly benefits and supplemental monthly benefits being paid to surviving male beneficiaries of superannuation annuitants.

In Schedule F are shown, according to age nearest birthday, the number of female members who are receiving superannuation annuities and the total amounts of the basic monthly benefits and supplemental monthly benefits.

In Schedule G are shown, according to age nearest birthday, the number and amount of the basic monthly benefits and supplemental monthly benefits being paid to surviving female beneficiaries of superannuation annuitants.

In Schedule H are shown, according to age nearest birthday, the number of male members who are receiving disability annuities and the total amounts of members' basic monthly benefits and supplemental monthly benefits.

In Schedule I are shown, according to age nearest birthday, the number of female members who are receiving disability annuities and the total amounts of members' basic monthly benefits and supplemental monthly benefits.

In Schedule J are shown, according to sex and age nearest birthday, the number and amount of both the basic monthly benefit and supplemental monthly benefit being paid to surviving beneficiaries of the disabled annuitants.

In Schedule K are shown, according to age nearest birthday, the number of male members who are receiving withdrawal annuities and the total amount of the basic monthly benefit and supplemental monthly benefit.

In Schedule L are shown, according to age nearest birthday, the number and amount of the basic monthly benefit and supplemental monthly benefit being paid to surviving male beneficiaries of the withdrawal annuitants.

In Schedule M are shown, according to age nearest birthday, the number of female members who are receiving withdrawal annuities and the total amount of the basic monthly benefit and supplemental monthly benefit.

In Schedule N are shown, according to age nearest birthday, the number and amount of the basic monthly benefit and supplemental monthly benefit being paid to surviving female beneficiaries of the withdrawal annuitants.

In Schedule O is shown, the summary of all annuities outstanding as of December 31, 1978 whether superannuation, disability, withdrawal or supplemental and whether being paid to members or their survivors.

In Schedule P is shown, for comparison, the outstanding membership both active and annuitant as of December 31, 1975, December 31, 1976, December 31, 1977 and December 31, 1978.

In Schedule Q, the benefits and member contributions and provisions of the plan as of December 31, 1978 are summarized.

The actuarial assumptions used in this valuation are shown in Schedule R.

ACTIVE MEMBERSHIP as of December 31, 1978

M A L E

CLASS	A & B		C		D		E		GRAND TOTAL	
	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary
17	4	\$ 17,660					4	\$ 17,660		
18	23	107,902					23	107,902		
19	121	831,801					121	831,801		
20	209	1,691,832					209	1,691,832		
21	318	2,766,104					318	2,766,104		
22	505	4,534,550					505	4,534,550		
23	702	6,727,964					702	6,727,964		
24	939	9,437,682					939	9,437,682		
25	1,246	13,287,751					1,246	13,287,751		
26	1,492	16,903,721					1,492	16,903,721		
27	1,575	18,840,893					1,575	18,840,893		
28	1,675	20,603,531	27	\$ 514,076			1,702	21,117,607		
29	2,030	26,287,420	50	951,748			2,080	27,239,168		
30	2,148	29,176,157	129	2,479,200	1	\$ 15,600	2,278	31,670,957		
31	2,338	32,591,088	215	4,148,083	3	46,800	2,559	36,839,530		
32	2,544	37,067,586	368	7,130,426	-	-	2,913	44,217,512		
33	1,728	25,646,966	254	4,906,890	4	62,400	1,986	30,616,256		
34	1,580	24,023,118	241	4,668,461	-	-	1,822	28,711,013		
35	1,640	25,673,775	266	5,176,131	-	-	1,909	30,898,119		
36	1,853	29,936,112	252	4,945,109	1	15,600	2,108	34,935,821		
37	1,518	24,711,935	185	3,657,909	2	31,200	1,707	28,440,044		
38	1,426	23,727,701	176	3,481,050	4	62,400	1,606	27,271,151		
39	1,353	23,192,836	150	3,004,505	4	62,400	1,511	26,359,366		
40	1,372	23,497,586	113	2,294,140	4	62,400	1,492	25,905,772		
41	1,364	23,440,569	87	1,736,102	2	31,200	1,459	25,340,801		
42	1,315	22,402,032	83	1,715,566	2	31,200	1,405	24,243,666		
43	1,356	23,618,548	68	1,422,615	4	62,400	1,436	25,293,564		
44	1,408	24,744,885	71	1,494,642	2	31,200	1,487	26,445,513		

SCHEDULE A (1)

ACTIVE MEMBERSHIP as of December 31, 1978

M A L E

CLASS	A & B		C		D		E		GRAND TOTAL	
	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary
45	1,394	\$ 24,159,407	49	\$ 1,035,748	2	\$ 31,200	4	\$ 91,752	1,449	\$ 25,318,107
46	1,434	25,200,522	36	791,749	2	31,200	8	325,098	1,480	26,348,569
47	1,522	26,573,722	48	1,022,422	7	109,200	18	493,912	1,595	28,199,256
48	1,640	28,633,951	67	1,487,499	3	46,800	9	300,314	1,719	30,468,564
49	1,607	27,969,040	44	964,070	5	63,166	10	286,559	1,666	29,282,835
50	1,538	26,301,864	39	875,853	3	46,800	16	505,945	1,596	27,730,462
51	1,793	30,272,975	48	1,101,999	5	78,000	22	692,721	1,868	32,145,695
52	1,657	27,809,611	52	1,157,101	6	93,600	18	489,981	1,733	29,550,293
53	1,781	30,118,477	46	1,056,221	2	31,200	20	563,574	1,849	31,769,472
54	1,775	29,766,134	43	1,014,225	6	93,600	27	756,962	1,851	31,630,921
55	1,801	30,088,600	36	804,478	4	62,400	20	559,104	1,861	31,514,582
56	1,810	29,885,446	29	662,827	10	156,000	20	549,491	1,869	31,253,754
57	1,731	28,376,896	18	391,642	8	128,793	15	461,163	1,772	29,358,494
58	1,701	27,717,798	15	318,972	3	46,800	28	860,602	1,747	28,944,172
59	1,668	26,483,490	10	226,910	5	78,000	20	669,131	1,703	27,457,531
60	1,473	22,773,501	7	176,533	6	123,000	17	430,779	1,503	23,503,813
61	1,410	21,694,507	-	-	4	62,400	19	531,711	1,433	22,288,618
62	1,304	19,707,911	4	56,483	5	78,000	19	549,008	1,332	20,391,402
63	972	14,678,169	-	-	1	15,600	19	641,826	992	15,335,595
64	843	12,785,832	-	-	4	62,400	18	579,524	865	13,427,756
65	715	11,125,049	2	42,984	3	46,800	10	266,738	730	11,481,571
66	375	5,668,381	-	-	-	-	20	619,520	395	6,287,901
67	308	4,602,444	4	62,400	4	62,400	10	236,452	322	4,901,296
68	220	3,169,557	-	-	-	-	13	361,573	233	3,531,130
69	162	2,333,070	5	77,400	5	77,400	12	379,760	179	2,790,230

SCHEDULE A (2)

ACTIVE MEMBERSHIP as of December 31, 1978

M A L E

CLASS	A & B		C		D		E		GRAND TOTAL	
	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary
Age										
70	138	\$ 2,186,990			3	\$ 46,800	6	\$ 197,097	147	\$ 2,430,887
71	111	1,698,912							111	1,698,912
72	72	1,128,064					2	112,500	74	1,240,564
73	67	957,823							67	957,823
74	48	702,173							48	702,173
75	43	601,873					1	55,000	44	656,873
76	21	264,805							21	264,805
77	35	591,877	1	\$ 957					36	592,834
78	15	186,736							15	186,736
79	168	1,036,490							168	1,036,490
80	19	219,800							19	219,800
81	6	109,934							6	109,934
82	5	93,453							5	93,453
83	6	73,789							6	73,789
84	2	48,527							2	48,527
85	3	56,501							3	56,501
86	1	10,752							1	10,752
88	3	22,371							3	22,371
Totals	<u>69,179</u>	<u>\$1,063,476,929</u>	<u>3,329</u>	<u>\$66,915,326</u>	<u>139</u>	<u>\$2,186,359</u>	<u>465</u>	<u>\$13,530,359</u>	<u>73,112</u>	<u>\$1,146,108,973</u>
Average Age	<u>43.77</u>		<u>38.08</u>		<u>52.24</u>		<u>55.95</u>		<u>43.61</u>	
Average Salary	<u>\$15,372</u>		<u>\$20,101</u>		<u>\$15,729</u>		<u>\$29,098</u>		<u>\$15,676</u>	

ACTIVE MEMBERSHIP as of December 31, 1978

F E M A I E

CLASS	A & B		C		D		E		GRAND TOTAL
	Age	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.	
18	88	\$	488,582					88	\$ 488,582
19	283		2,193,356					283	2,193,356
20	545		4,523,152					545	4,523,152
21	759		6,650,315					759	6,650,315
22	1,033		9,291,561					1,033	9,291,561
23	1,305		12,465,319					1,305	12,465,319
24	1,645		16,278,393					1,645	16,278,393
25	1,869		19,347,359					1,869	19,347,359
26	1,989		21,233,077					1,989	21,233,077
27	1,937		21,220,758					1,937	21,220,758
28	1,812		20,325,210	1	\$ 18,912			1,813	20,344,122
29	1,660		19,371,909	6	112,736			1,666	19,484,645
30	1,576		18,466,397	1	18,648			1,577	18,485,045
31	1,542		18,429,117	2	37,542			1,544	18,466,659
32	1,539		18,879,294	3	56,872		1	\$ 15,612	18,951,778
33	1,042		12,720,413	2	31,962		-	1,044	12,752,375
34	942		11,606,887	2	37,260			944	11,644,147
35	999		12,144,307	-	-			999	12,144,307
36	1,094		13,408,176	-	-			1,094	13,408,176
37	896		10,902,127	-	-			896	10,902,127
38	884		11,147,238	-	-			884	11,147,238
39	901		11,172,162	-	-		1	13,268	11,185,430
40	957		11,952,495	2	32,412			959	11,984,907
41	913		11,568,102	1	13,281			915	11,593,485
42	944		11,849,416	-	-		2	34,741	11,884,157
43	885		10,947,288	-	-		1	19,500	10,966,788
44	997		12,577,694	1	12,229	1	\$ 15,600	1,000	12,625,023

SCHEDULE B (1)

ACTIVE MEMBERSHIP as of December 31, 1978

F E M A I, E

CLASS	A & B		C		D		E		GRAND TOTAL	
	Age	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.		Annual Salary
45	906	\$ 11,343,828	3	\$ 51,168	-	-	1	\$ 19,500	910	\$ 11,414,496
46	1,010	12,587,359	-	-	-	-	2	62,754	1,012	12,650,113
47	1,035	12,983,787	-	-	-	-	3	44,253	1,038	13,028,040
48	1,114	13,897,828	1	14,418	-	-	2	34,970	1,117	13,947,216
49	1,114	13,785,433	1	17,994	1	\$ 15,600	3	53,434	1,119	13,872,461
50	1,132	14,224,793	-	-	-	-	4	97,804	1,136	14,322,597
51	1,261	15,801,680	-	-	-	-	4	68,436	1,265	15,870,116
52	1,281	16,294,353	-	-	-	-	4	65,270	1,285	16,359,623
53	1,287	16,234,116	-	-	1	15,600	3	50,960	1,292	16,300,676
54	1,297	16,260,557	2	26,143	-	-	9	162,934	1,308	16,449,634
55	1,390	17,632,827	-	-	-	-	4	88,208	1,394	17,721,035
56	1,288	16,467,937	1	13,875	-	-	1	19,500	1,290	16,501,312
57	1,276	16,043,312	-	-	-	-	2	33,762	1,278	16,077,074
58	1,277	16,576,671	-	-	-	-	1	15,492	1,278	16,592,163
59	1,278	16,195,223	1	16,456	-	-	3	50,716	1,282	16,262,395
60	1,086	13,576,248	2	25,433	1	15,600	3	109,500	1,092	13,726,781
61	891	11,089,194	-	-	-	-	1	18,599	892	11,107,793
62	782	9,708,042	-	-	-	-	-	-	782	9,708,042
63	627	7,925,739	-	-	1	15,600	1	10,918	629	7,952,257
64	499	6,144,826	-	-	-	-	-	-	499	6,144,826
65	393	4,996,241	-	-	1	15,600	3	74,890	397	5,086,731
66	240	3,019,179	-	-	-	-	6	135,725	246	3,154,904
67	169	1,983,996	-	-	-	-	2	39,000	171	2,022,996
68	142	1,771,833	-	-	1	15,600	1	10,672	144	1,798,105
69	87	1,028,368	-	-	-	-	-	-	87	1,028,368

SCHEDULE B (2)

ACTIVE MEMBERSHIP as of December 31, 1978

F E M A L E

CLASS	A & B		C		D		E		GRAND TOTAL
	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	
70	56	\$ 636,180					56	\$ 636,180	
71	60	721,744					60	721,744	
72	52	562,833					52	562,833	
73	22	218,569					22	218,569	
74	23	241,855					23	241,855	
75	14	160,273					14	160,273	
76	24	168,173					24	168,173	
77	14	140,742					14	140,742	
78	10	81,854					10	81,854	
79	12	123,434					12	123,434	
80	3	16,376					3	16,376	
81	3	24,749					3	24,749	
82	2	31,481					2	31,481	
83	1	3,662					1	3,662	
84	1	3,847					1	3,847	
86	1	10,755					1	10,755	
Totals	54,196	\$ 641,880,011	32	\$ 537,341	7	\$ 109,200	70	\$ 1,382,020	\$ 643,908,572
Average Age		41.15		39.50		57.43		54.04	41.17
Average Salary		\$11,844		\$16,792		\$15,600		\$19,743	\$11,857

SCHEDULE B (3)

SUMMARY OF ACTIVE MEMBERS as of DECEMBER 31, 1978

	<u>Number</u>	<u>Annual Salary</u>	<u>Average Age</u>	<u>Average Annual Salary</u>
<u>By Sex</u>				
Male	73,112	\$1,146,108,973	43.61	\$15,676
Female	54,305	643,908,542	41.17	11,857
Total	<u>127,417</u>	<u>\$1,790,017,545</u>	<u>42.57</u>	<u>\$14,048</u>
<u>By Class</u>				
A & B	123,375	\$1,705,356,940	42.62	\$13,823
C	3,361	67,452,667	38.09	20,069
D	146	2,295,559	52.49	15,723
E	535	14,912,379	55.70	27,874
Total	<u>127,417</u>	<u>\$1,790,017,545</u>	<u>42.57</u>	<u>\$14,048</u>
<u>Class A by Category</u>				
0	119,764	\$1,642,767,299	42.66	\$13,717
1, 5, 6	3,238	52,959,535	40.51	16,356
2	86	1,372,800	44.14	15,963
3, 4	287	8,257,306	49.23	28,771
Total	<u>123,375</u>	<u>\$1,705,356,940</u>	<u>42.62</u>	<u>\$13,823</u>

SCHEDULE C

SUPERANNUATION ANNUITIES as of DECEMBER 31, 1978

MALE MEMBERS

Age	Number	Basic Monthly Benefit	Supplemental Monthly Benefits		
			1968	1974 on 1968	1974
36	1	\$ 82.94			
48	2	372.08			\$ 30.08
50	1	551.17			-
51	19	15,774.36			-
52	29	22,593.86			-
53	41	34,461.98			11.58
54	48	36,182.21			4.29
55	50	39,311.18			261.05
56	66	52,260.10			515.57
57	74	53,061.37			340.82
58	79	63,614.31			515.24
59	82	65,310.70			1,296.10
60	60	41,767.06			807.12
61	238	145,806.41			1,284.10
62	411	222,621.95			1,504.63
63	717	313,498.49	\$ 66.74	\$ 20.03	3,153.38
64	963	399,394.17	259.74	77.93	4,121.57
65	1,066	397,320.44	540.51	162.17	6,383.35
66	1,364	462,215.19	349.15	104.74	7,083.74
67	1,341	453,730.10	492.89	147.87	9,263.60
68	1,418	426,573.88	673.43	202.04	13,748.67
69	1,411	428,342.71	385.05	115.52	16,471.16
70	1,205	351,375.01	578.91	173.67	20,783.86
71	1,209	359,745.53	414.15	124.25	27,129.25
72	1,115	291,247.26	476.07	142.85	26,404.61
73	993	260,343.59	889.18	266.80	27,027.47
74	821	207,805.74	1,423.40	427.01	27,799.97
75	691	168,691.13	1,375.28	412.58	25,088.93
76	676	156,906.98	1,891.50	566.80	27,461.96
77	509	121,883.70	2,352.71	705.93	22,295.69
78	449	114,483.25	2,046.03	613.91	20,451.59
79	369	73,566.14	2,547.09	764.20	16,353.67
80	335	77,727.67	2,709.37	811.68	15,815.35
81	246	46,112.77	2,559.13	767.78	10,900.63
82	212	44,760.06	2,422.66	726.85	10,061.61
83	183	34,967.12	2,784.11	835.32	8,265.08
84	170	32,801.26	3,038.60	911.70	7,458.36
85	133	27,248.21	2,669.23	799.71	6,360.20
86	108	27,261.90	2,144.75	643.43	5,324.52
87	89	18,499.21	2,174.27	652.27	4,739.89
88	57	12,441.27	1,444.61	433.40	2,768.88
89	34	8,940.54	792.25	237.70	2,233.63
90	26	5,257.81	440.40	120.12	832.52
91	26	3,953.49	688.09	206.42	939.46
92	15	2,362.68	653.40	196.03	682.54
93	12	1,567.13	443.99	133.21	470.14
94	7	1,085.35	269.31	80.79	280.17

SCHEDULE D(1)

SUPERANNUATION ANNUITIES as of DECEMBER 31, 1978

MALE MEMBERS

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefits</u>		
			<u>1968</u>	<u>1974 on 1968</u>	<u>1974</u>
95	4	\$ 978.75	\$ 64.43	\$ 19.33	\$ 180.56
96	5	516.23	80.58	24.18	154.89
97	1	32.85	-	-	9.86
98	3	2,404.52	217.30	65.19	721.35
99	3	504.46	77.94	23.39	162.15
100	1	39.06	5.78	1.73	11.72
101	1	36.00	12.75	3.83	10.80
103	1	732.09	59.52	17.86	219.63
105	1	133.92	21.28	6.38	40.18
Total	<u>19,191</u>	<u>\$ 6,131,295.34</u>	<u>\$42,495.58</u>	<u>\$12,746.60</u>	<u>\$386,237.17</u>

SUPERANNUATION ANNUITIES TO SURVIVING BENEFICIARIES as of DECEMBER 31, 1978

MALES

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefit 1974</u>
12	1	\$ 198.34	
16	1	184.66	
19	1	184.66	
20	1	341.26	
23	1	179.58	
27	1	495.20	
28	3	783.92	
29	1	141.57	
30	2	805.54	
32	1	303.05	
33	2	751.64	\$ 31.56
34	1	91.93	0
35	2	609.19	0
36	1	394.19	0
37	2	191.35	0
38	4	554.37	0
40	3	620.06	23.45
41	1	114.87	0
42	3	408.82	0
46	2	626.40	0
47	2	365.43	0
49	1	623.36	0
50	2	189.33	0
53	1	70.12	0
54	3	371.88	27.81
55	1	82.59	0
56	1	495.20	0
57	5	1,034.20	22.83
58	3	435.38	0
59	1	332.49	0
60	2	91.43	4.08
61	2	719.14	0
62	3	1,244.13	0
63	4	1,175.97	9.31
64	4	1,720.68	27.47
65	3	844.40	0
66	4	1,875.99	22.11
67	6	1,621.93	0
68	8	4,297.84	0
69	4	1,370.39	0
70	5	1,654.64	7.21
71	6	2,078.03	0
72	3	1,261.09	9.05
73	2	221.04	19.49
74	1	37.98	0
75	3	337.27	38.61
76	5	883.81	88.92
77	1	194.04	0
79	2	420.24	0

SCHEDULE E(1)

SUPERANNUATION ANNUITIES TO SURVIVING BENEFICIARIES as of DECEMBER 31, 1978

MALES

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefit 1974</u>
80	1	\$ 63.73	0
81	5	1,405.20	0
82	2	82.81	\$ 9.71
83	2	242.84	61.50
84	1	86.31	0
86	1	157.13	47.13
105	1	192.31	0
106	1	402.56	0
107	2	813.97	0
TOTAL	<u>138</u>	<u>\$ 37,477.48</u>	<u>\$ 450.24</u>

SCHEDULE E(2)

SUPERANNUATION ANNUITIES as of DECEMBER 31, 1978

FEMALE MEMBERS

Age	Number	Basic Monthly Benefit	Supplemental Monthly Benefits		
			1968	1974 on 1968	1974
50	1	\$ 357.02			
51	1	700.74			
52	1	500.09			
53	1	134.80			
54	2	744.26			
55	3	1,640.48			
56	5	3,250.04			\$ 33.49
57	3	2,080.74			-
58	14	10,554.30			-
59	19	14,618.40			8.68
60	47	25,703.49			-
61	205	73,437.86			-
62	289	90,419.65	\$ 13.98	\$ 4.19	90.92
63	567	172,671.66	.75	.23	30.16
64	735	226,244.56	-	-	92.46
65	784	221,322.29	9.90	2.97	1,079.76
66	883	251,205.28	-	-	2,589.32
67	894	241,941.25	10.50	3.15	4,021.48
68	846	218,615.45	7.46	2.24	5,785.78
69	805	208,800.00	-	-	8,373.76
70	719	171,591.61	-	-	10,593.53
71	697	162,416.23	25.21	7.56	13,319.34
72	644	140,071.95	32.85	9.85	15,490.76
73	537	107,973.03	154.97	46.48	14,215.88
74	500	96,989.92	368.76	110.69	15,089.21
75	426	80,272.05	671.15	201.44	13,165.04
76	391	69,667.60	872.49	260.48	13,365.28
77	295	54,466.74	1,069.55	320.89	12,051.71
78	279	49,116.73	1,459.01	437.85	10,954.21
79	255	44,175.99	1,631.97	489.71	9,700.26
80	210	34,465.99	2,049.91	615.05	8,575.41
81	179	26,606.12	1,652.00	494.77	6,621.36
82	182	28,491.24	2,044.82	606.93	6,406.37
83	149	19,507.22	2,083.52	624.93	5,312.54
84	126	17,589.34	1,909.88	573.03	4,644.60
85	106	12,750.45	1,753.48	526.09	3,253.75
86	91	13,198.19	1,644.75	492.01	3,366.76
87	64	7,703.54	1,210.38	363.12	2,119.31
88	52	7,764.49	1,207.42	362.24	2,187.47
89	46	5,844.49	841.68	252.50	1,344.52
90	33	3,794.89	638.23	191.47	1,020.79
91	27	2,745.96	628.93	188.69	808.35
92	10	795.48	216.68	65.00	238.66
93	15	1,972.44	364.02	109.23	591.73
94	10	1,034.45	202.64	60.79	297.18
95	9	911.39	280.24	84.08	273.40
96	3	269.44	97.73	29.32	80.83
97	1	35.88	5.74	1.72	10.77
98	4	455.04	53.18	15.96	136.50
100	1	66.78	48.32	7.25	10.01
103	1	282.33	-	-	-
Total	<u>12,167</u>	<u>\$2,928,019.36</u>	<u>\$25,262.10</u>	<u>\$ 7,561.91</u>	<u>\$197,351.34</u>

SUPERANNUATION ANNUITIES TO SURVIVING BENEFICIARIES as of DECEMBER 31, 1978

FEMALES

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefit 1974</u>
12	4	\$ 554.09	
13	2	321.88	
14	1	421.83	
15	1	138.48	
17	1	131.10	
20	1	252.25	
26	1	178.48	
28	2	341.06	\$ 6.18
29	3	376.24	0
30	2	803.09	0
31	1	299.03	0
32	3	800.61	0
33	0	0	0
34	1	227.16	0
35	1	132.98	0
36	1	31.50	0
37	1	115.29	0
38	2	1,534.13	0
39	3	1,739.96	0
40	4	421.24	6.88
41	1	70.12	0
42	4	1,048.46	7.61
43	2	238.93	0
44	3	222.27	0
45	2	391.67	0
46	4	637.97	0
47	4	567.66	0
48	6	1,270.12	0
49	5	1,946.53	0
50	6	1,307.80	0
51	12	2,958.50	0
52	19	4,954.55	107.40
53	11	1,716.34	46.30
54	21	7,335.52	26.61
55	17	4,246.97	0
56	13	4,248.02	19.90
57	39	8,738.37	59.33
58	32	9,126.52	201.35
59	56	15,601.54	207.52
60	50	15,867.78	287.23
61	61	22,478.69	153.52
62	64	14,317.94	81.45
63	103	28,313.35	224.54
64	88	27,844.03	459.61
65	104	25,575.26	500.37
66	106	31,034.33	469.79
67	114	29,013.80	905.79
68	113	29,453.06	729.25
69	126	35,075.71	1,027.82

SCHEDULE G(1)

SUPERANNUATION ANNUITIES TO SURVIVING BENEFICIARIES as of DECEMBER 31, 1978

FEMALES

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefit 1974</u>
70	128	\$ 32,996.70	\$ 877.07
71	124	28,880.36	1,011.62
72	130	24,386.28	1,365.64
73	118	26,586.80	1,182.13
74	98	19,522.17	1,112.36
75	107	18,956.94	987.16
76	99	22,034.31	1,295.69
77	95	18,859.58	996.57
78	98	17,144.25	949.18
79	84	13,200.52	782.70
80	73	10,681.75	507.17
81	78	13,137.79	862.05
82	74	12,425.77	435.64
83	48	8,505.72	204.98
84	57	6,805.49	64.83
85	38	5,243.25	200.99
86	35	5,025.19	317.11
87	20	1,765.15	70.96
88	38	4,238.57	85.11
89	17	1,807.10	12.46
90	12	1,368.74	3.63
91	14	1,583.74	24.49
92	8	750.34	47.33
93	8	2,419.86	74.98
94	11	980.92	0
95	2	107.00	0
96	3	476.31	84.57
97	0	0	0
98	0	0	0
99	1	45.00	0
100	1	131.55	0
101	1	104.16	31.25
104	1	117.67	0
105	2	382.48	0
106	1	932.73	0
107	1	153.37	0
108	3	531.26	0
Total	<u>2,849</u>	<u>\$636,711.03</u>	<u>\$19,116.12</u>

SCHEDULE G(2)

DISABILITY ANNUITIES as of DECEMBER 31, 1978

MALE MEMBERS

Age	Number	Basic Monthly Benefit	Supplemental Monthly Benefits		
			1968	1974 on 1968	1974
29	2	\$ 539.85			
30	4	979.70			
32	5	1,424.31			\$ 12.69
33	4	1,372.42			0
34	1	302.07			0
35	4	1,489.08			0
36	7	2,497.34			0
37	2	558.32			0
38	8	1,680.21			68.35
39	8	2,058.48			22.61
40	7	1,937.60			0
41	6	1,537.69			29.96
42	10	2,730.39			20.88
43	7	2,297.35			0
44	12	4,074.64			32.56
45	18	5,797.07			27.70
46	20	5,963.67	\$ 21.74	\$ 6.53	172.13
47	17	5,330.81	.97	.29	64.68
48	20	5,383.74	12.57	3.77	105.97
49	29	10,735.91	0	0	130.99
50	34	12,221.81	20.56	6.32	116.61
51	46	16,696.98	0	0	157.44
52	36	11,628.30	0	0	134.93
53	52	19,019.11	0	0	206.52
54	54	19,327.08	0	0	343.48
55	63	20,634.82	10.82	3.25	363.57
56	75	24,437.31	30.81	9.24	387.86
57	76	24,395.73	0	0	201.90
58	89	25,465.17	7.89	2.37	397.61
59	91	26,899.60	10.08	3.02	448.61
60	115	33,821.38	23.86	7.17	545.93
61	110	30,254.50	41.41	12.42	445.76
62	79	19,646.61	7.20	2.16	487.49
63	44	10,209.05	31.32	9.39	459.70
64	55	9,860.78	93.73	28.14	953.71
65	51	9,089.85	49.84	14.95	926.49
66	40	6,156.97	72.31	21.71	895.81
67	29	3,776.66	71.99	21.60	602.28
68	22	2,004.38	75.47	22.65	423.16
69	11	1,044.31	85.72	25.72	294.26
70	12	994.61	141.67	42.36	281.95
71	12	1,029.85	79.81	23.94	306.03
72	12	1,146.81	182.28	54.69	344.07
73	14	1,083.46	167.27	50.19	325.04
74	8	589.16	117.47	35.25	176.75
75	8	536.35	98.57	29.56	160.91
76	2	307.24	36.00	10.80	92.18
77	1	57.18	9.14	2.74	17.15
78	4	404.43	204.90	61.47	121.32
79	2	140.99	72.54	21.76	42.30
80	2	139.99	93.48	28.04	42.00
83	1	57.36	86.04	25.81	17.21
84	2	139.13	93.34	28.00	41.74
88	1	38.43	53.41	16.02	11.53
HUGGINS	Total	<u>\$391,946.04</u>	<u>\$2,104.21</u>	<u>\$631.33</u>	<u>\$11,461.82</u>

SCHEDULE H

DISABILITY ANNUITIES as of DECEMBER 31, 1978

FEMALE MEMBERS

Age	Number	Basic Monthly Benefit	Supplemental Monthly Benefits		
			1968	1974 on 1968	1974
28	3	\$ 678.42			
29	1	391.80			
30	1	348.16			
31	4	811.12			
32	2	533.80			
33	1	138.47			\$ 6.93
34	1	234.12			0
35	5	1,279.18			9.22
36	3	541.82			12.29
37	4	779.21			25.69
38	7	1,777.28			0
39	3	939.63			0
40	2	482.05			0
41	6	1,540.11	\$ 1.03	\$.31	38.70
42	5	1,441.46	0	0	0
43	9	1,953.65	0	0	23.22
44	6	1,432.89	0	0	30.43
45	6	1,869.09	0	0	19.97
46	6	1,194.84	0	0	51.53
47	11	2,064.38	0	0	103.56
48	20	5,132.37	3.53	1.06	77.12
49	9	1,975.13	0	0	37.02
50	16	4,174.54	3.80	1.14	106.10
51	19	4,033.56	8.94	2.69	116.68
52	21	4,989.59	10.92	3.28	43.35
53	36	9,177.83	0	0	117.98
54	46	13,415.22	7.35	2.21	221.10
55	41	10,389.14	17.97	5.40	226.94
56	56	13,653.42	34.07	10.22	416.66
57	60	15,145.57	4.00	1.20	335.26
58	46	9,406.85	24.96	7.49	298.82
59	74	19,344.25	10.55	3.16	454.10
60	53	11,641.36	20.15	6.05	374.17
61	67	14,432.44	13.38	4.01	397.42
62	50	8,539.49	34.19	10.26	402.59
63	48	10,386.22	19.81	5.95	593.86
64	44	6,383.72	86.67	26.01	726.43
65	42	5,787.19	63.59	19.07	662.24
66	38	5,273.86	88.64	26.59	803.24
67	29	2,226.98	138.09	41.43	500.99
68	19	1,944.50	141.31	42.41	488.37
69	20	1,910.15	82.46	24.74	512.54
70	15	1,384.69	148.16	44.45	406.04
71	13	901.47	140.48	42.15	249.42
72	11	899.41	131.95	39.58	245.94
73	6	497.06	41.79	12.54	149.10
74	4	205.27	68.75	20.63	61.59
75	10	622.84	102.80	30.86	186.86
76	3	141.82	60.52	18.15	42.55
77	7	455.83	197.46	59.25	136.74
78	4	271.23	76.84	23.04	81.37
79	2	123.10	27.15	8.15	36.94

SCHEDULE I(1)

DISABILITY ANNUITIES as of DECEMBER 31, 1978

FEMALE MEMBERS

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefits</u>		
			<u>1968</u>	<u>1974 on 1968</u>	<u>1974</u>
80	3	\$ 211.29	\$ 78.31	\$ 23.49	\$ 63.38
81	5	337.97	154.18	45.38	99.70
82	3	155.93	92.36	27.71	46.78
84	1	64.39	14.81	4.44	19.32
87	2	139.17	85.16	25.55	41.75
88	1	46.33	16.41	4.92	13.90
Total	<u>1,030</u>	<u>\$206,252.66</u>	<u>\$2,252.54</u>	<u>\$ 674.97</u>	<u>\$10,115.90</u>

SCHEDULE I(2)

DISABILITY ANNUITIES TO SURVIVING BENEFICIARIES as of December 31, 1978

MALES

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>
29	1	\$ 494.63
47	1	456.88
50	1	129.02
52	1	226.26
58	1	381.93
60	1	148.30
62	1	151.06
65	1	177.53
66	1	120.04
68	2	588.14
69	1	138.38
77	1	335.14
79	1	188.20
84	1	129.02
Total	<u>15</u>	<u>\$ 3,664.53</u>

FEMALES

24	1	\$ 602.51
32	1	38.54
34	1	108.51
39	1	139.90
40	1	458.45
41	1	145.25
45	1	164.19
50	1	643.28
51	1	95.20
52	5	1,392.80
53	3	740.46
54	5	1,221.91
55	1	108.82
56	4	605.83
57	5	1,614.89
58	5	1,167.69
59	6	1,659.02
60	3	844.44
61	4	877.16
62	3	1,032.76
63	1	77.31
64	4	1,501.14
65	3	1,074.16
66	2	1,137.67
67	2	562.59
69	2	828.88
72	1	144.18
76	1	129.02
103	1	238.50
Total	<u>70</u>	<u>\$ 19,355.06</u>

SCHEDULE J

WITHDRAWAL ANNUITIES as of DECEMBER 31, 1978

MALE MEMBERS

Age	Number	Basic Monthly Benefit	Supplemental Monthly Benefits		
			1968	1974 on 1968	1974
28	2	\$ 66.60			
29	3	89.07			
30	8	275.16			
31	15	569.51			
32	30	1,481.56			
33	17	870.68			
34	26	1,646.85			
35	25	1,340.67			
36	40	2,374.80			
37	30	2,196.72			
38	36	2,176.53			
39	27	2,371.94			
40	23	2,636.36			
41	34	4,066.02			
42	25	2,916.79			
43	25	3,126.60			
44	34	4,243.24			
45	32	3,424.32			
46	32	5,148.03			
47	35	6,246.75			
48	38	6,295.51			
49	41	10,072.88			
50	43	7,412.99			
51	46	13,260.71			
52	39	10,797.58			
53	44	12,914.15			\$ 79.10
54	56	17,613.37			124.14
55	61	19,670.27			61.91
56	44	15,145.13			146.02
57	72	24,515.67			124.31
58	98	35,874.09			235.58
59	117	40,265.46			296.05
60	96	34,694.74			131.99
61	104	35,971.16	\$130.19	\$ 28.00	1,016.85
62	103	32,223.26			2,115.70
63	99	30,231.05			2,326.28
64	102	31,360.94			3,000.20
65	83	22,498.67			2,400.46
66	84	19,836.09			2,591.87
67	74	17,411.89			2,708.86
68	67	11,888.78			2,431.18
69	51	7,538.71			1,899.53
70	68	9,436.40			2,730.54
71	48	5,359.54			1,603.23
72	48	5,436.03			1,630.90
73	36	4,537.40			1,361.24
74	41	4,250.67			1,260.67
75	35	3,904.35			1,083.65
76	31	2,621.22			786.39
77	25	1,401.36			409.44
78	26	1,832.25			549.72
79	34	2,793.66			838.13

WITHDRAWAL ANNUITIES as of DECEMBER 31, 1978

MALE MEMBERS

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefits</u>		
			<u>1968</u>	<u>1974 on 1968</u>	<u>1974</u>
80	26	\$ 1,749.34			\$ 524.80
81	28	2,421.57			726.51
82	28	2,547.81			764.39
83	17	1,331.75			399.54
84	6	335.57			100.68
85	2	506.01			151.81
86	1	23.33			7.00
87	2	128.66			38.59
88	1	76.24			22.87
89	2	380.87			114.27
90	2	199.53			59.86
91	1	36.91			11.08
92	1	87.26			26.18
94	1	120.06			36.01
Total	<u>2,571</u>	<u>\$556,279.09</u>	<u>\$130.19</u>	<u>\$ 28.00</u>	<u>\$ 36,927.53</u>

SCHEDULE K(2)

WITHDRAWAL ANNUITIES TO SURVIVING BENEFICIARIES as of DECEMBER 31, 1978

MALES

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefit 1974</u>
14	1	\$ 1,540.39	
19	1	99.52	
20	2	212.30	
22	1	210.10	
25	1	225.48	
29	1	91.90	
31	1	113.03	
33	1	192.08	
34	1	13.05	
35	2	320.49	
37	1	564.02	
38	1	49.54	
39	1	38.43	
40	1	126.26	
41	1	182.04	
50	1	248.78	
51	1	228.39	
52	2	935.27	
54	1	274.78	
56	1	451.37	
57	1	216.62	
58	2	731.84	
59	2	2,578.06	
61	4	1,500.39	
62	1	1,282.95	
63	2	225.90	
64	2	590.33	
66	1	445.09	
68	2	998.87	
69	2	1,011.04	
70	2	1,785.76	
71	3	652.48	
73	1	11.67	\$ 3.50
74	1	354.65	
75	1	83.41	
80	1	187.79	
108	1	402.98	
109	<u>1</u>	<u>153.09</u>	
Total	<u>53</u>	<u>\$ 19,330.14</u>	<u>\$ 3.50</u>

WITHDRAWAL ANNUITIES as of DECEMBER 31, 1978

FEMALE MEMBERS

Age	Number	Basic Monthly Benefit	Supplemental Monthly Benefits		
			1968	1974 on 1968	1974
29	5	\$ 165.62			
30	12	392.75			
31	12	424.44			
32	19	782.00			
33	16	696.00			
34	8	344.80			
35	21	1,060.36			
36	13	783.03			
37	12	655.20			
38	15	744.64			
39	12	976.08			
40	5	419.15			
41	8	412.90			
42	9	582.77			
43	13	1,015.05			\$ 5.26
44	12	959.30			0
45	10	886.73			0
46	15	1,328.23			0
47	18	2,010.20			0
48	18	2,551.07			0
49	24	3,917.75			0
50	21	2,222.21			0
51	26	3,860.21			0
52	42	8,554.48			0
53	45	7,132.71			0
54	38	7,579.21			0
55	62	12,371.10			12.89
56	70	15,258.52			0
57	69	14,129.53			0
58	109	27,627.04			62.14
59	101	27,215.88			0
60	117	35,009.54			0
61	110	29,661.35			237.60
62	97	25,068.56			628.71
63	84	30,049.86			859.21
64	61	19,487.03			945.69
65	53	14,752.69			1,450.90
66	53	12,717.17			1,700.51
67	58	15,049.36			2,390.71
68	51	11,158.77			2,288.18
69	38	6,006.22			1,527.95
70	39	5,624.89			1,678.72
71	30	4,441.66			1,377.64
72	33	4,119.83	\$5.23	\$1.57	1,411.68
73	31	3,387.91			1,112.09
74	21	1,493.36			448.04

SCHEDULE M(1)

WITHDRAWAL ANNUITIES as of DECEMBER 31, 1978

FEMALE MEMBERS

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefits</u>		
			<u>1968</u>	<u>1974 on 1968</u>	<u>1974</u>
75	22	\$ 2,576.46			\$ 780.87
76	22	2,277.20			849.00
77	10	736.89			200.09
78	15	969.51			290.87
79	19	1,472.14			441.67
80	13	887.06			266.14
81	8	487.54			146.25
82	5	410.80			123.23
83	7	335.67			100.71
84	2	100.92			30.28
85	3	100.18			30.05
86	5	407.17			122.15
87	1	225.23			67.57
88	1	16.22			4.87
89	1	70.07			21.02
91	4	96.84			29.05
92	2	40.52			12.16
93	1	19.81			5.94
94	2	75.00			22.50
95	1	48.35			14.51
102	1	90.68			27.21
Total	<u>1,881</u>	<u>\$376,531.42</u>	<u>\$5.23</u>	<u>\$1.57</u>	<u>\$21,724.06</u>

SCHEDULE M(2)

WITHDRAWAL ANNUITIES TO SURVIVING BENEFICIARIES as of DECEMBER 31, 1978

FEMALES

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefit 1974</u>
12	3	\$ 451.55	
13	2	1,699.37	
15	2	519.92	
22	1	99.52	
24	1	99.52	
27	1	264.70	
28	1	113.03	
29	1	248.31	
30	1	204.35	
31	2	407.42	
33	1	529.01	
35	2	624.49	
36	2	746.39	
37	1	148.00	
38	1	138.37	
39	2	289.15	
41	2	284.15	
42	4	3,807.55	
43	3	192.71	
44	2	522.52	
45	2	2,260.92	
46	4	987.85	
47	2	984.68	
48	8	3,843.57	
49	11	3,148.56	
50	10	3,535.77	
51	10	3,355.81	\$ 28.71
52	9	2,296.26	0
53	5	2,220.62	0
54	20	9,197.59	0
55	19	8,491.02	0
56	17	5,237.12	0
57	16	5,958.06	0
58	25	7,013.19	0
59	16	5,461.52	0
60	19	4,802.55	2.87
61	24	7,182.80	28.40
62	16	4,380.44	20.99
63	22	7,130.48	0
64	24	6,555.61	46.63
65	19	5,048.01	263.52
66	30	6,864.65	105.44
67	25	5,400.32	71.46
68	13	2,411.55	0
69	19	2,994.84	63.35

SCHEDULE N(1)

WITHDRAWAL ANNUITIES TO SURVIVING BENEFICIARIES as of DECEMBER 31, 1978

FEMALES

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefit 1974</u>
70	19	\$ 3,330.13	\$ 70.16
71	20	2,853.31	74.92
72	15	1,371.31	38.30
73	20	2,108.37	122.70
74	20	2,236.31	47.85
75	8	1,009.40	0
76	17	1,687.28	40.51
77	8	656.82	40.45
78	16	1,910.28	66.32
79	9	1,349.05	54.98
80	4	527.13	84.42
81	2	96.51	0
82	3	659.98	6.41
83	3	391.18	0
85	1	109.19	0
86	2	222.32	0
108	1	140.45	0
Totals	<u>588</u>	<u>\$148,813.25</u>	<u>\$1,278.39</u>

SUMMARY OF ANNUITIES as of DECEMBER 31, 1978

	Number	Basic Monthly Benefit			Supplemental Monthly Benefit		Total	Age	Average
		1968	1974 on 1968	1974	1974	Basic Monthly Benefit			
<u>Superannuation</u>									
Male	19,191	\$ 6,131,295.34	\$12,746.60	\$386,237.17	\$ 6,572,774.69	70.39	\$342.49		
Female	12,167	2,928,019.36	7,561.91	197,351.34	3,158,194.71	70.73	259.57		
Surviving Beneficiaries:									
Male	138	37,477.48	-	450.24	37,927.72	60.14	274.84		
Female	2,849	636,711.03	-	19,116.12	655,827.15	70.95	230.20		
Total	34,345	9,733,503.21	20,308.51	603,154.87	10,424,724.27	70.52	303.53		
<u>Disability</u>									
Male	1,444	391,946.04	631.33	11,461.82	406,143.40	57.69	281.26		
Female	1,030	206,252.66	674.97	10,115.90	219,296.07	58.97	212.91		
Surviving Beneficiaries:									
Male	15	3,664.53	-	-	3,664.53	62.27	244.30		
Female	70	19,355.06	-	-	19,355.06	57.60	276.50		
Total	2,559	621,218.29	1,306.30	21,577.72	648,459.06	58.23	253.40		
<u>Withdrawal</u>									
Male	2,571	556,279.09	28.00	36,927.53	593,364.81	58.99	230.79		
Female	1,881	376,531.42	1.57	21,724.06	398,262.28	59.56	211.73		
Surviving Beneficiaries:									
Male	53	19,330.14	-	3.50	19,333.64	54.53	364.79		
Female	588	148,813.25	-	1,278.39	150,091.64	62.43	255.26		
Total	5,093	1,100,953.90	29.57	59,933.48	1,161,052.37	59.55	227.97		
TOTAL ANNUITIES	41,997	\$11,455,675.40	\$21,644.38	\$684,666.07	\$12,234,235.70	68.44	\$291.31		

SCHEDULE O

BENEFIT AND CONTRIBUTION PROVISIONS as of DECEMBER 31, 1974
(as embodied in Act 31, approved March 1, 1974)

The State Employees' Retirement System of Pennsylvania makes provision for retirement, disability, and death benefits for all State employees and certain other eligible groups. The major provisions may be summarized as follows:

Eligible Employees

- Class A - All regular State employees as well as employees of certain Commissions and Authorities and all employees of state-owned educational institutions and the Pennsylvania State University (unless such employees have joined the Public School Employees' Retirement System of Pennsylvania). All employees who become members (or who rejoin the Retirement System) on and after March 1, 1974.
- Class C - Officers and employees of the Pennsylvania State Police and enforcement officers of the Pennsylvania Liquor Control Board who were members prior to March 1, 1974.
- Class D-3 - Members of the General Assembly who were members prior to March 1, 1974.
- Class E-1 - Members of the Judiciary who were members prior to March 1, 1974.
- Class E-2 - Justices of the Peace paid by the Commonwealth who were members prior to March 1, 1974.

Age Requirements for Superannuation Retirement (with full formula benefits)

- Class A* - Age 60, except for members of the General Assembly, enforcement officers, correction officers, psychiatric security aides and officers of the Pennsylvania State Police for whom the requirement is age 50.

*Members of Class A with 35 or more years of credited service are entitled to at least full formula benefits regardless of age.

Classes C and D-3 - Age 50.

Class E-1 - Age 60.

Class E-2 - Age 60.

Formula for Superannuation Retirement Annuity

The standard single-life annuity applicable to members of Class A, is equal to 2% of the final 3-year average salary ("F.A.S.") of the member multiplied by the years and fractions of credited service.

The annuity for other classes of members is obtained by multiplying the standard single-life annuity by a class multiplier as follows:

Class	Class of Service Multiplier	
	<u>Prior to 1/1/73</u>	<u>On and After 1/1/73</u>
C	1	1
D-3	3.75	1.731
E-1	2. for each of the first 10 years of judicial service plus 1.5 for each subsequent year.	1.50 for each of the first 10 years of judicial service plus 1.125 for each subsequent year.
E-2	1.5	1.125

NOTE: There are conditions under which long-service members or members retiring at advanced ages may receive somewhat larger benefits than those described above.

In addition to the standard single-life annuity as determined above, a member of Class C receives a "member's annuity" actuarially equivalent to the regular accumulated member contributions and interest at retirement but not less than such annuity determined as if the member were age 60 at retirement.

In addition to the above benefits, a member who, prior to March 1, 1974, has elected "Social Security Integration Credits" is entitled to a single-life annuity of 2% of his "Average Non-Covered Salary" for each year of Social Security Integration credits. "Average Non-Covered Salary" is the average annual salary

SCHEDULE Q (2)

received while covered by the Retirement System since January 1, 1956 in excess of the maximum covered wages under Social Security. In effect, the years of Social Security Integration Credit are the same as total credited service unless the member did not elect coverage when first eligible.

Age and Service Requirements for Early Retirement

In the case of withdrawal, a member of Class D-3 is eligible for early retirement after 6 years of legislative service and members of other classes are eligible after 10 years of service.

Adjustment for Early Retirement Benefit

A member receives the actuarial equivalent of the annuity payable at superannuation retirement age earned to the date of early retirement.

Age and Service Requirements for Disability Retirement

A member is eligible for disability retirement if he is totally and permanently disabled prior to superannuation retirement age and has at least 5 years of service, except an officer of the State Police or an enforcement officer for whom there is no service requirement.

Formula for Disability Benefit

The disability benefit is equal to the benefit calculated as for superannuation retirement, based on years of credited service at disability, if the result is greater than or equal to 33-1/3% of F.A.S. at time of disability. If the benefit so calculated is less than 33-1/3% of F.A.S., the disability benefit is equal to the smaller of:

- (a) the benefit calculated as for superannuation retirement based on service to superannuation, or
- (b) 33-1/3% of F.A.S. at time of disability.

SCHEDULE Q (3)

Eligibility for Vested Benefit

A member is eligible for a vested benefit after 10 years of service, except for members of Class D-3 who are eligible after 6 years of credited service.

Vested Benefit

The vested benefit is calculated as for superannuation retirement but deferred until superannuation retirement age.

Eligibility for Death Benefit Prior to Retirement

A member is eligible if he has 10 years of credited service, except for a member of Class D-3 who is eligible after 6 years of credited service, or attainment of superannuation age.

Amount of Death Benefit Prior to Retirement

An eligible beneficiary receives the full reserve value of the benefits to which the member would have been entitled had he retired the day before he dies, assuming he had elected Option 1 if no other option had been elected.

Death Benefits After Retirement

A member may elect one of several typical optional reduced pensions in lieu of his maximum single-life annuity provided by the formula. However, if he elects the single-life annuity, there is a provision for a modified cash refund without actuarial reduction of the unpaid balance of the member accumulated contributions and interest at time of retirement.

Supplemental Allowances

Any superannuation or disability annuitant is entitled to a supplemental allowance sufficient to build the amount of his total single life allowance including any cost of living supplements up to not less than at the rate of \$84.50 for each year of credited service.

SCHEDULE Q (4)

A percentage cost-of-living increase was also applied as of July 1, 1968 to the benefits of annuitants in receipt of superannuation and disability allowances which became effective prior to January 1, 1967. The percentages varied according to year of retirement and began with 1% increase for those retiring in 1966 and increased to 150% for those who retired in 1933 and earlier. Such supplemental benefit was based on the single life benefits payable to member annuitants and discontinued at their death.

A percentage cost-of-living increase was applied as of July 1, 1974 to the benefits of annuitants in receipt of superannuation or disability allowances which became effective prior to July 1, 1972. The percentages varied according to year of retirement and began with a 5% increase for those retired between July 1, 1971 and June 30, 1972 and increased to 30% for those who retired prior to July 1, 1957. Such cost-of-living supplements are payable under the terms and conditions as provided under the option plan in effect as of July 1, 1974. Such supplemental annuities are also payable to withdrawal annuitants beginning after superannuation age (but not prior to July 1, 1974).

Rate of Member Contribution

(i) Regular member contributions, excluding Social Security Integration contributions

Class A - 5% of total salary

For other classes of members, the class of service multiplier is applied to the 5% rate to produce the following:

Class C - 5%

Class D-3 - 8.655%

Class E-1 - 7.5% during the first 10 years of judicial service and 5.625% thereafter.

Class E-2 - 5.625%

SCHEDULE Q (5)

(ii) Additional contribution for Social Security Integration Credit

A member of any class who elected before March 1, 1974 Social Security Integration Credit pays 5% of any salary in excess of the amount of salary covered by Social Security during the year for which contributions are being made. A member electing to end additional contributions is ineligible to make future contributions or accrue future benefits.

Interest Credited on Member Contribution

A rate of 4% stipulated as the statutory rate of interest, has been credited on the member contributions since the inception of the system.

Refund of Accumulated Member Contributions

On the death of a member not qualifying for death benefits, his accumulated member contributions are paid to his beneficiary; also, any member terminating service when not eligible for another form of benefit is paid a refund of his accumulated contributions and interest; any other terminating member may elect the refund of his accumulated contributions and interest in lieu of the retirement allowance to which he is entitled.

Employer Contributions

The State pays the balance of the required contributions in excess of the members contributions in accordance with the law. Basically, the employer contribution is the normal cost plus an accrued liability contribution funded over 30 years, assuming the accrued liability contribution increases at least 4% each year. In addition, a contribution is required to fund the Supplemental Allowance effective in 1968 over 20 years from July, 1969 and the Supplemental Allowance effective in 1974 over 20 years from July, 1974.

SCHEDULE Q (6)

ACTUARIAL ASSUMPTIONS

Interest Rate: 5½% per annum, compounded annually.

Service Tables: Service tables for active members based on the experience of the Retirement System in 1971-75, with values at specimen ages in five separate classes as follows:

CLASS*	AGE	R A T E S O F S E P A R A T I O N D U E T O				SALARY SCALE
		Withdrawal	Death	Disability	Retirement	
A and B (MALE)	25	.1993	.0010	.0001	.0010	\$ 4,000
	35	.1031	.0018	.0004	.0020	8,136
	45	.0838	.0039	.0013	.0043	13,655
	55	.0750	.0105	.0047	.0124	21,398
	65	-	.0127	-	.1900	33,231
A and B (FEMALE)	25	.1900	.0005	.0001	.0001	4,000
	35	.1124	.0010	.0003	.0016	8,136
	45	.0715	.0020	.0012	.0033	13,655
	55	.0645	.0039	.0045	.0111	21,398
	65	-	.0055	-	.2300	33,231
C (MALE and FEMALE)	25	.0117	.0010	.0001	.0001	4,000
	35	.0020	.0018	.0004	.0012	7,109
	45	.0100	.0039	.0013	.0032	11,221
	55	-	.0105	-	.0525	16,300
	65	-	.0127	-	.3100	22,992
D (MALE and FEMALE)	25	.0766	.0010	.0001	-	4,000
	35	.0524	.0018	.0004	-	5,642
	45	.0067	.0039	.0013	.0067	7,959
	55	-	.0105	-	.0680	11,227
	65	-	.0127	-	.1690	15,837
E (MALE and FEMALE)	25	.0274	.0010	.0001	-	4,000
	35	.0140	.0018	.0004	-	5,642
	45	.0084	.0039	.0013	.0004	7,959
	55	.0088	.0105	.0047	.0061	11,227
	65	-	.0127	-	.0475	15,837

Superannuation and Withdrawal Allowances: The mortality table used for those receiving superannuation and withdrawal allowance is the 1971 Group Annuity Mortality Table.

Disability Allowances: The mortality tables used for those receiving disability allowances are modifications based on sex of 1965 Railroad Retirement Board Mortality among Totally Disabled Annuitants.

*As defined in Retirement Law prior to March 1, 1974 amendment (Act 31).

STATE EMPLOYEES' RETIREMENT SYSTEM

COMMONWEALTH OF PENNSYLVANIA

Summary of Data as of December 31

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>
Number of members				
Actives	130,642	130,145	128,249	128,742
Pensioners and beneficiaries	<u>31,312</u>	<u>34,761</u>	<u>38,494</u>	<u>41,997</u>
Total	161,954	164,906	166,743	170,739
Total payroll (000,000)	\$ 1,474.0	\$ 1,627.6	\$ 1,729.2	\$ 1,790.0
Average per active member	11,283	12,506	13,634	13,904
Present value of future benefits (000,000)				
Pensioners and beneficiaries	\$ 980.9	\$ 1,115.1	\$1,272.3	\$ 1,429.0
Actives	<u>3,718.5</u>	<u>4,276.0</u>	<u>4,649.4</u>	<u>4,955.6</u>
Total	\$ 4,699.4	5,391.1	\$5,921.7	\$ 6,384.6
Assets (000,000)				
Accumulated member contributions ...	\$ 620.0	\$ 685.6	\$ 752.9	\$ 816.9
Other	<u>1,075.1</u>	<u>1,285.9</u>	<u>1,512.7</u>	<u>1,750.5</u>
Total	\$ 1,695.1	\$ 1,971.5	\$2,265.6	\$ 2,567.4
Unfunded liabilities (000,000)	<u>\$ 3,004.3</u>	<u>\$ 3,419.6</u>	<u>\$3,656.1</u>	<u>\$ 3,817.2</u>
Present value of member contributions (000,000)	\$ 700.5	\$ 788.8	\$ 837.8	\$ 876.6
Present value of employer contributions (000,000)	\$ 2,304.8	\$ 2,632.9	\$2,819.8	\$ 2,941.8
Number of pensioners and beneficiaries per active member	1:4	1:4	1:3	1:3

STATE EMPLOYEES' RETIREMENT SYSTEM

COMMONWEALTH OF PENNSYLVANIA

Summary of Data as of December 31

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>
Number of members				
Actives	130,642	130,145	128,249	128,742
Pensioners and beneficiaries	<u>31,312</u>	<u>34,761</u>	<u>38,494</u>	<u>41,997</u>
Total	161,954	164,906	166,743	170,739
Total payroll (000,000)	\$ 1,474.0	\$ 1,627.6	\$ 1,729.2	\$ 1,790.0
Average per active member	11,283	12,506	13,634	13,904
Present value of future benefits (000,000)				
Pensioners and beneficiaries	\$ 980.9	\$ 1,115.1	\$1,272.3	\$ 1,429.0
Actives	<u>3,718.5</u>	<u>4,276.0</u>	<u>4,649.4</u>	<u>4,955.6</u>
Total	\$ 4,699.4	5,391.1	\$5,921.7	\$ 6,384.6
Assets (000,000)				
Accumulated member contributions ...	\$ 620.0	\$ 685.6	\$ 752.9	\$ 816.9
Other	<u>1,075.1</u>	<u>1,285.9</u>	<u>1,512.7</u>	<u>1,750.5</u>
Total	\$ 1,695.1	\$ 1,971.5	\$2,265.6	\$ 2,567.4
Unfunded liabilities (000,000)	<u>\$ 3,004.3</u>	<u>\$ 3,419.6</u>	<u>\$3,656.1</u>	<u>\$ 3,817.2</u>
Present value of member contributions (000,000)	\$ 700.5	\$ 788.8	\$ 837.8	\$ 876.6
Present value of employer contributions (000,000)	\$ 2,304.8	\$ 2,632.9	\$2,819.8	\$ 2,941.8
Number of pensioners and beneficiaries per active member	1:4	1:4	1:3	1:3