

**ST. PAUL TEACHERS' RETIREMENT
FUND ASSOCIATION**

Supplemental Report

December 31, 1982

MAR 6 1983

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION

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GLOSSARY OF TERMS

Considered Payroll

Annual Compensation of the Members included in the Association.

Value of Benefits Earned to Date
(Exhibits 1 and 2)

The value of a benefit commencing at retirement age considering the employee's age, service and earnings up to the date of the valuation.

Entry Age Normal Level Contribution Requirements
(Exhibits 7 and 8)

The level percentage of payroll which, if paid from the average age at entry of a Member into the Association to retirement age, will accumulate to the sum required to provide for the benefits earned by his service.

Value of Future Entry Age Normal Level Contributions
(Exhibits 5 and 7)

The value of the future income expected to be received from applying the entry age normal level percentage to the future earnings of each member between his present age and the time that he reaches retirement, discounted for death, disability and possible termination of employment.

Net Prior Requirements Accumulated to Date Remaining to be Financed
(Unfunded Liability) (Exhibits 5 and 6)

The amount in excess of the current asset balance that would have been accumulated on December 31, 1982, if the entry age normal cost method had always been employed and the entry age normal contributions for past years had been paid as scheduled.

Interest Requirement on Prior Unfunded Liability
(Exhibits 6 and 8)

The amount of interest that accrues each year on the prior unfunded liability. Failure to pay the full interest requirement results in a corresponding increase in the unfunded liability.

Present Value of All Benefits
(Exhibits 4 and 5)

The single sum amount which, if accumulated in a fund in accordance with the actuarial assumptions, would be sufficient to pay all benefits expected to be earned by present members for past and future service as they fall due.

Funding Objective

The minimum funding objective is to accumulate sufficient assets to cover the benefits earned to date. It is expected that the assets will substantially exceed the benefits earned to date as time goes by if there are no substantial amendments. To the extent that excess assets are accumulated, they represent advance funding against the possibility of a decline in the size of the group.

SUMMARY

(Census as of December 31, 1982)

Membership

	<u>Prior Year</u>	<u>Current Year</u>	<u>Net Change</u>
Retired Members and Beneficiaries	981	996	+ 15
Annual Benefit Payments	\$ 6,836,976	\$ 7,394,929	\$ + 557,953
Active Members	3,018	2,933	- 85
Participating Payroll	<u>\$60,342,802</u>	<u>\$61,695,167</u>	<u>\$+1,352,365</u>

Funded Status

Value of Benefits Earned to Date	\$166,468,631	\$181,426,698	\$+14,958,067
Assets at Cost*	105,071,870	117,983,021	+12,911,151
Funding Ratio	<u>63.1%</u>	<u>65.0%</u>	<u>+ 1.9%</u>

Adequacy of Contributions

Member/State	18.5673%	18.5226%
Actuarial Requirement	22.4943%	21.9334%
Margin	<u>(3.9270%)</u>	<u>(3.4108%)</u>

* Bonds at amortized cost.

STATEMENT OF FINANCIAL CONDITION AND STATUS OF FUNDING

This section is designed to show the financial condition of the retirement system by comparing the assets on hand to the value of the benefits earned to date; and to show the trend of the ratio of assets to the present value of benefits earned to date.

Exhibit 1

Analysis of Funded Status
(Year Ended - December 31, 1982)

	<u>Assets</u>	<u>Value of Benefits Earned to Date</u>	<u>Excess of Benefits Earned to Date Over Assets</u>
Retired Members and Beneficiaries	\$ 63,427,074	\$ 63,427,074	\$ 0
Deferred Vested and Inactive Members	5,336,703	5,336,703	0
Active Members	<u>49,219,244</u>	<u>112,662,921</u>	<u>63,443,677</u>
TOTAL	<u>\$117,983,021</u>	<u>\$181,426,698</u>	<u>\$63,443,677</u>
Ratio of Assets to Benefits Earned to Date	<u>65.0%</u>		

Exhibit 2

Progress of Funding

<u>Year Ended 12/31</u>	<u>Present Value of Benefits Earned to Date</u>	<u>Assets on Hand</u>	<u>Funding Ratio</u>
1971	\$ 59,501,403	\$ 22,541,277	37.9%
1972	59,593,105	27,554,138	46.2%
1973	62,756,402	33,004,303	52.6%
1974	66,473,748	40,763,219	61.3% (1)
1975	73,429,042	46,833,545	63.8% (2)
1976	85,119,882	54,480,417	64.0%
1977	98,729,267	61,492,282	62.3% (3)
1978	115,780,026	70,023,919	60.5%
1979	137,343,411	79,622,860	58.0% (4)
1980	152,051,681	91,317,183	60.1%
1981	166,468,631	105,071,870	63.1%
1982	181,426,698	117,983,021	65.0%

(1) 64.2% based on Plan prior to Amendment.

(2) 65.5% without \$1,976,827 reserve for increases granted retirees in 1955, 1958, 1966, 1970 and 1973 under Par. 9.

(3) 65.6% without increase effective for retirements July 1, 1977 or later.

(4) 64.6% prior to amendment (augmentation).

ACTUARIAL BASIS FOR DETERMINATION OF THE ENTRY AGE NORMAL
LEVEL FINANCING REQUIREMENT (AS A PERCENTAGE OF PAYROLL)
OF THE PROGRAM

This section is designed to illustrate the adequacy of the Employer/Member contribution rate by comparing it to the level actuarial requirement, expressed as a percentage of payroll.

Exhibit 3

Actuarial Balance Sheet
(Year Ended - December 31, 1982)

Resources

Cash and Investment (net)	\$117,983,021
Present Value of All Remaining Benefits to be Funded by Future Contributions	<u>210,874,351</u>
TOTAL	<u>\$328,857,372</u>

Liabilities and Reserve

Benefits Payable to Retired Members and Their Beneficiaries	\$ 63,427,074
Deferred Vested and Inactive Members	5,336,703
Active Members	<u>260,093,595</u>
TOTAL	<u>\$328,857,372</u>

Exhibit 4

Analysis of Actuarial Obligation
(Census as of December 31, 1982)Retired Members

Service Retirement	\$57,140,047	
Disability	2,256,264	
Survivor	<u>4,030,763</u>	\$ 63,427,074

Deferred Vested and Inactive Members

5,336,703

Active Members

Retirement	\$213,220,731	
Disability	16,576,802	
Survivor	17,171,490	
Refund	<u>13,124,572</u>	<u>260,093,595</u>

TOTAL VALUE OF ALL BENEFITS
(Includes Benefits for Past
and Future Service)

\$328,857,372

Exhibit 5

Determination of the Prior Entry Age
Normal Contribution Requirements (Unfunded Liability)
(Census as of December 31, 1982)

Total Value of All Benefits (Includes Benefits for Past and Future Service)	\$328,857,372
Net Assets on Hand	<u>117,983,021</u>
Benefits to be Funded in the Future	210,874,351
Present Value of Future Entry Age Normal Level Contribution Requirements	<u>72,390,352</u>
Net Prior Contribution Requirement Accumulated to Date (Unfunded Liability)	<u><u>\$138,483,999</u></u>

Exhibit 6

Alternative Requirements to Fund the Prior
Entry Age Normal Requirements
(Census as of December 31, 1982)

Considered Payroll	<u>\$ 61,695,167</u>
Prior Entry Age Normal Level Contribution Requirements Accumulated to Date (Unfunded Liability)	\$138,483,999
Interest Requirement on Unfunded Liability	\$ 6,924,200
Interest Requirement on Unfunded Liability Adjusted for Mid-Year Receipt	\$ 6,755,317
Interest Requirement as Percentage of Considered Payroll	10.9495%
Forty-Year Funding Requirement	\$ 8,070,593
Forty-Year Funding Requirement Adjusted for Mid-Year Receipt	\$ 7,873,749
Forty-Year Funding Requirement as a Percentage of Considered Payroll	12.7623%

Exhibit 7

Entry Age Normal Level Contribution Requirements
(Census as of December 31, 1982)

Present Value of Future Entry Age Normal Level Contribution Requirements	\$ 72,390,352
Present Value of Future Payroll of Current Members of the Association	698,420,540
Entry Age Normal Level Contribution Rate at Beginning of the Year*	<u>10.3649%</u>
Entry Age Normal Level Contribution Rate Adjusted for Mid-Year Receipt	<u>10.6240%</u>

*Future requirements divided by future payroll.

Exhibit 8

Actuarial Balance Expressed as a Percentage of Covered Payroll
(Census as of December 31, 1982)

Member Contribution Rate*	7.3658%
State Contribution Rate*	<u>11.1568</u>
TOTAL CONTRIBUTION RATE	<u>18.5226%</u>

	<u>Alternative Requirements</u>	
	<u>Interest Only</u>	<u>Forty-Year** Funding</u>
Entry Age Normal Level Contribution Rate	10.6240%	10.6240%
Amortization of Unfunded Liability	10.9495	12.7623
Expense Allowance	<u>.3599</u>	<u>.3599</u>
Total Level Requirement	21.9334%	23.7462%
Actuarial Margin Excess (Deficit) (Contribution Rate Less Level Requirement)	<u>(3.4108%)</u>	<u>(5.2236%)</u>

* Weighted by current payroll 81.88% Basic and 18.12% Coordinated.

** The Employee Retirement Income Security Act of 1974 (ERISA) requires plans in existence on January 1, 1974 to amortize past service liabilities over a period of 40 years from January 1, 1976.

Exhibit 9

Minimum Accounting Accrual Requirement
(5% Interest, 3-1/2% Salary Scale)

	Year Ended <u>1980</u>	Year Ended <u>1981</u>	Year Ended <u>1982</u>
Payroll	<u>\$ 58,224,248</u>	<u>\$ 60,342,802</u>	<u>\$ 61,695,167</u>
Past Service Obligation	199,833,325	207,457,574	210,874,351
Assets on Hand	91,317,183	105,071,870	117,983,021
Present Value of Future Past Service Payments	<u>34,096,778</u>	<u>34,241,811</u>	
Unfunded Past Service	\$ 74,419,364	\$ 68,143,893	
5% Interest on Unfunded	<u>3,720,968</u>	<u>3,407,195</u>	
5% Interest on Unfunded as Percent of Payroll	6.39%	5.65%	
Double the Member Contribution Rate Less Normal Cost	<u>3.02</u>	<u>3.17</u>	
Estimated Rate Excess (Deficit)	<u>(3.37%)</u>	<u>(2.48%)</u>	