

COMMONWEALTH OF PENNSYLVANIA

STATE EMPLOYEES' RETIREMENT SYSTEM

1994 Actuarial Report

Hay/Huggins Company
July 1, 1995

May 30, 1995

Hay/Huggins
Company

Mr. John Brosius
Executive Director
State Employees' Retirement System
30 North Third Street
Harrisburg, PA 17108-1147

Dear Mr. Brosius:

This report presents the results of our actuarial valuation of the Pennsylvania State Employees' Retirement System (SERS) as of December 31, 1994. Highlights of the valuation are presented on page 1, followed by a general discussion and comments on the various schedules included in the report. These schedules summarize the underlying calculations, asset information, participant data, plan benefits and actuarial assumptions.

The main purposes of this report are:

- to indicate the pension contribution rates which will be the basis for the Fiscal Year 1995-96 appropriation request;
- to disclose the financial condition of the Plan;
- to provide information relating to the disclosure and reporting requirements of Statement No. 5 of the Governmental Accounting Standards Board.

To the best of our knowledge, this report is complete and accurate and all costs and liabilities have been determined in conformance with generally accepted actuarial principles and on the basis of actuarial assumptions and methods which, in the aggregate, are reasonable (taking into account past experience under the SERS and reasonable expectations) and which in combination represent our best estimate of anticipated experience under the plan.

Respectfully submitted,
HAY/HUGGINS COMPANY, INC.



By
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Member American Academy of Actuaries
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HayGroup

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STATE EMPLOYEES' RETIREMENT SYSTEM

VALUATION HIGHLIGHTS

	<u>December 31, 1994</u>	<u>December 31, 1993</u>	
	<u>Valuation</u>	<u>Valuation</u>	<u>Valuation</u>
• Summary of Contributions: (Percent of Members' Compensation)			
	<u>Valuation</u>	<u>Valuation</u>	<u>Actual</u>
Normal Cost	10.73%	10.23%	10.23%
Amortization of Liabilities	(0.46)	(1.70)	(1.31)
Total	10.27%	8.53%	8.92%
Contribution Rates for:			
Class A Members:			
Age 60 Superannuation	9.03%	7.39%	7.77%
Age 50 Superannuation	11.32	9.41	9.79
Park Rangers	12.44	10.64	11.02
Capitol Police	12.44	10.67	11.05
State Police	27.59	25.76	26.36
Class C Members:			
State Police	27.59	25.76	26.36
Enforcement Officers	11.32	9.41	9.79
Class D Members	42.45	35.29	36.71
Class E Members	16.39	13.78	14.41
• Market Value Assets	\$ 13,330,273,487	\$ 13,700,885,096	
• Projected Benefit Obligation	\$ 13,171,871,241	\$ 11,853,943,437	
• Active Participants:			
Number	114,120	111,962	
Average annualized compensation	\$ 32,960	\$ 31,674	
Total annualized compensation	\$ 3,761,447,006	\$ 3,546,228,636	
• Annuitants and Beneficiaries:			
Number	80,835	80,690	
Total annual pension	\$ 669,870,011	\$ 627,068,437	
• Inactive Participants:			
Number	4,455	4,717	

STATE EMPLOYEES' RETIREMENT SYSTEM

General Discussion

The liabilities and costs in this report were based on actuarial assumptions adopted by the State Employees' Retirement Board in 1991 and funding procedures specified in Act 1991-23. The rates of investment return and salary increases are shown in the following table. The single-rate equivalent of the graded investment assumption, for the purposes of determining the employer contribution, is 9 percent a year.

<u>Years</u>	<u>Salary Increases</u>			<u>Investment Return</u>
	<u>General</u>	<u>Average Career</u>	<u>Total</u>	
1995 to 2000	4.0%	2.7%	6.7%	9.9%
2001 to 2005	4.0	2.7	6.7	9.0
2006 to 2010	4.0	2.7	6.7	8.0
2011 to 2015	4.0	2.7	6.7	7.0
After 2015	4.0	2.7	6.7	6.0

With the exception of the career salary scale, the assumptions are the same as those used for the December 31, 1993 valuation. In 1993, the Commonwealth introduced a new pay scale which became effective January 1, 1994. The new pay scale compressed the previous schedule of 35 steps to 20 steps. The new scale provides longevity increases for members who have at least one year of service. The previous pay scale delayed the longevity increase to new hires for a period of seven years. The implementation of the new pay scale increased the retirement salary base (benefits are based on high 3-year average salary) relative to career salary.

The Board adopted new salary scales that reflected the changes in the pay scales. These scales are shown in Schedule M. As a result, the State Employees' Retirement System (SERS) liabilities and normal cost were increased. The State Employees' Retirement Board at their meeting of April 19, 1995, adopted the employer contribution rate of 10.27 percent for fiscal year 1995/96.

The 1993 employer contribution rate determined as of December 31, 1993, using the assumptions and plan design in place on December 31, 1993, was 8.53 percent of payroll. The Board decided to continue the 1992 contribution rate of 8.92 percent for fiscal year 1994/95 for several reasons. Primary among these were the increased costs resulting from Act 1994-29, which had passed after December 31, 1993, and the new salary scale. These two changes have been reflected in the 1994 valuation and are the primary reasons that the cost has increased to 10.27 percent of payroll.

STATE EMPLOYEES' RETIREMENT SYSTEM

History of the Employer Contribution Rate

The chart on the next page shows the history of the employer contribution rate from 1980 through 1994. The rate increased in 1980 due to the adoption of the 1976-1980 evaluation results, and the rate was lowered in 1985 as a result of the adoption of new assumptions based on the study of experience from 1981 through 1985. While the components of the rate shifted from 1985 through 1988, the total rate held steady. The employer contribution dropped slightly in 1989 as a result of investment gains.

Changes made for the 1990 valuation resulted in a drop in the employer contribution rate from 12.32 percent to 9.87 percent of salary. The employer contribution rate dropped further, to 8.92 percent, in the 1991 valuation. The Board decided to continue the 8.92 percent contribution from 1992 for the next two fiscal years. The table below shows the difference between the contribution rate calculated in the valuation and the contribution rate adopted by the Board.

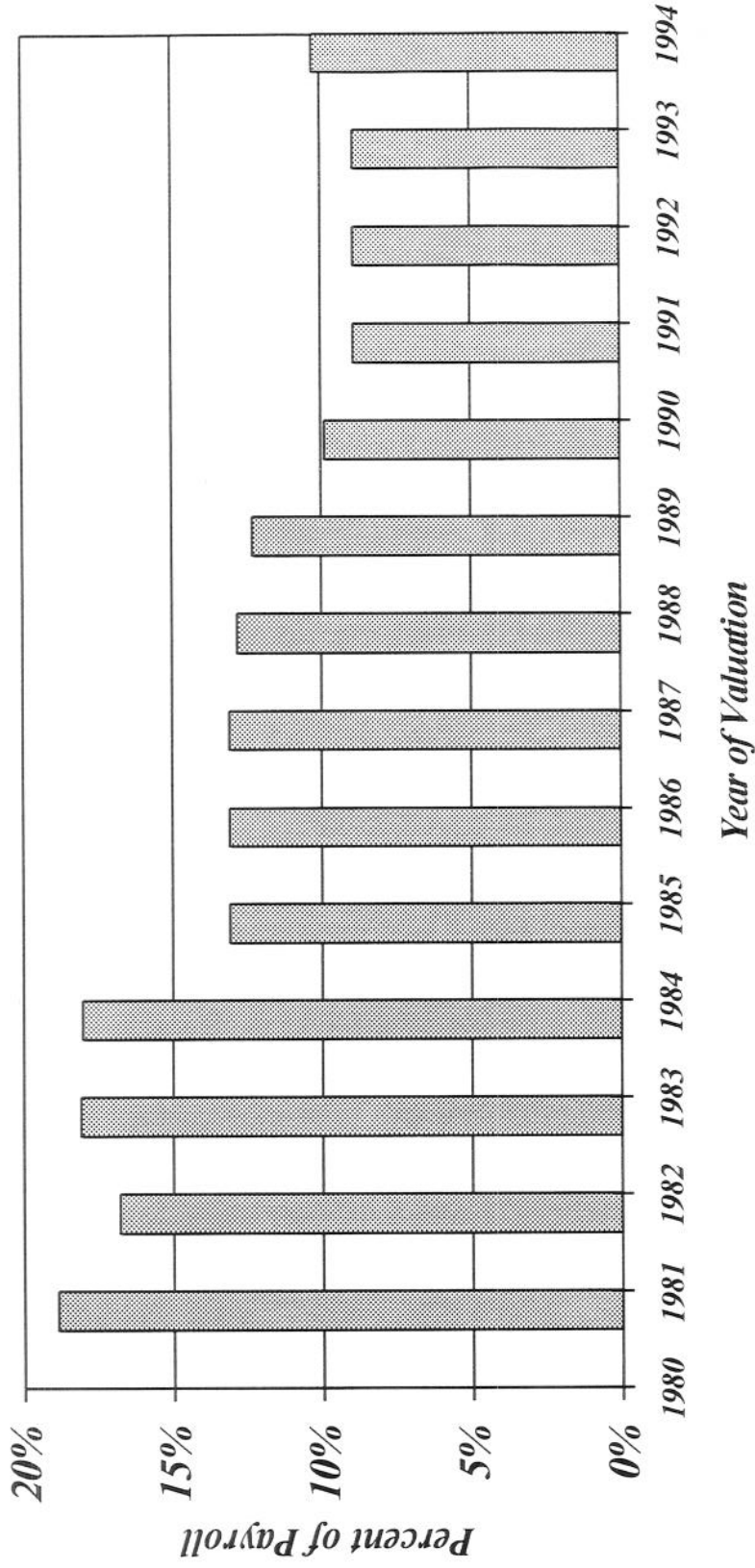
The contribution rate calculated in the 1992 valuation was 9.27 percent. The increase to 9.27 percent was a direct result of eliminating the additional 1.25 percent employe contribution and unexpectedly high increases in salary. The decision by the Board to continue the 8.92 percent contribution rate considered the fact that excess investment income already earned would reduce the rate in the future, and the large increases in salary would not be repeated.

The employer contribution as determined in the 1993 valuation declined to 8.53 percent largely as a result of investment gains. The higher rate was continued in recognition of the fact that the salary scale and Act 1994 - 29 changes already in effect would increase the cost of the system. The actuary agreed that continuation of the 8.92 percent for fiscal year 1993/1994 and fiscal year 1994/1995 was sound.

<u>Valuation as of December 30</u>	<u>Contribution Rate Calculated for Fiscal Year</u>	<u>Calculated Valuation Rate</u>	<u>Contribution Rate Adopted by the Board</u>
1991	1992 / 1993	8.92%	8.92%
1992	1993 / 1994	9.27	8.92
1993	1994 / 1995	8.53	8.92
1994	1995 / 1996	10.27	10.27

Pennsylvania State Employees' Retirement System

Total Employer Cost



The total employer cost is the actual contribution rate during the succeeding fiscal year. For instance, the 1994 rate of 10.27 percent will be the employer contribution for fiscal year 1995/96. In some years the contribution rate was adjusted for events occurring after the valuation date.

STATE EMPLOYEES' RETIREMENT SYSTEM

COMMENTS ON SCHEDULES

Employer Contribution Rate

Schedules A and B summarize the development of the Employer Contribution Rate before allocation by group.

The normal cost is the level percentage of compensation which would be required for new active members over their period of active service to fund the liability for any prospective benefits earned by the new members. The normal cost calculation uses data for all active members who had not yet completed one year of credited service. The normal cost increased from 10.23 percent in 1993 to 10.73 percent in 1994.

The unfunded liability that existed on December 31, 1990 is being funded over 20 years from July 1, 1991. Unfunded liability increases (decreases) due to changes in assumptions, changes in legislation, or gains or losses because actual experience differs from the actuarial assumptions, will typically be amortized over 20 years from the July 1 following the effective date of the change. Increases in the unfunded liability due to supplemental annuities are amortized over 20 years from the effective date of the benefit increase, unless otherwise stipulated by law.

Schedule B shows an increase in the unfunded liability of \$224,936,857 from the supplemental annuities that were effective July 1, 1994 and an increase in the unfunded liability of \$392,912,465 for changes during calendar year 1994. Included in the changes during the year are benefit improvements that became effective during the year, that were passed in Act 1994 - 29. The liability for the supplemental annuities and for the changes during the year will be recognized as an increase in the total payment over the 20 years beginning July 1, 1995.

The total payment on the unfunded liability remains as a credit to the overall employer cost of the system. The total credit for amortization of the surplus decreased from 1.70 percent of payroll to 0.46 percent of payroll.

The Employer Contribution Rate is comprised of the Normal Cost and the amortization of the unfunded liabilities. The Employer Contribution Rate calculated as a result of the December 31, 1994 actuarial valuation is 10.27 percent. The 1993 valuation had produced an Employer Contribution Rate of 8.53 percent of payroll that would have been used for the 1994/1995 fiscal year. The Board set the 1994/1995 rate at a higher amount, 8.92 percent, thus allowing for part of the potential cost of Act 1994 - 29 and the new salary scale.

STATE EMPLOYES' RETIREMENT SYSTEM

Employer Contribution Rates by Group

Schedule C summarizes the development of the rate for the cost of additional benefits for each group of members with different benefits. The basic employer contribution rate for general benefits is 9.03 percent of salary. There is an additional employer contribution required to pay for the added liability for members entitled to full benefits at age 50; and for those entitled to an annual benefit rate that is greater than the basic 2 percent rate. The Park Rangers, Capitol Police, State Police Officers, and the Class E members are charged the amount necessary to fund the past service cost of benefit improvements that were effective in prior years. The effect of the adjustments is to produce an aggregate employer contribution rate that is equal to the required rate of 10.27 percent of total payroll. The complete schedule of contributions by group is shown below:

Class A with age 60 benefit	9.03%
Class A with age 50 benefit	11.32
Class A Park Rangers	12.44
Class A Capitol Police	12.44
Class A State Police	27.59
Class C State Police	27.59
Class C Enforcement Officers	11.32
Class D	42.45
Class E	<u>16.39</u>
Total Overall Cost	10.27%

Schedule D shows the development of the contribution rates for additional annuities for certain State Police and Enforcement Officers. These members receive an additional annuity that is equal to the accumulated member contributions and interest at retirement determined as if the members were at least age 60 at retirement. These benefits have been fully funded by past contributions so no future contribution is required.

Change in Employer Contribution Rate

Schedule E contains an analysis of the change in the Employer Contribution Rate and Unfunded Liability from the 1993 to 1994 valuation. The recognition of the new salary scale created an increase in the liability of \$456,000,000, and increased the contribution by 1.17 percent of salary. Changes in plan provisions from Act 1994 - 29 increased the liabilities by \$307,000,000, which translated into an increase in the cost of 0.67 percent of salary. Other changes were an increase due to the loss in investment earnings of 0.11 percent, a 0.03 percent increase related to changes in the demographics of new entrants, and a 0.24 percent decrease due to other factors.

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The net result of all changes was to increase the aggregate employer contribution from 8.53 percent of compensation to 10.27 percent of compensation.

The changes mentioned above decreased the surplus in the unfunded liability to \$249,428,967.

Actuarial Balance Sheet and Account Balance Transfers

Schedule F contains the actuarial balance sheet. These future contributions consist of normal cost payments and member contributions, offset by the credit resulting from the excess of assets over liabilities.

Each year it is necessary to compare the account balance in the benefit payment accounts, the Annuity Reserve Account, the State Police Benefit Account, and the Enforcement Officers' Benefit Account with the actuarial liability of the account and make the necessary transfer to bring the accounts into balance with the liabilities. The accounts go out of balance during the year as a result of differences between actual experience and the reserves set for retirees. An excess of \$201,891,281 in the Annuity Reserve Account was transferred to the State Accumulation Account. A transfer of \$602,634 was necessary from the State Accumulation Account to the Enforcement Officers' Benefit Account. These transfer amounts are shown on Schedule G.

Transfers were made from the Supplemental Annuity Account to the three benefit payment accounts for the supplemental annuity that was effective July 1, 1994. The transfers from the Supplemental Annuity Account total \$224,936,857. That is the amount established for 20-year amortization on Schedule B.

Accounting Disclosure Statements

Schedule H provides information required by the Governmental Accounting Standards Board (GASB) and information on the accumulated plan benefits as defined by the Financial Accounting Standards Board (FASB).

The GASB liability for projected benefits (the Projected Benefit Obligation) is a standardized disclosure measure of the present value of pension benefits estimated to be payable in the future as a result of participant service to December 31, 1994. The liability was determined to be \$13,171,871,241. The market value of assets was 101.2 percent of the Projected Benefit Obligation. The interest rate used in determining the GASB liability was 9.25 percent. The rate of 9.25 percent is approximately equal to the investment return rates averaged over the period during which past obligations to current employees and annuitants will be paid.

The GASB liability assumes salaries will increase in the future.

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The FASB liability does not include the effect of assumed future salary increases and is calculated at a lower interest rate than the GASB liability. The FASB actuarial present value of accumulated plan benefits was determined to be \$11,405,985,145 and the ratio of market value of assets to accumulated plan benefits was 116.9 percent. The value increased from \$10,631,426,819 in 1993 to \$11,405,985,145 in 1994. The increase was partly due to the change in plan provisions that became effective during 1994.

The FASB liabilities shown on page 2 of Schedule H are calculated using an interest rate of 7.75 percent. The assumption of 7.75 percent is in the range of the latest (March 1995) rates for 30-Year Treasury Bonds (7.45 percent) and Aaa Seasoned Issue Corporate Bonds as reported by Moody's Investment Service (8.12 percent).

The funded ratios dropped in 1994 for several reasons. First, there was a loss of \$1,375,742,682 in the market value of assets. Second, the liabilities for Act 1994-29 were added in the valuation, but these liabilities will not be fully amortized until 2015. Third, for GASB only, the salary scale modification increased the present value of the benefits for active employees.

If the plan would have terminated on December 31, 1994, the market value of assets would have exceeded the liabilities for benefits already earned by an amount of \$1.9 billion dollars, even using the conservative FASB interest rate. The sound funding policy adopted by the Board assures that future liabilities will be met by future contributions therefore, the decline in the ratio is only a temporary dip in the long-term sound position of the system.

Plan Assets

Schedule I summarizes the development of the actuarial value of assets as of December 31, 1994. The assets are based on the unaudited financial statements prepared by SERS. The asset valuation method will smooth out year-to-year fluctuations in the market value. The approach gradually recognizes, over a 5 year period, the differences between total investment returns and the assumed rate of return (9.9 percent in 1994). This smoothing method includes 20 percent of the 1994 asset loss of \$1,375,742,682 this year, with the remainder to be recognized over the next four years.

Projection

Schedule J displays a five year history and an eleven year projection of the annuitants and active employees, and the contributions and benefit payments.

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Participant Data

Section I of Schedule K provides a distribution of the active and inactive participants as of December 31, 1994 by benefit class, sex, age, and length of service. It also shows the average annualized salary in 1994 by age group and sex. Section II of the schedule shows the retired participants and beneficiaries by age, sex, and benefit amounts.

Although we have made tests to check for reasonableness and consistency, we have not independently audited the data which were submitted by SERS.

Plan Provisions

Schedule L contains a summary of the principal provisions of the plan in effect after enactment of Act 1994-29. These changes have been reflected in this valuation and are detailed in Schedule L.

Actuarial Assumptions

Schedule M summarizes the actuarial assumptions used for the valuation. With the exception of the career salary scale, the actuarial assumptions are the same as those introduced in 1990 which reflect the experience of the SERS during 1986 through 1990. The Commonwealth introduced a new pay scale which became effective January 1, 1994. The new pay scale compressed the previous schedule of 35 steps down 20 steps. The new scale provides longevity increases for members who have at least one year of service. The previous pay scale delayed the longevity increase to new hires for a period of seven years. The career salary scales were increased to reflect the new pay scales.

Funding Methods

Schedule N explains the funding methods used in the valuation. The asset valuation method amortizes investment gains and losses over five years. The funding and contribution policy provides for reasonable levels of contribution that will fund the cost of future retirement credits with a credit for amortization of the excess of assets over liabilities. The section explains the calculation of the liabilities required for the accountant reports.

Definitions

Schedule O defines certain technical terms used in the valuation.

STATE EMPLOYEES' RETIREMENT SYSTEM

UNFUNDED LIABILITY AND NORMAL COST DECEMBER 31, 1994

I. Present Value of Benefits:

1) Active and Inactive Participants	
a) Superannuation and Withdrawal.....	\$ 13,632,785,307
b) Disability.....	718,222,789
c) Death.....	922,228,887
d) Refunds.....	58,910,689
e) Special Police and Enforcement Officer Benefits.....	42,550,387
2) Annuitants and Beneficiaries.....	<u>5,039,220,966</u>
3) Total.....	\$ 20,413,919,025

II. Present Value of Member and Employer Contributions:

1) Employer portion of Normal Cost.....	\$ 4,522,691,149
2) Member Contributions.....	2,149,171,578
3) Special Police and Enforcement Officer Contributions.....	<u>0</u>
4) Total.....	\$ 6,671,862,727

III. Actuarial Accrued Liability: (I) - (II)..... \$ 13,742,056,298

IV. Adjusted Actuarial Value of Assets..... \$ 13,991,485,265

V. Unfunded Liability (III) - (IV)..... \$ (249,428,967)

VI. Employer Normal Cost Rate

1) Normal Cost Rate for new active members to fund:	
a) Superannuation and Withdrawal.....	13.51%
b) Disability.....	0.92
c) Death.....	0.76
d) Refunds.....	<u>0.54</u>
e) Total.....	15.73%
2) Member Deductions.....	5.00%
3) Employer Normal Cost (1)-(2).....	10.73%

SCHEDULE A

STATE EMPLOYEES RETIREMENT SYSTEM

TOTAL EMPLOYER CONTRIBUTION RATE IN FISCAL YEAR 1995-96

I. Amortization of:	Funding Period 20 Years from July 1	Initial Amount of Liability	Outstanding Balance as of 12/31/94	Annual Payment to Fund Amount	Annual Payment to Fund Percent*
1) Liability for Supplemental Annuities	1991	\$ 405,641,841	\$ 430,346,406	\$ 39,513,727	0.99%
2) Liability for Other Benefits	1991	461,468,532	489,573,074	44,951,827	1.13%
3) Liability (Asset) for Changes in 1991	1992	(735,926,889)	(773,785,104)	(67,856,705)	(1.70)%
4) Liability (Asset) for Changes in 1992	1993	(428,770,084)	(445,012,161)	(37,377,661)	(0.94)%
5) Liability (Asset) for Changes in 1993	1994	(556,924,446)	(568,400,504)	(45,842,434)	(1.15)%
6) Liability for Changes in 1994	1995	392,912,465	392,912,465	30,617,351	0.77%
7) Liability for Supplemental Annuities	1995	224,936,857	<u>224,936,857</u>	<u>17,528,003</u>	<u>0.44%</u>
8) Total Liability Payment Sum of (1) through (7)			\$ (249,428,967)	\$ (18,465,892)	(0.46)%
II. Employer Normal Cost					10.73%
III. Total Employer Cost (I) + (II)					10.27%

*The payment is expressed as a percentage of the projected total payroll for active members in fiscal year 1995-96 of \$3,990,439,600

STATE EMPLOYEES RETIREMENT SYSTEM

EMPLOYER CONTRIBUTION RATE BY GROUP

	Class A (Age 60 Super- annuation)	Class A (Age 50 Super- annuation)	Class A Park Rangers & Capitol Police	Class A State Police	Class C State Police	Class C Enforcement Officers	Class D	Class E
1) Basic Contribution Rate	9.03%	9.03%	9.03%	9.03%	9.03%	9.03%	9.03%	9.03%
2) Age 50 Superannuation	-	2.29%	2.00%	2.29%	2.29%	2.29%	2.29%	-
3) Multiplier Adjustment	1.00	1.00	1.00	1.558	1.558	1.00	3.75	1.6582
4) Past Liability	-	-	1.41%	9.96%	9.96%	-	-	1.41%
5) Class C Additional Annuities	-	-	-	0.00	0.00	0.00	-	-
6) Adjusted Contribution Rates: [(1) + (2)] x 3 + 4 + 5	9.03%	11.32%	12.44%	27.59%	27.59%	11.32%	42.45%	16.39%
7) Projected 1994/95 Payroll	\$3,350,212,000	\$371,623,000	\$6,678,000	\$134,845,000	\$55,994,000	\$2,863,000	\$726,000	\$67,499,000
8) Employer Contribution Amount	\$ 302,524,000	\$ 42,068,000	\$ 831,000	\$ 37,204,000	\$15,449,000	\$ 324,000	\$308,000	\$11,063,000

Notes: The total employer contribution (\$409,818,000) is the average employer contribution rate from Schedule B (10.27 percent) times the total projected payroll (\$3,990,440,000). The Basic Contribution Rate (9.03 percent) was determined as the percentage needed to produce employer contribution amounts by class that sum to \$409,818,000. The resulting total contribution amount may differ slightly because of rounding.

STATE EMPLOYES' RETIREMENT SYSTEM

STATE POLICE AND ENFORCEMENT OFFICERS - ADDITIONAL ANNUITY RATE
(Fiscal Year 1995-96)

	<u>State Police</u>	<u>Enforcement Officers</u>
1) Balance in Benefit Account as of December 31, 1994	\$862,971,280	\$16,983,133
2) Present Value of Benefits for Annuitants and Beneficiaries.....	658,526,494	14,678,845
3) Assets available for additional annuities for Active Members: (1) - (2).....	204,444,786	2,304,288
4) Present Value of additional annuities for Active Members	40,246,099	2,304,288
5) Present Value of Future Contribution to fund additional annuities: (4) - (3)	0	0
6) Present Value of Future Compensation for eligible Active Members.....	*	*
7) Contribution Rate as a percentage of payroll payable January 1: (5) / (6).....	0.00%	0.00%

* Not calculated because additional annuity is fully funded.

SCHEDULE D

STATE EMPLOYES' RETIREMENT SYSTEM

ANALYSIS OF CHANGE IN EMPLOYER CONTRIBUTION RATE

	Normal <u>Cost</u>	Unfunded <u>Liabilities</u>	<u>Total</u>
I. December 31, 1993 Valuation	10.23%	(1.70)%	8.53%
II. Changes - 12/31/94 Valuation:			
1) Loss on Investment Earnings.....		0.11%	0.11%
2) Change in Demographics of the New Entrants.....	0.15	(0.12)	0.03
3) Changes in the plan provisions from Act 1994 - 29	0.07	0.60	0.67
4) Recognition of new salary scale	0.28	0.89	1.17
5) Difference Due to Actual Experience Different from Actuarial Assumptions		(0.24)	(0.24)
6) Total Change	0.50%	1.24%	1.74%
III. December 31, 1994 Valuation:			
(I) + (II)	10.73%	(0.46)%	10.27%

ANALYSIS OF CHANGE IN UNFUNDED LIABILITY

I. December 31, 1993 Unfunded Liability	\$ (846,876,772)
II. Expected Amortization Payment	(63,439,282)
III. Expected Liability as of December 31, 1994 [((I) x 1.099) - (II)]	(867,278,289)
IV. Change in Liability Due to:	
1) Loss on Investment Earnings.....	58,107,502
2) Change in Demographics of New Entrants.....	(61,451,174)
3) Changes in the plan provisions from Act 1994 - 29	307,255,868
4) Recognition of new salary scale	455,762,871
5) Difference Due to Actual Experience Different from Actuarial Assumptions	(141,825,745)
6) Total Change	\$617,849,322
V. December 31, 1994 Unfunded Liability: (III) + (IV)	\$ (249,428,967)

SCHEDULE E

STATE EMPLOYEES' RETIREMENT SYSTEM
ACTUARIAL BALANCE SHEET AS OF DECEMBER 31, 1994

ASSETS

LIABILITIES

<u>Present Assets:</u>		<u>Present Value of Benefits Payable to Annuitants and Beneficiaries from:</u>	
Members' Savings Account	\$ 2,352,730,646	Annuity Reserve Account	\$ 4,159,266,553
Annuity Reserve Account	4,159,266,553	State Police Benefit Account	862,971,280
State Police Benefit Account	862,971,280	Enforcement Officers Benefit Account	<u>16,983,133</u>
Enforcement Officers Benefit Account	16,983,133	Total for Annuitants and Beneficiaries	\$ 5,039,220,966
State Accumulation Account	6,593,605,138		
Supplemental Annuity Account	<u>(655,283,263)</u>		
Total Present Assets (Market Value)	\$13,330,273,487		
Adjustment to Smooth Market Fluctuations	693,417,164		
Adjustments for Contributions Payable in the Fiscal year	(32,205,386)	<u>Present Value of Benefits to Active and Inactive Members from:</u>	
Total Present Assets (Actuarial Value)	\$13,991,485,265	<u>Member Savings Account and State Accumulation Account</u>	
<u>Present Value of Future Contributions</u>		Superannuation and withdrawal	\$ 13,632,785,307
Members' Contributions (Employer)	\$ 2,149,171,578	Disability	718,222,789
Normal Cost Contributions (Employer)	4,522,691,149	Death	922,228,887
Accrued Liability Amortization (Employer)	(904,712,230)	Refunds	<u>58,910,689</u>
Supplemental Annuity Amortization (Employer)	655,283,263	Subtotal	\$15,332,147,672
Special State Police Contributions (Employer)	0	State Police Benefit Account	40,246,099
Special Enforcement Officer Contributions (Employer)	<u>0</u>	Enforcement Officers Benefit Account	<u>2,304,288</u>
Total Future Contributions	\$ 6,422,433,760	Total	\$15,374,698,059
TOTAL ASSETS	<u>\$20,413,919,025</u>	TOTAL LIABILITIES	<u>\$20,413,919,025</u>

STATE EMPLOYES' RETIREMENT SYSTEM

ANALYSIS OF CHANGE IN EMPLOYER CONTRIBUTION RATE

	Normal <u>Cost</u>	Unfunded <u>Liabilities</u>	<u>Total</u>
I. December 31, 1993 Valuation	10.23%	(1.70)%	8.53%
II. Changes - 12/31/94 Valuation:			
1) Loss on Investment Earnings.....		0.11%	0.11%
2) Change in Demographics of the New Entrants.....	0.15	(0.12)	0.03
3) Changes in the plan provisions from Act 1994 - 29	0.07	0.60	0.67
4) Recognition of new salary scale	0.28	0.89	1.17
5) Difference Due to Actual Experience Different from Actuarial Assumptions		(0.24)	(0.24)
6) Total Change	0.50%	1.24%	1.74%
III. December 31, 1994 Valuation:			
(I) + (II)	10.73%	(0.46)%	10.27%

ANALYSIS OF CHANGE IN UNFUNDED LIABILITY

I. December 31, 1993 Unfunded Liability	\$ (846,876,772)
II. Expected Amortization Payment	(63,439,282)
III. Expected Liability as of December 31, 1994 [((I) x 1.099) - (II)]	(867,278,289)
IV. Change in Liability Due to:	
1) Loss on Investment Earnings.....	58,107,502
2) Change in Demographics of New Entrants.....	(61,451,174)
3) Changes in the plan provisions from Act 1994 - 29	307,255,868
4) Recognition of new salary scale	455,762,871
5) Difference Due to Actual Experience Different from Actuarial Assumptions	(141,825,745)
6) Total Change	\$617,849,322
V. December 31, 1994 Unfunded Liability: (III) + (IV)	\$ (249,428,967)

SCHEDULE E

**STATE EMPLOYEES' RETIREMENT SYSTEM
ACTUARIAL BALANCE SHEET AS OF DECEMBER 31, 1994**

ASSETS

LIABILITIES

<u>Present Assets:</u>	
Members' Savings Account	Present Value of Benefits Payable to Annuityants and Beneficiaries from:
Annuity Reserve Account	Annuity Reserve Account
State Police Benefit Account	State Police Benefit Account
Enforcement Officers Benefit Account	Enforcement Officers Benefit Account
State Accumulation Account	Total for Annuityants and Beneficiaries
Supplemental Annuity Account	
Total Present Assets (Market Value)	
Adjustment to Smooth Market Fluctuations	
Adjustments for Contributions Payable in the Fiscal year	
Total Present Assets (Actuarial Value)	
<u>Present Value of Future Contributions</u>	<u>Member Savings Account and State Accumulation Account</u>
Members' Contributions (Employe)	Superannuation and withdrawal
Normal Cost Contributions (Employer)	Disability
Accrued Liability Amortization (Employer)	Death
Supplemental Annuity Amortization (Employer)	Refunds
Special State Police Contributions (Employer)	Subtotal
Special Enforcement Officer Contributions (Employer)	State Police Benefit Account
Total Future Contributions	Enforcement Officers Benefit Account
	Total
<u>TOTAL ASSETS</u>	<u>TOTAL LIABILITIES</u>

STATE EMPLOYES' RETIREMENT SYSTEM

REQUIRED TRANSFERS WITHIN SERS ACCOUNTS

I. Annuity Reserve Account

Balance as reported by SERS	\$ 4,155,310,381
Transfer from State Accumulation Account	(201,891,281)
Transfer from Supplemental Annuity Account.....	<u>205,847,453</u>
December 31, 1994 balance after transfers	\$ 4,159,266,553

II. State Accumulation Account

Balance as reported by SERS	\$ 6,392,316,491
Transfer to Annuity Reserve Account.....	201,891,281
Transfer to Enforcement Officer Account.....	<u>(602,634)</u>
December 31, 1994 balance after transfers	\$ 6,593,605,138

III. Enforcement Officers' Benefit Account

Balance as reported by SERS	\$ 15,618,857
Transfer from State Accumulation Account	602,634
Transfer from Supplemental Annuity Account.....	<u>761,642</u>
December 31, 1994 balance after transfers	\$ 16,983,133

IV. State Police Benefit Account

Balance as reported by SERS	\$ 844,643,518
Transfer from Supplemental Annuity Account.....	<u>18,327,762</u>
December 31, 1994 balance after transfers	862,971,280

V. Supplemental Annuity Account

Balance as reported by SERS	(430,346,406)
Transfer to Annuity Reserve Account.....	(205,847,453)
Transfer to State Police Benefit Account.....	(18,327,762)
Transfer to Enforcement Officers' Benefit Account	<u>(761,642)</u>
December 31, 1994 balance after transfers	(655,283,263)

Note: The transfers from the Supplemental Annuity Account total \$224,936,857. That is the amount established for 20 year amortization on Schedule B.

SCHEDULE G

STATE EMPLOYES' RETIREMENT SYSTEM

ACCOUNTING DISCLOSURE STATEMENTS

I. FUNDING STATUS OF PROJECTED BENEFIT OBLIGATION AS OF DECEMBER 31, 1994

	<u>Number of Members</u>	
1) Projected benefit obligation		
a) Retirees and beneficiaries		
1. Superannuation retirements	47,139	\$3,197,027,661
2. Early retirements	22,053	1,398,660,167
3. Disabled	4,588	236,869,914
4. Beneficiaries	<u>7,055</u>	<u>206,052,103</u>
5. Total	80,835	\$5,038,609,845
b) Inactive participants	4,455	\$ 78,647,671
c) Active members		
1. Employee contributions and interest		\$2,349,731,353
2. Employer-financed liability - vested	66,320	5,219,026,065
3. Employer-financed liability - nonvested	<u>47,800</u>	<u>485,856,307</u>
4. Total	114,120	\$8,054,613,725
d) Total obligation for all members	199,410	\$13,171,871,241
2) Market value of assets available for benefits		\$13,330,273,487
3) Unfunded projected benefit obligation		\$(158,402,246)
4) Assets as a percent of projected benefit obligation		101.2%

The amount shown above as the projected benefit obligation (PBO) is a standardized disclosure measure of the present value of pension benefits estimated to be payable in the future as a result of employee service to December 31, 1994. The PBO was calculated in conformance with the requirements of Statement No. 5 of the Governmental Accounting Standards Board (GASB) - "Disclosure of Pension Information by Public Employes' Retirement Systems and State and Local Governmental Employers." The investment return assumption is 9.25 percent. The calculation assumes salaries will increase as stated in Schedule N. No post-retirement increases are assumed.

Note: The funded ratios dropped in 1994 for several reasons including a \$1.4 billion loss in the market value of assets and a substantial increase in liabilities resulting from Act 1994 - 29. This is a temporary decline in one measure of the adequacy of the fund. The long-term financing of all liabilities is sound and this measure should again increase in the future.

SCHEDULE H
(Page 1 of 2)

STATE EMPLOYEES' RETIREMENT SYSTEM

ACCOUNTING DISCLOSURE STATEMENTS

II. FUNDING STATUS OF ACCUMULATED PLAN BENEFITS AS OF DECEMBER 31, 1994

1)	Actuarial Present Value of Accumulated Plan Benefits	
a)	Vested	
1.	Active participants.....	\$ 5,588,826,327
2.	Inactive	65,278,328
3.	Superannuation Retirements	3,500,944,330
4.	Early Retirements.....	1,564,842,947
5.	Disabled.....	260,916,741
6.	Beneficiaries.....	<u>224,659,822</u>
7.	Total Vested.....	\$11,205,468,495
b)	Non-vested	\$ 200,516,650
c)	Total Accumulated Plan Benefits.....	\$11,405,985,145
2)	Market Value of Assets.....	\$13,330,273,487
3)	Ratio of market value of assets to actuarial present value of accumulated benefits	
a)	Vested Benefits.....	119.0%
b)	Total Accumulated Benefits.....	116.9%
4)	Changes in Accumulated Plan Benefits	
a)	Value as of December 31, 1993	\$10,631,426,819
b)	Changes during year	
1.	Due to passage of time and other causes	\$ 421,308,413
2.	Due to change in interest rate.....	0
3.	Due to change in plan provisions.....	<u>353,249,913</u>
4.	Total change	\$ 774,558,326
c)	Value as of December 31, 1994	\$11,405,985,145

The amount shown above as the present value of accumulated plan benefits is a standardized disclosure measure of the present value of pension benefits estimated to be payable in the future as a result of employee service to December 31, 1994. This measure assumes that salaries will not increase in the future. The investment return assumption is 7.75 percent.

Note: The funded ratios dropped in 1994 for several reasons including a \$1.4 billion loss in the market value of assets and a substantial increase in liabilities resulting from Act 1994 - 29. This is a temporary decline in one measure of the adequacy of the fund. The long-term financing of all liabilities in sound and this measure should again increase in the future.

SCHEDULE H
(Page 2 of 2)

STATE EMPLOYES' RETIREMENT SYSTEM

ACTUARIAL VALUE OF ASSETS

I. Development of 12/31/94 Expected Actuarial Value:	
1) Actuarial Value as of 12/31/93	\$13,076,667,080
2) Contributions in 1994.....	536,130,517
3) Benefits and Expenses in 1994	(811,937,061)
4) Interest @ 9.9% to 12/31/94 on (1)	1,294,590,041
5) Interest @ 9.9% to 12/31/94 on .5 x ((2) - (3)).....	(13,652,424)
6) Expected Actuarial Value as of 12/31/94: (1) + (2) + (3) + (4) + (5)	\$14,081,798,153
II. Previous Differences Not Yet Amortized:	
1) Unrecognized amount of 12/31/90 Difference: .2 x \$(364,286,067)	(72,857,213)
2) Unrecognized amount of 12/31/91 Difference: .4 x \$1,245,070,096.....	498,028,038
3) Unrecognized amount of 12/31/92 Difference: .6 x \$(177,551,390)	(106,530,834)
4) Unrecognized amount of 12/31/93 Difference: .8 x \$381,972,531	<u>305,578,025</u>
5) Total	\$ 624,218,016
III. Gain or Loss from 1994	
1) Market Value of Assets on 12/31/94	\$13,330,273,487
2) Expected Market Value II(5) + I(6)	<u>14,706,016,169</u>
3) Gain (loss) from 1994 Investments (1) - (2)	\$(1,375,742,682)
IV. Development of Actuarial Value of Assets as of 12/31/94:	
1) 20% of \$(364,286,067) (12/31/90 Difference):.....	(72,857,213)
2) 20% of \$1,245,070,096 (12/31/91 Difference):	249,014,019
3) 20% of \$(177,551,390) (12/31/92 Difference):.....	(35,510,278)
4) 20% of \$381,972,531 (12/31/93 Difference):	76,394,506
5) 20% of \$(1,375,742,682) (12/31/94 Difference):.....	(275,148,536)
6) Total Difference: (1) + (2) + (3) + (4) + (5)	\$ <u>(58,107,502)</u>
7) Actuarial Value at 12/31/94: I(6) + IV(6)	\$14,023,690,651

SCHEDULE I

(Page 1 of 2)

STATE EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL VALUE OF ASSETS

V.	Adjustments to Actuarial Value of Assets For Transactions Before 7/1/95:	
	1) Employer Total Cost Payable 1/1/95 Through 6/30/95	\$ 158,369,740
	2) Employer Normal Cost Payable 1/1/95 Through 6/30/95	(190,575,126)
	3) Total Adjustments	\$ (32,205,386)
VI.	Adjusted Actuarial Value of Assets (IV) + (V)	<u>\$13,991,485,265</u>

STATE EMPLOYES' RETIREMENT SYSTEM

PROJECTION OF POPULATION, BENEFITS, AND CONTRIBUTIONS

Projection of Annuitants and Employees

<u>Year Ending</u> <u>December 31</u>	<u>Annuitants</u>		<u>Total</u>	<u>Active</u> <u>Employees</u>
	<u>Former</u> <u>Employees</u>	<u>Survivors</u>		
1990 Actual	68,156	6,066	74,222	111,248
1991 Actual	69,908	6,332	76,240	105,731
1992 Actual	73,897	6,595	80,492	109,609
1993 Actual	73,894	6,796	80,690	111,962*
1994 Actual	73,780	7,055	80,835	114,120
1995	75,020	7,337	82,357	114,120
1996	75,532	7,604	83,136	114,120
1997	76,250	7,854	84,103	114,120
1998	77,426	8,083	85,509	114,120
1999	78,745	8,290	86,765	114,120
2000	79,389	8,472	87,862	114,120
2001	80,161	8,628	88,789	114,120
2002	80,782	8,756	89,538	114,120
2003	81,245	8,854	90,099	114,120
2004	81,539	8,921	90,460	114,120
2005	81,656	8,957	90,613	114,120

* The December 31, 1993 report erroneously reported the 1993 number of active members as 116,652. The number has been corrected for this report.

STATE EMPLOYEES' RETIREMENT SYSTEM

PROJECTION OF POPULATION, BENEFITS, AND CONTRIBUTIONS

Projection of Expected Contributions and Benefits

(Millions of Dollars)

<u>Calendar Year</u>	<u>Contribution</u>		<u>Benefits/ Expenses</u>
	<u>Employee</u>	<u>Employer</u>	
1990 Actual	175	418	607
1991 Actual	183	381	664
1992 Actual	187	318	851
1993 Actual	190	312	781
1994 Actual	193	343	812
1995	201	371	889
1996	209	413	925
1997	217	442	989
1998	226	485	1,097
1999	235	537	1,197
2000	244	597	1,271
2001	254	651	1,346
2002	264	695	1,424
2003	275	736	1,504
2004	286	776	1,629
2005	297	828	1,760

The projection is based upon the following assumptions: A projected investment return of 8.7 percent in 1995, 8.8 percent in 1996, 8.8 percent in 1997, and 8.9 percent in all other years; general pay increases of 4.0 percent; and supplemental annuity increases in 1999 and 2004.

STATE EMPLOYEES' RETIREMENT SYSTEM

I. AGE, SERVICE AND SALARY PROFILE OF ACTIVE PARTICIPANTS DECEMBER 31, 1994

ACTIVE EMPLOYEES*

Age	Males - Full Years of Service to December 31, 1994							Total	Average Salary
	0-4	5-9	10-14	15-19	20-24	25-29	30+		
less than 20	7	0	0	0	0	0	0	7	\$ 25,596
20-24	608	49	0	0	0	0	0	657	21,306
25-29	1,951	756	49	0	0	0	0	2,756	24,632
30-34	1,652	1,728	932	175	0	0	0	4,487	28,260
35-39	1,504	1,750	1,665	1,300	197	0	0	6,416	30,646
40-44	1,759	1,524	1,575	2,083	2,075	252	0	9,268	33,121
45-49	1,298	1,285	1,186	1,674	3,236	2,039	114	10,832	36,698
50-54	820	814	661	852	1,522	1,982	970	7,621	39,340
55-59	632	572	607	601	876	1,197	1,093	5,578	40,871
60-64	353	409	417	405	421	530	595	3,130	41,144
65+	<u>149</u>	<u>184</u>	<u>194</u>	<u>147</u>	<u>128</u>	<u>152</u>	<u>173</u>	<u>1,127</u>	<u>43,377</u>
Total	<u>10,733</u>	<u>9,071</u>	<u>7,286</u>	<u>7,237</u>	<u>8,455</u>	<u>6,152</u>	<u>2,945</u>	<u>51,879</u>	<u>\$34,994</u>

Average age..... 45.38
Average service..... 14.43

Age	Females - Full Years of Service to December 31, 1994							Total	Average Salary
	0-4	5-9	10-14	15-19	20-24	25-29	30+		
less than 20	30	0	0	0	0	0	0	30	\$ 19,525
20-24	928	169	0	0	0	0	0	1,097	20,083
25-29	1,618	1,216	175	0	0	0	0	3,009	22,661
30-34	1,377	1,692	1,201	372	0	0	0	4,642	25,501
35-39	1,475	1,687	1,417	1,678	453	0	0	6,710	27,701
40-44	1,356	1,644	1,281	1,858	2,561	572	0	9,272	29,520
45-49	1,102	1,480	1,162	1,300	1,774	1,575	172	8,565	30,418
50-54	631	994	884	1,024	1,034	906	477	5,950	30,699
55-59	368	521	738	798	848	686	404	4,363	30,916
60-64	178	273	373	485	480	352	216	2,357	30,743
65+	<u>44</u>	<u>105</u>	<u>122</u>	<u>125</u>	<u>120</u>	<u>115</u>	<u>84</u>	<u>715</u>	<u>31,967</u>
Total	<u>9,107</u>	<u>9,781</u>	<u>7,353</u>	<u>7,640</u>	<u>7,270</u>	<u>4,206</u>	<u>1,353</u>	<u>46,710</u>	<u>\$28,734</u>

Average age 43.85
Average service..... 13.35

* The following three pages contain information on members in special categories. These include selected hazardous duty members, legislators, judges and district judges. The above information is for all other active members. Page five of Schedule K is the total of all active categories. Page six is the total of all active and inactive employees

SCHEDULE K
(Page 1 of 8)

STATE EMPLOYEES' RETIREMENT SYSTEM

I. AGE, SERVICE AND SALARY PROFILE OF ACTIVE PARTICIPANTS DECEMBER 31, 1994

SELECTED HAZARDOUS DUTY

Age	Males - Full Years of Service to December 31, 1994							Total	Average Salary
	0-4	5-9	10-14	15-19	20-24	25-29	30+		
less than 20	0	0	0	0	0	0	0	0	\$ 0
20-24	332	1	0	0	0	0	0	333	23,778
25-29	1,643	503	1	0	0	0	0	2,147	29,711
30-34	784	1,121	295	4	0	0	0	2,204	34,618
35-39	299	607	625	220	3	0	0	1,754	38,342
40-44	281	421	338	415	176	7	0	1,638	38,714
45-49	296	474	317	241	674	392	10	2,404	41,844
50-54	137	225	165	93	200	321	98	1,239	42,784
55-59	69	142	106	56	56	74	70	573	39,318
60-64	17	73	62	32	28	18	36	266	40,548
65+	4	20	11	2	2	0	2	41	37,197
Total	3,862	3,587	1,920	1,063	1,139	812	216	12,599	\$37,075

Average age..... 39.59
Average service..... 10.13

Age	Females - Full Years of Service to December 31, 1994							Total	Average Salary
	0-4	5-9	10-14	15-19	20-24	25-29	30+		
less than 20	1	0	0	0	0	0	0	1	\$ 18,678
20-24	39	0	0	0	0	0	0	39	22,650
25-29	123	43	0	0	0	0	0	166	27,004
30-34	89	94	37	2	0	0	0	222	31,819
35-39	103	90	86	32	3	0	0	314	34,199
40-44	110	83	52	45	23	2	0	315	33,454
45-49	71	67	49	22	28	17	1	255	35,719
50-54	34	35	24	22	12	13	3	143	36,875
55-59	20	23	22	12	13	9	4	103	35,740
60-64	3	6	17	6	3	3	3	41	40,632
65+	1	0	4	3	0	0	0	8	37,704
Total	594	441	291	144	82	44	11	1,607	\$33,451

Average age 40.87
Average service..... 8.27

* Enforcement officers, correction officers, psychiatric security aides, Capitol Police Officers, Park Rangers and officers of the Pennsylvania State Police and Delaware River Port Authority.

STATE EMPLOYEES' RETIREMENT SYSTEM

I. AGE, SERVICE AND SALARY PROFILE OF ACTIVE PARTICIPANTS DECEMBER 31, 1994

LEGISLATORS

Age	Males - Full Years of Service to December 31, 1994							Total	Average Salary
	0-4	5-9	10-14	15-19	20-24	25-29	30+		
less than 20	0	0	0	0	0	0	0	0	\$ 0
20-24	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0
30-34	10	1	0	0	0	0	0	11	47,000
35-39	7	8	4	5	0	0	0	24	47,275
40-44	8	8	9	11	2	0	0	38	47,705
45-49	6	8	4	19	4	2	0	43	48,530
50-54	4	5	6	10	4	3	0	32	50,005
55-59	1	6	3	6	2	3	1	22	50,399
60-64	4	3	2	5	1	0	4	19	49,470
65+	<u>1</u>	<u>3</u>	<u>3</u>	<u>7</u>	<u>5</u>	<u>1</u>	<u>1</u>	<u>21</u>	<u>48,744</u>
Total	<u>41</u>	<u>42</u>	<u>31</u>	<u>63</u>	<u>18</u>	<u>9</u>	<u>6</u>	210	<u>\$48,684</u>

Average age 49.56

Average service 12.66

Age	Females - Full Years of Service to December 31, 1994							Total	Average Salary
	0-4	5-9	10-14	15-19	20-24	25-29	30+		
less than 20	0	0	0	0	0	0	0	0	\$ 0
20-24	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0
30-34	1	0	0	0	0	0	0	1	47,000
35-39	2	0	0	0	0	0	0	2	47,000
40-44	1	0	2	0	1	0	0	4	47,000
45-49	5	3	0	0	0	0	0	8	47,000
50-54	2	0	2	0	0	0	0	4	47,000
55-59	1	2	1	0	0	0	0	4	47,000
60-64	0	2	0	0	0	0	0	2	47,000
65+	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>3</u>	<u>47,183</u>
Total	<u>12</u>	<u>8</u>	<u>6</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>28</u>	<u>\$47,020</u>

Average age 51.25

Average service 7.71

SCHEDULE K
(Page 3 of 8)

STATE EMPLOYEES' RETIREMENT SYSTEM

I. AGE, SERVICE AND SALARY PROFILE OF ACTIVE PARTICIPANTS DECEMBER 31, 1994

JUDGES AND DISTRICT JUSTICES

Age	<u>Males - Full Years of Service to December 31, 1994</u>							Total	Average Salary
	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>		
less than 20	0	0	0	0	0	0	0	0	\$ 0
20-24	0	0	0	0	0	0	0	0	0
25-29	3	0	0	0	0	0	0	3	76,744
30-34	6	2	0	0	0	0	0	8	66,168
35-39	18	9	4	0	0	0	0	31	70,140
40-44	49	31	23	7	5	0	0	115	64,380
45-49	38	42	42	11	12	3	0	148	72,146
50-54	34	27	40	13	10	7	4	135	74,949
55-59	19	15	28	21	15	19	5	122	72,111
60-64	5	18	16	27	26	16	2	110	75,482
65+	<u>2</u>	<u>8</u>	<u>22</u>	<u>13</u>	<u>21</u>	<u>12</u>	<u>12</u>	<u>90</u>	<u>77,729</u>
Total	<u>174</u>	<u>152</u>	<u>175</u>	<u>92</u>	<u>89</u>	<u>57</u>	<u>23</u>	<u>762</u>	<u>\$72,480</u>

Average age 52.67
 Average service 12.41

Age	<u>Females - Full Years of Service to December 31, 1994</u>							Total	Average Salary
	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>		
less than 20	0	0	0	0	0	0	0	0	\$ 0
20-24	0	0	0	0	0	0	0	0	0
25-29	4	0	0	0	0	0	0	4	69,766
30-34	8	1	0	0	0	0	0	9	79,881
35-39	9	5	2	0	0	0	0	16	65,528
40-44	17	15	6	4	0	0	0	42	76,826
45-49	9	12	12	0	2	1	0	36	70,036
50-54	4	9	4	3	0	0	0	20	64,993
55-59	5	5	7	6	2	2	0	27	59,454
60-64	3	3	3	3	4	3	0	19	50,391
65+	<u>0</u>	<u>1</u>	<u>6</u>	<u>2</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>10</u>	<u>61,249</u>
Total	<u>59</u>	<u>51</u>	<u>40</u>	<u>18</u>	<u>9</u>	<u>6</u>	<u>0</u>	<u>183</u>	<u>\$67,046</u>

Average age 48.43
 Average service 9.09

SCHEDULE K
 (Page 4 of 8)

STATE EMPLOYES' RETIREMENT SYSTEM

I. AGE, SERVICE AND SALARY PROFILE OF ACTIVE PARTICIPANTS DECEMBER 31, 1994

ALL ACTIVE EMPLOYES

Age	Males - Full Years of Service to December 31, 1994							Total	Average Salary
	0-4	5-9	10-14	15-19	20-24	25-29	30+		
less than 20	7	0	0	0	0	0	0	7	\$25,596
20-24	942	50	0	0	0	0	0	992	22,127
25-29	3,606	1,266	50	0	0	0	0	4,922	26,869
30-34	2,458	2,858	1,227	179	0	0	0	6,722	30,408
35-39	1,834	2,384	2,300	1,526	200	0	0	8,244	32,465
40-44	2,104	1,988	1,947	2,524	2,264	259	0	11,086	34,320
45-49	1,645	1,811	1,552	1,947	3,939	2,437	124	13,455	38,037
50-54	999	1,073	874	973	1,739	2,313	1,072	9,043	40,362
55-59	722	737	744	686	951	1,294	1,169	6,303	41,359
60-64	379	504	498	469	476	564	637	3,527	42,208
65+	<u>157</u>	<u>215</u>	<u>231</u>	<u>169</u>	<u>157</u>	<u>165</u>	<u>188</u>	<u>1,282</u>	<u>45,639</u>
Total	<u>14,853</u>	<u>12,886</u>	<u>9,423</u>	<u>8,473</u>	<u>9,726</u>	<u>7,032</u>	<u>3,190</u>	<u>65,583</u>	<u>\$35,859</u>

Average age 44.36
 Average service 13.56

Age	Females - Full Years of Service to December 31, 1994							Total	Average Salary
	0-4	5-9	10-14	15-19	20-24	25-29	30+		
less than 20	31	0	0	0	0	0	0	31	\$19,498
20-24	967	169	0	0	0	0	0	1,136	20,171
25-29	1,747	1,259	175	0	0	0	0	3,181	22,948
30-34	1,476	1,787	1,238	374	0	0	0	4,875	25,891
35-39	1,590	1,784	1,505	1,710	456	0	0	7,045	28,080
40-44	1,484	1,742	1,341	1,907	2,585	574	0	9,633	29,862
45-49	1,187	1,562	1,223	1,323	1,804	1,593	173	8,865	30,747
50-54	672	1,039	914	1,049	1,046	919	480	6,119	30,963
55-59	394	551	768	816	863	697	408	4,497	31,212
60-64	184	284	393	494	487	358	219	2,419	31,078
65+	<u>45</u>	<u>107</u>	<u>133</u>	<u>130</u>	<u>121</u>	<u>115</u>	<u>85</u>	<u>736</u>	<u>32,489</u>
Total	<u>9,777</u>	<u>10,284</u>	<u>7,690</u>	<u>7,803</u>	<u>7,362</u>	<u>4,256</u>	<u>1,365</u>	<u>48,537</u>	<u>\$29,044</u>

Average age 43.77
 Average service 13.16

STATE EMPLOYEES' RETIREMENT SYSTEM

I. AGE, SERVICE AND SALARY PROFILE OF ACTIVE PARTICIPANTS DECEMBER 31, 1994

ACTIVE AND INACTIVE EMPLOYEES

Age	Males - Full Years of Service to December 31, 1994							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
less than 20	10	0	0	0	0	0	0	10
20-24	1,008	50	0	0	0	0	0	1,058
25-29	3,760	1,280	50	0	0	0	0	5,090
30-34	2,584	2,884	1,236	181	0	0	0	6,885
35-39	1,957	2,415	2,337	1,539	200	0	0	8,448
40-44	2,356	2,017	2,003	2,553	2,274	259	0	11,462
45-49	1,803	1,843	1,612	1,998	3,970	2,449	124	13,799
50-54	1,132	1,104	914	1,004	1,759	2,327	1,086	9,326
55-59	854	768	788	717	968	1,311	1,183	6,589
60-64	485	532	521	482	492	579	658	3,749
65+	202	234	245	179	164	168	197	1,389
Total	<u>16,151</u>	<u>13,127</u>	<u>9,706</u>	<u>8,653</u>	<u>9,827</u>	<u>7,093</u>	<u>3,248</u>	<u>67,805</u>

Average age 44.42
 Average service 13.35

Age	Females - Full Years of Service to December 31, 1994							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
less than 20	32	0	0	0	0	0	0	32
20-24	1,020	172	0	0	0	0	0	1,192
25-29	1,866	1,274	176	0	0	0	0	3,316
30-34	1,569	1,817	1,258	375	0	0	0	5,019
35-39	1,667	1,821	1,576	1,729	456	0	0	7,249
40-44	1,630	1,805	1,426	1,969	2,598	575	0	10,003
45-49	1,367	1,644	1,287	1,365	1,819	1,599	173	9,254
50-54	837	1,100	970	1,084	1,060	928	486	6,465
55-59	528	592	820	839	876	706	414	4,775
60-64	273	319	422	513	511	365	221	2,624
65+	108	129	142	134	122	116	90	841
Total	<u>10,897</u>	<u>10,673</u>	<u>8,077</u>	<u>8,008</u>	<u>7,442</u>	<u>4,289</u>	<u>1,384</u>	<u>50,770</u>

Average age 43.91
 Average service 12.90

STATE EMPLOYES' RETIREMENT SYSTEM

II. AGE AND BENEFIT PROFILE OF ANNUITANTS AND BENEFICIARIES DECEMBER 31, 1994

SUPERANNUATION ANNUITANTS

Age	Male		Female		Total	
	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
50-54	274	\$ 8,501,041	7	\$ 51,010	281	\$ 8,552,052
55-59	780	21,155,994	111	2,073,299	891	23,229,293
60-64	2,533	47,552,297	1,594	17,428,422	4,127	64,980,719
65-69	5,776	74,471,698	4,173	35,880,303	9,949	110,352,001
70-74	6,429	68,903,702	5,031	35,179,907	11,460	104,083,609
75-79	4,961	38,780,591	4,399	25,503,195	9,360	64,283,786
80-84	3,464	25,007,329	3,257	18,395,805	6,721	43,403,134
85-89	1,550	10,710,325	1,604	8,823,779	3,154	19,534,104
90 & Over	539	3,750,419	657	3,577,655	1,196	7,328,074
Total	<u>26,306</u>	<u>\$298,833,396</u>	<u>20,833</u>	<u>\$146,913,375</u>	<u>47,139</u>	<u>\$445,746,772</u>

Average Age 73.6

Average Pension \$9,456

EARLY RETIREMENT ANNUITANTS

Age	Male		Female		Total	
	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
30-34	22	\$ 18,611	101	\$ 97,520	123	\$ 116,131
35-39	205	237,094	554	628,343	759	865,437
40-44	727	1,053,379	1,592	2,045,955	2,319	3,099,334
45-49	1,934	14,357,224	1,442	2,726,396	3,376	17,083,620
50-54	2,039	23,417,702	1,046	4,404,536	3,085	27,822,238
55-59	1,737	18,705,496	1,364	10,048,319	3,101	28,773,815
60-64	2,261	28,241,258	1,674	13,672,035	3,935	41,913,293
65 & Over	<u>2,665</u>	<u>23,555,562</u>	<u>2,690</u>	<u>16,319,661</u>	<u>5,355</u>	<u>39,875,223</u>
Total	<u>11,590</u>	<u>\$109,606,326</u>	<u>10,463</u>	<u>\$49,762,921</u>	<u>22,053</u>	<u>\$159,549,091</u>

Average Age 56.8

Average Pension \$7,235

SCHEDULE K

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STATE EMPLOYES' RETIREMENT SYSTEM

II. AGE AND BENEFIT PROFILE OF ANNUITANTS AND BENEFICIARIES DECEMBER 31, 1994

DISABLED ANNUITANTS

Age	Male		Female		Total	
	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
30-34	12	\$ 86,809	17	\$ 117,981	29	\$ 204,790
35-39	51	396,891	79	593,828	130	990,719
40-44	143	1,115,417	189	1,366,793	332	2,482,210
45-49	282	2,335,191	230	1,877,088	512	4,212,279
50-54	335	3,035,882	256	1,906,001	591	4,941,883
55-59	355	3,091,398	311	2,459,127	666	5,550,525
60-64	380	3,088,938	357	2,418,123	737	5,507,061
65 & Over	<u>792</u>	<u>4,902,563</u>	<u>799</u>	<u>3,940,855</u>	<u>1,591</u>	<u>8,843,418</u>
Total	<u>2,350</u>	<u>\$18,053,089</u>	<u>2,238</u>	<u>\$14,679,796</u>	<u>4,588</u>	<u>\$32,732,885</u>

Average Age..... 59.4
 Average Pension..... \$7,134

BENEFICIARIES AND SURVIVOR ANNUITANTS

Age	Male		Female		Total	
	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
Under 25	7	\$ 35,468	6	\$ 46,458	13	\$ 81,926
25-29	5	71,594	7	53,551	12	125,145
30-34	9	118,833	11	61,337	20	180,170
35-39	18	124,559	18	106,588	36	231,147
40-44	15	103,443	31	86,900	46	190,343
45-49	27	82,900	65	284,449	92	367,349
50-54	29	83,710	114	687,281	143	770,991
55-59	31	101,488	222	1,445,334	253	1,546,822
60-64	41	184,769	331	2,291,290	372	2,476,059
65-69	49	262,295	771	4,180,706	820	4,443,001
70-74	62	272,330	1,135	5,391,271	1,197	5,663,601
75-79	86	360,333	1,405	5,501,960	1,491	5,862,293
80-84	60	207,263	1,317	5,139,052	1,377	5,346,315
85-89	21	85,272	780	3,166,996	801	3,252,268
90 & Over	<u>8</u>	<u>26,470</u>	<u>374</u>	<u>1,277,363</u>	<u>382</u>	<u>1,303,833</u>
Total	<u>468</u>	<u>\$2,120,727</u>	<u>6,587</u>	<u>\$29,720,536</u>	<u>7,055</u>	<u>\$31,841,263</u>

Average Age..... 74.8
 Average Pension..... \$4,513

SCHEDULE K

(Page 8 of 8)

STATE EMPLOYEES' RETIREMENT SYSTEM

BENEFIT AND CONTRIBUTION PROVISIONS as of DECEMBER 31, 1994
(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 employes and certain other eligible groups. The major provisions may be summarized as follows:

Eligibility Employes

- Class A - All regular State employes as well as employes of certain Commissions and Authorities and all employes of state-owned educational institutions and the Pennsylvania State University (unless such employes have joined the Public School Employees' Retirement System of Pennsylvania or TIAA-CREF). All employes who become members (or who rejoin the Retirement System) on and after March 1, 1974 except Judges and District Justices.
- Class C - Liquor Law enforcement officers and other officers and certain employes of the Pennsylvania State Police who have been members and employes continuously since prior to March 1, 1974.
- Class D-3 - Members of the General Assembly who have been members and employes continuously since prior to March 1, 1974.
- Class E-1 - Judges.
- Class E-2 - District Justices.

STATE EMPLOYES' RETIREMENT SYSTEM

BENEFIT AND CONTRIBUTION PROVISIONS as of DECEMBER 31, 1994
(as embodied in Act 31, approved March 1, 1974)

Age and Service Requirements for Superannuation Retirement (full formula benefits)

Class A - Age 60, with three years of service, except for members of the General Assembly, enforcement officers, correction officers, psychiatric security aides, and officers of the Delaware River Port Authority; for whom the requirement is age 50 with three years of service. Members of Class A with 35 or more years of credited service are entitled to full formula benefits regardless of age. State Police Officers can retire on full benefits after age 50 or with 20 years of service. Capitol Police and Park Rangers can retire on full benefits at age 50 with 20 years of Capitol Police or Park Ranger service.

Classes C Age 50.

Class 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 and Class C is equal to 2 percent of the high 3-year average salary ("F.A.S.") of the member multiplied by the years and fractions of credited service.

The applicable single-life annuity for Class C State Police and Class A State Police is a minimum of 50 percent of highest annual salary if the member has over 20 but less than 25 years of service. With more than 25 years of service the benefit is a minimum of 75 percent of highest annual salary.

STATE EMPLOYES' RETIREMENT SYSTEM

BENEFIT AND CONTRIBUTION PROVISIONS as of DECEMBER 31, 1994
(as embodied in Act 31, approved March 1, 1974)

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

<u>Class</u>	<u>Multiplier</u>	
D-3	3.75	
E-1	2.0	for each of the first 10 years of judicial service dropping to 1.5 for each subsequent year of judicial service.
E-2	1.5	for each year of judicial service.

NOTE: There are conditions under which long-service members or members retiring at advanced ages may receive somewhat larger benefits than those described above. Further, benefit limitations exist for most members of Class D-3.

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 was age 60 at retirement.

In addition to the above benefits, a member who has elected Social Security Integration Coverage is entitled to a single-life annuity of 2 percent of his "Average Non-Covered Salary" for each year of Social Security Integration (SSI) coverage. All Class E members can elect SSI coverage. Other members must have elected SSI coverage before March, 1974. "Average Non-Covered Salary" is the average annual salary received while covered by the Retirement System since January 1, 1956 in excess of the maximum covered wages under Social Security.

STATE EMPLOYEES' RETIREMENT SYSTEM

BENEFIT AND CONTRIBUTION PROVISIONS as of DECEMBER 31, 1994
(as embodied in Act 31, approved March 1, 1974)

Age and Service Requirements for Disability Retirement

A member is eligible for disability retirement if the member is unable to perform his or her current job and has at least 5 years of service. An officer of the State Police or Liquor Law enforcement officer does not have a 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 percent of F.A.S. at time of disability. If the benefit so calculated is less than 33-1/3 percent of F.A.S., the disability benefit is equal to the smaller of:

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

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 Class D-3 service.

Vested Benefit

The vested benefit is equal to the benefit calculated as for superannuation, based on years of credited service at the time of leaving the plan. The former member can receive the full benefit beginning at superannuation age, or an actuarially reduced early retirement benefit beginning at the date of separation.

STATE EMPLOYEES' RETIREMENT SYSTEM

BENEFIT AND CONTRIBUTION PROVISIONS as of DECEMBER 31, 1994 **(as embodied in Act 31, approved March 1, 1974)**

Eligibility for Death Benefit Prior to Retirement

A member is eligible if the member is (1) under superannuation age with 10 years of credited service, except for a member of Class D-3 who is eligible after 6 years of Class D-3 service, or (2) upon attainment of superannuation age with 3 years of credited service.

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 the member retired the day before he or she died, assuming the member had elected Option 1 if no other option had been elected.

Temporary Early Retirement Benefit

A temporary early retirement incentive was provided for under Act 1994 - 29. The early retirement incentive was retroactive to July 1, 1993, and will continue on until June 30, 1997. During this period of time, a member who has 30 or more years of service may retire at any age and receive full unreduced benefits.

Death Benefits After Retirement

A member may elect one of several optional reduced pensions in lieu of the single-life annuity provided by the formula. However, if the member 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 the total single-life allowance, including any cost-of-living supplements, up to the rate of \$84.50 for each year of credited service. An annuitant who retired early is entitled to the supplemental allowance upon attaining superannuation age.

STATE EMPLOYES' RETIREMENT SYSTEM

BENEFIT AND CONTRIBUTION PROVISIONS as of DECEMBER 31, 1994
(as embodied in Act 31, approved March 1, 1974)

Supplemental annuities applying cost-of-living increases to the benefits of annuitants have been instituted from time to time. The most recent of these became effective as of July 1, 1994.

Rate of Member Contribution

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

Class A - 5.00% 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 - 5.00%

Class D-3 - 18.75%

Class E-1 - 10.00% during the first 10 years of judicial service and 7.5% thereafter.

Class E-2 - 7.50%

- (ii) Additional contribution for Social Security Integration Credit

Any member who elects Social Security Integration Credit pays 5 percent 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.

STATE EMPLOYES' RETIREMENT SYSTEM

BENEFIT AND CONTRIBUTION PROVISIONS as of DECEMBER 31, 1994
(as embodied in Act 31, approved March 1, 1974)

Interest Credited on Member Contributions

A rate of 4 percent, 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, the accumulated member contributions are paid to the beneficiary; also, any member terminating service when not eligible for another form of benefit is paid a refund of the accumulated contributions and interest; any other terminating member may elect the refund of accumulated contributions and interest in lieu of a retirement allowance.

Employer Contributions

The employer pays the balance of the cost in excess of the members' contributions with payment schedules determined by law. The employer contribution is the employer share of the normal cost plus the amount needed to amortize the December 31, 1990 accrued and supplemental liabilities over a twenty-year period ending with June 30, 2011. Changes in cost after 1990 are typically amortized over new twenty-year periods beginning with the July first following the effective date of the change.

STATE EMPLOYES' RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS

Schedule M shows the actuarial assumptions used for the valuation. The assumptions were based on an evaluation of experience under SERS from 1986 through 1990. Schedule M contains an extract of the full set of rates used in the valuation. The full set of rates is in the evaluation report which can be obtained from SERS. The rates are the probabilities that an event will occur in the year after the valuation. For instance, the male superannuation rate of .200 at age 60 means that 200 of every 1,000 employees age 60 and eligible for full benefits are expected to retire before they reach age 61.

Interest Rate: Interest rate of 9.9 percent graded down to 6.0 percent as shown in Schedule M, compounded annually.

Superannuation and Early Retirement Allowances: The mortality table used for those receiving superannuation and early retirement allowances is the 1971 Group Annuity Mortality Table.

Disability Allowances: The mortality tables used for those receiving disability allowances are modifications of the Federal Civil Service Disability Mortality table.

FOR ACTIVE GENERAL EMPLOYEES

<u>Early Retirement Rate*</u>			<u>Superannuation Retirement Rates</u>		
<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
30	.020	.047	50-58	.150	.040
35	.022	.029	59	.150	.150
40	.016	.025	60	.200	.308
45	.015	.021	61	.220	.250
50	.016	.025	62	.600	.500
55	.022	.035	63	.300	.330
			64	.300	.330
			65	.600	.590
			66	.400	.410
			67	.300	.390
			68-79	.280	.280
			80	1.000	1.000

* Early retirement rates only apply to members not eligible for superannuation retirement.

SCHEDULE M
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STATE EMPLOYES' RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS (Continued)

FOR ACTIVE GENERAL EMPLOYEES

Rates of Separation Due to Withdrawal*

<u>Male</u>					<u>Female</u>				
<u>Years of Service</u>					<u>Years of Service</u>				
<u>Age</u>	<u>0</u>	<u>1</u>	<u>5</u>	<u>9+</u>	<u>Age</u>	<u>0</u>	<u>1</u>	<u>5</u>	<u>9+</u>
20	.1720	.1200	.0500	.0048	20	.1902	.1014	.1176	.0098
25	.1720	.1200	.0546	.0048	25	.2114	.1820	.1176	.0098
30	.1293	.1069	.0536	.0048	30	.2117	.2023	.1150	.0098
35	.1293	.1069	.0536	.0048	30	.1780	.1461	.0897	.0078
40	.1095	.0642	.0376	.0037	40	.1503	.0979	.0682	.0061
45	.1035	.0796	.0293	.0034	45	.1279	.0882	.0611	.0051
50	.0979	.0511	.0217	.0032	50	.1550	.0870	.0545	.0060
55	.0856	.0430	.0190	.0030	55	.1289	.1130	.0511	.0056

FOR ALL ACTIVE EMPLOYEES

<u>Age</u>	<u>Death</u>		<u>Disability*</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
25	.0006	.0005	.0004	.0005
30	.0008	.0005	.0008	.0014
35	.0008	.0007	.0016	.0023
40	.0013	.0011	.0024	.0031
45	.0022	.0012	.0044	.0049
50	.0036	.0022	.0062	.0073
55	.0059	.0037	.0081	.0093
60	.0090	.0042	.0090	.0042

* Separation due to withdrawal and disability retirement rates only apply to members not eligible for superannuation retirement.

STATE EMPLOYES' RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS (Continued)

FOR SPECIAL BENEFIT CLASSES

Withdrawal

<u>Years of Service</u>	<u>Class C</u>	<u>Class D</u>	<u>Class E</u>
0	.074	.000	.050
1	.035	.030	.040
2-3	.027	.030	.030
4-6	.025	.030	.020
7-8	.009	.030	.010
9+	.001	.002	.002

Early Retirement

	<u>Class C</u>	<u>Class D</u>	<u>Class E</u>
Any Age	.0130	.0450	.0210

Superannuation

<u>Age</u>	<u>Class C</u>			<u>Class C</u>	
	<u>Less Than 20</u>	<u>Class D</u>	<u>Class E</u>	<u>20 or More Years of Service</u>	<u>Service</u>
50	.075	.060	N/A	20	.200
55	.130	.060	N/A	21	.080
60	.350	.100	.150	22	.080
65	.650	.130	.250	23	.040
70	.300	.130	.900	24	.040
75	.300	.130	.900	25	.200
80	1.000	1.000	1.000	26-30	.080

STATE EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS (continued)

The Board adopted new career salary scale assumptions in 1995 for the December 31, 1994 valuation. These new assumptions reflected the changes made to the pay scales by the Commonwealth effective January 1, 1994. One change was to compress the 35 steps of 1.25 percent in each pay range to 20 steps of 2.20 percent. The second change was to provide step increases to new employes after the first year rather than the seventh year.

The career salary scales used in the December 31, 1993 valuation are the first two columns on the next page. The following adjustments were made to those scales to implement the new assumptions:

A new scale was adopted for employes hired after December 31, 1994.

The career scale for those hired before July 1, 1988 was increased by the difference between 2.20 percent and 1.25 percent for the next ten years. The scale was then reduced by 1.25 percent per year for the fifteenth through thirtieth year.

For members who entered after July 1, 1988 and before January 1, 1995, the assumed career salary scale was increased by the difference between 2.20 percent and 1.25 percent for 19 years and reduced by 1.25 percent for the next 15 years.

No salary scale is used for members in Classes D and E. These rates predict the career salary growth for individuals. In addition to career salary growth, it is assumed that salary rates will increase by 4 percent each year.

STATE EMPLOYES' RETIREMENT SYSTEM

Actuarial Assumptions (Continued)

Career Salary Scale for Members in Classes A and C

Age	Date of Hire		
	Before July 1, 1988	After July 1, 1988 and Before January 1, 1995	Future Hire
20	4.5	4.5	6.4
21	4.3	4.0	6.4
22	4.1	3.8	6.4
23	3.9	3.4	6.1
24	3.7	3.2	5.8
25	3.5	2.9	5.6
26	3.5	2.9	5.3
27	3.4	2.8	5.1
28	3.4	2.8	4.9
29	3.3	2.7	4.7
30	3.2	2.7	4.5
31	3.2	2.6	4.3
32	3.1	2.6	4.2
33	3.1	2.5	4.0
34	3.0	2.5	3.9
35	3.0	2.4	3.8
36	2.9	2.4	3.6
37	2.9	2.4	3.5
38	2.8	2.3	3.3
39	2.8	2.3	3.2
40	2.7	2.2	3.0
41	2.7	2.2	2.8
42	2.6	2.2	2.7
43	2.6	2.2	2.5
44	2.5	2.2	2.4
45 and older	2.5	2.2	2.2

SCHEDULE M

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STATE EMPLOYEES' RETIREMENT SYSTEM

The annual contribution is equal to the sum of the following:

- (1) The employer share of the normal cost.
- (2) The amortization of the unfunded liabilities as of December 31, 1990 over a twenty-year period ending on June 30, 2011.
- (3) The amortization of changes in liability after 1990 over twenty-year periods typically beginning with the July first following the effective date of the change. Changes include actuarial gains and losses and plan amendments.

All of the amortization payments are based on a schedule of contributions that increase five percent a year. The employer cost is determined as a percent of payroll and the employer contributes that percent of the payroll of all covered members during each fiscal year. The employer cost is the total of (1) the employer normal cost percent and (2) the amortization payment for fiscal year 1994/95 divided by the projected payroll for the fiscal year.

The assumptions used in determining the actuarial cost are stated in Schedule M, and the employer cost, as a percent of payroll, is determined in Schedules A and B. The assumptions used for the current valuation were adopted after a review of the evaluation of experience under SERS from 1986 through 1990. The salary increases and investment returns are:

<u>Years</u>	<u>Salary Increases</u>			<u>Investment Return</u>
	<u>General</u>	<u>Average Career</u>	<u>Total</u>	
1995 to 2000	4.0%	2.7%	6.7%	9.9 %
2001 to 2005	4.0	2.7	6.7	9.0
2006 to 2010	4.0	2.7	6.7	8.0
2011 to 2015	4.0	2.7	6.7	7.0
After 2015	4.0	2.7	6.7	6.0

The Board adopted new career salary scale assumptions for the December 31, 1994 valuation that reflect the changes made to the pay scales by the Commonwealth. The new scale provides longevity increases for members who have at least one year of service. The previous pay scale delayed the longevity increase to new hires for a period of seven years.

STATE EMPLOYEES' RETIREMENT SYSTEM

All costs and liabilities have been determined in conformance with generally accepted actuarial principles and procedures in accordance with the principles of practice prescribed by the Actuarial Standards Board. The calculations were performed on the basis of actuarial assumptions and methods which are internally consistent and reasonable (taking into account past experience under the SERS and reasonable expectations) and which in combination represent the best estimate of anticipated experience under the plan.

III. DISCLOSURE ASSUMPTIONS

The Projected Benefit Obligation (PBO) is the present value of accumulated plan benefits based on past service and projected salary. The PBO was calculated using the withdrawal, death and retirement assumptions set forth in Schedule M.

The career salary for the PBO growth was set equal to the salary growth shown in Schedule M including the assumptions that the salary rates would increase by 4 percent per year, compounded annually. The rate of interest was 9.25 percent per year, compounded annually. The rate of 9.25 percent is approximately equal to the assumed investment return rates averaged over the period during which past obligations to current employees and annuitants will be paid. The 1993 investment return rate assumption was also 9.25 percent. The only change in assumptions was in the career salary growth scale. The Board adopted new career salary scale assumptions that reflect the changes made to the pay scales by the Commonwealth. The new scale provides longevity increases for members who have at least one year of service. The previous scale delayed the longevity increase to new hires for a period of seven years.

The result of the use of the above salary scales and interest rate is to determine a PBO that is the best estimate of the actual obligations of the fund using the procedures established by the Governmental Accounting Standards Board.

The present value of accumulated plan benefits is the liability based on past service but without projection of a salary increase. This value was determined using the assumptions from Schedule M and an interest rate of 7.75 percent for this 1994 report. The 1994 report uses an assumption of 7.75 percent which is in the range of the latest (March 1995) rates for 30-Year Treasury Bonds (7.45 percent) and Aaa Seasoned Issue Corporate Bonds as reported by Moody's Investment Service (8.12 percent). The 1993 investment return rate assumption was also 7.75 percent.

Both disclosure values were determined using the demographic assumptions based on the 1986 to 1990 evaluation of experience.

STATE EMPLOYES' RETIREMENT SYSTEM

DEFINITIONS OF TECHNICAL TERMS

Accrued Service. Service credited under the system which was rendered before the date of the actuarial valuation.

Actuarial Accrued Liability. The portion of the actuarial present value of benefits which is not provided for by the actuarial present value of future normal costs. Also referred to as Past Service Liability.

Actuarial Assumptions. Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, investment income and salary growth. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the actuarial present value of future benefits between future normal costs and the actuarial accrued liability.

Actuarial Present Value. The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting projected future payments at assumed rates of interest and probabilities of payment.

Amortization. Paying off an amount with periodic payments of interest and principle -- as opposed to paying off with a lump sum payment.

Normal Cost. The portion of the actuarial present value of future benefits that is allocated to the current year by the actuarial cost method.

Projected Benefit Obligation. The present value of pension benefits estimated to be payable in the future as a result of employe service to the date of the valuation. The projection includes expected increases in salary.

Unfunded Actuarial Accrued Liabilities. The difference between actuarial accrued liabilities and valuation assets.

STATE EMPLOYES' RETIREMENT SYSTEM

I. ASSET VALUATION METHOD

The actuarial value of assets is developed by recognizing the difference between the expected actuarial value of assets and the market value of assets over a five-year period. The expected actuarial value is last year's actuarial value brought forward to reflect actual contributions, benefit payments and expenses, and assumed investment income. Each year 20 percent of the difference between this expected value and the market value is recognized in determining the current actuarial value of assets with the remaining 80 percent to be recognized over the next four years.

The adjustments and the resulting actuarial assets are shown in Schedule I. The assets are further adjusted to account for the remaining employer contributions in fiscal year 1994/95 (through June 30, 1995). This adjustment is made because the 1994 valuation results will not be reflected in employer contributions until July 1, 1995. The assets are increased by employer contributions payable through June 30, 1995. This adjustment includes any employer contributions due and payable as of the valuation date. The assets are then reduced by the employer normal cost payable through June 30, 1995.

II. FUNDING AND CONTRIBUTION POLICY

The Pennsylvania State Employees' Retirement System funding policy provides for periodic employer contributions at actuarially determined rates that will amortize the liabilities by June 30, 2015. This policy assures that the SERS is appropriately funded and also that the fund will accumulate sufficient assets to pay benefits when they are due. The policy is set by the State Employees' Retirement Board in conformance with specific legal requirements as to the method of funding.

A variation of the Entry-Age Actuarial Cost Method is used to determine the liabilities and costs related to all SERS benefits including superannuation, withdrawal, death and disability benefits. The significant difference between the method used for SERS and the typical Entry-Age Actuarial Cost Method is that the normal cost is based on the benefits and contributions for new employes rather than for all current employes from their date of entry. The SERS variation should produce approximately the same results as the typical method over the long run.