

ST. PAUL TEACHERS' RETIREMENT FUND

ACTUARIAL VALUATION REPORT

JULY 1, 1985

THE *Wyatt* COMPANY

ACTUARIES AND CONSULTANTS

EMPLOYEE BENEFITS
COMPENSATION PROGRAMS
EMPLOYEE COMMUNICATIONS
ADMINISTRATIVE SYSTEMS
RISK MANAGEMENT
INTERNATIONAL SERVICES

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OFFICES IN PRINCIPAL CITIES
AROUND THE WORLD

December 10, 1985

Legislative Commission on
Pensions and Retirement
55 State Office Building
St. Paul, Minnesota 55155

RE: ST. PAUL TEACHERS' RETIREMENT FUND

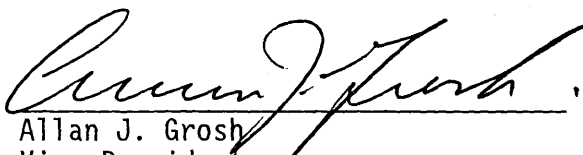
Gentlemen:

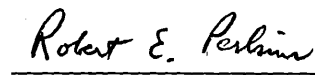
We have prepared an actuarial valuation of the Fund as of July 1, 1985 based on membership and financial data supplied by the Fund.

We certify that to the best of our knowledge and belief this actuarial valuation was performed in accordance with the requirements of Section 356.215, Minnesota Statutes, and the requirements of the Standards for Actuarial Work, adopted by the Commission on June 11, 1985.

Respectfully submitted,

THE WYATT COMPANY


Allan J. Grosh
Vice President


Robert E. Perkins
Consulting Actuary

ST. PAUL TEACHERS' RETIREMENT FUND

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COORDINATED

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ST. PAUL TEACHERS' RETIREMENT FUND

REPORT HIGHLIGHTS (DOLLARS IN THOUSANDS)

	<u>12/31/84 VALUATION</u>	<u>07/01/85 VALUATION</u>
A. CONTRIBUTIONS (TABLE 11)		
1. Statutory Contributions - Chapter 354A % of Payroll	17.00%	17.71%
2. Required Contributions - Chapter 356 % of Payroll	16.58%	21.95%
3. Sufficiency (Deficiency) (A1-A2)	0.42%	-4.24%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	NA	\$159,874
b. Current Benefit Obligations (Table 8)	NA	\$282,588
c. Funding Ratio (a/b)	NA	56.57%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$143,600	\$159,874
b. Actuarial Accrued Liability (Table 9)	\$260,109	\$307,407
c. Funding Ratio (a/b)	55.21%	52.01%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$341,742	\$340,343
b. Current and Expected Future Benefit Obligations	\$322,828	\$403,836
c. Funding Ratio (a/b)	105.86%	84.28%
C. PLAN PARTICIPANTS		
1. Active Members (Table 3)		
a. Number	2,806	2,888
b. Projected Annual Earnings	\$75,983	\$75,852
c. Average Annual Earnings (Actual \$)	\$27,079	\$26,265
d. Average Age	42.9	42.9
e. Average Service	11.7	11.6
f. Additional Members on Leave of Absence	140	134
2. Others		
a. Service Retirements (Table 4)	927	963
b. Disability Retirements (Table 5)	28	28
c. Survivors (Table 6)	106	112
d. Deferred Retirements (Table 7)	35	36
e. Terminated Other Non-vested (Table 7)	NA	1,770
f. Total	1,096	2,909

ST. PAUL TEACHERS' RETIREMENT FUND

COMMENTARY

Purpose

The purpose of this valuation is to determine the financial status of the Fund. In order to achieve this purpose, an actuarial valuation is made at the beginning of each fiscal year as required by Section 356.215 of Minnesota Statutes.

Report Highlights

The statutory contributions for the St. Paul Teachers' Retirement Fund are not sufficient for 1985 by an amount of 4.24% of payroll. According to this valuation a contribution rate of 21.95% is required to comply with Minnesota Law.

The financial status of the Fund can be measured by three different funding ratios:

- o The Accrued Benefit Funding Ratio is a measure of current funding status, and when viewed over a period of years, presents a view of the funding progress. This ratio is based on recently published Governmental Accounting Standards Board proposals. This year's ratio is 56.57%. The corresponding ratio for the prior year was not calculated.
- o The Accrued Liability Funding Ratio is also a measure of funding status and funding progress. It is based on the actuarial cost method that

has historically been used. For 1985 the ratio is 52.01%, which is a decrease from the 1984 value of 55.21%.

- o The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This ratio which is less than 100%, verifies that the current statutory contributions are inadequate.

The following table summarizes the impact of the benefit changes since the 1984 valuation:

	<u>July 1, 1985 valuation</u>	
	<u>Before Changes</u>	<u>After Changes</u>
Required Contributions	19.54%	21.95%
Accrued Benefit Funding Ratio	60.67%	56.57%
Accrued Liability Funding Ratio	55.73%	52.01%
Projected Benefit Funding Ratio	93.25%	84.28%

Asset Information

Beginning in 1984, changes in Section 356.215 of Minnesota Statutes require that the asset value used for actuarial purposes reflect a portion of the unrealized gains and losses. Only a portion of these gains and losses are considered because market values are typically volatile and could produce erratic changes in the contribution requirements from year to year.

The calculation of assets for actuarial purposes begins with the reporting of Total Assets by the Fund (Table 1, line B). These Total Assets, reduced by any Amounts Currently Payable (line C), produce the Assets Available for Benefits (line D5), which is the starting value for determining the Actuarial Value of Assets.

The calculation of the Actuarial Value of Assets is shown in Table 1 on lines F1 to F6. It combines the cost value and one-third of the difference between market value and cost value.

The term "Actuarial Value of Assets" is used to indicate that the value was determined for use in this actuarial valuation. Since Minnesota Statutes refer to this value as "Current Assets", the latter phrase will be used in the remainder of this report.

The term MPRIF appears on some of the tables with a corresponding value of zero. MPRIF stands for Minnesota Post Retirement Investment Fund, which is used by many of the public funds. For purposes of consistency all of the actuarial reports follow the same format.

Membership Data

Tables 3 through 6 summarize statistical information on members by category. Active members are grouped by age and completed years of service in Table 3. The earnings shown for these members are for the prior fiscal year except in the case of fulltime new hires where earnings have been annualized.

The service retirements are shown in Table 4 and disabled members are shown in Table 5. The survivors category (Table 6) includes spouses and children of deceased members.

The reconciliation of active members in Tables 7 and 15 include members on leave of absence.

Actuarial Balance Sheet

An actuarial balance sheet is required by Section 356.215, Subdivision 4f of Minnesota Law. This balance sheet (Table 8) establishes a method for evaluating both current and future levels of funding.

Current funding levels are evaluated by comparing Current Assets on line A to Current Benefit Obligations on line D5. The difference between the obligations and the assets is shown as Current Unfunded Liability on line G.

The measurement of the Current Benefit Obligation is based on the Proposed Statement of Governmental Accounting Standards published by the Governmental Accounting Standards Board (GASB) in August 1985. This value is known as the Actuarial Present Value of Credited Projected Benefits.

The first step in the GASB calculation for active members involves projecting salaries and service to determine future benefits payable under the plan and then discounting those projected benefits to the date of the valuation. The second step is to determine the discounted value of benefits for the non-active members. For those non-active members whose benefits have not commenced, the liability includes augmentation of benefits to date of commencement. The result of the first two steps is shown on line F, Total Current and Expected Future Benefit Obligations.

The third step is to determine the portion that represents Current Benefit Obligations. In the case of active members the Current Benefit Obligation is computed by attributing an equal benefit amount to each year of credited and expected future employee service. For all others, their entire liability is

considered a Current Benefit Obligation.

Current and future funding levels are evaluated by comparing Current and Future Expected Assets on line C to Current and Expected Future Benefit Obligations on line F. The difference between the obligations and the assets is shown as the Current and Future Unfunded Liability on line H.

Since line F has already been calculated, the remaining step is to determine the Expected Future Assets . The statutory contribution rate in excess of the combined normal cost rate and expense rate is first calculated. The amount of assets for line B1 can be determined by projecting from the valuation date to the amortization date (the date for paying off all unfunded liabilities) on the assumption that total payroll is increasing at 6.5% annually and then discounted to the date of the valuation.

The Current Unfunded Liability, line G, is a measurement of the status of the funding to the date of the valuation. The Current and Future Unfunded Liability is a measurement of the adequacy of the current statutory contribution level.

Contribution Sufficiency

The approach used by the State of Minnesota to determine contribution sufficiency is the Entry Age Normal Cost Method. The primary characteristic of this method is that it allocates costs as a level percentage of payroll.

A comparison of this actuarial method (Table 9) to the actuarial balance sheet (Table 8) shows similarities and differences. The similarity is that both approaches calculate the value of all future benefits the same way. This can be

verified by comparing line F of Table 8 to line A6, column 1, of Table 9. The difference arises from the technique for allocating liabilities between past and future. As noted in the prior section, the balance sheet allocates benefits and the corresponding liabilities, on the basis of service. The method used in Table 9 allocates liabilities so that the cost each year will be a constant percentage of payroll.

An Unfunded Actuarial Accrued Liability is computed under the Entry Age Normal Cost Method by comparing the liabilities allocated to past service (Actuarial Accrued Liability) to the Current Assets. This amount, line B3, is funded over the remaining years to the amortization date by a series of payments. Prior to 1984 these payments were calculated to be a level dollar amount similar to a fixed interest rate mortgage. The method of funding was changed in 1984 to produce a series of payments that remain a constant percentage of payroll each year.

Under this new approach the payments will increase 6.5% each year since that is the assumed rate of increase in payroll. Although the payment schedule will be adequate to amortize the existing unfunded, the lower payments in the earlier years will not be sufficient to cover the interest on the unfunded liability. After a few years the annual payment will begin to cover not only the interest but also repay a portion of the unfunded.

Projected Cash Flow

Table 12 illustrates the anticipated cash flow over the amortization period. The cash flow begins with the Current Assets. Contributions are then added based on the present statutory rates for employers and employees. As members

become eligible for payments, disbursements are made from the Fund.

This projected cash flow assumes that future payrolls increase by 6.5%. For purposes of this table only, new members are assumed to be hired in order to replace those who terminate from the active group. This open group method provides a more realistic picture of future cash flow. The statutory interest rate of 8% is used to project future investment return. The assumed bonus payment of 1% has been taken out of year end assets and added to the disbursements in the following year.

Plan Provisions

Two plan changes since the last valuation have increased the Unfunded Actuarial Accrued Liability by \$18,291,000.

The major plan change involves the annual lump sum bonus. The maximum bonus payment has been increased from 0.5% to 1.0% of assets, in conjunction with a change in the required investment return from 5.5% to 6.0% before the bonus is payable. A minor benefit change was the increase from 3.5% to 5.0% in the interest for refunds upon death.

Basic and Coordinated

Table 2 allocates the Current Assets between the Basic and Coordinated Programs based on information provided by the Fund except for expenses which were allocated in proportion to the Current Assets at the beginning of the year. Additional tables at the end of this report provide information required by Section 354A.41 of Minnesota Statutes.

The Statutes also require the disclosure of the contribution required to meet the interest at the assumed rate on the Actuarial Unfunded Accrued Liability. The following table compares the required contribution which funds the Unfunded by the year 2009 as a level percentage of payroll to the contribution which provides for interest on the Unfunded. As noted in the section on Contribution Sufficiency, the amount of the Unfunded will increase under the amortization approach because payments for the next several years will not be sufficient to cover interest.

	<u>Required Contribution Rate</u>	
	<u>Amortization of Unfunded</u>	<u>Interest on Unfunded</u>
Basic	26.39%	32.31%
Coordinated	8.72%	9.14%
Combined	21.95%	26.49%

TABLE 1

ST. PAUL TEACHERS' RETIREMENT FUND

ACCOUNTING BALANCE SHEET
(DOLLARS IN THOUSANDS)

July 1, 1985

	<u>MARKET VALUE</u>	<u>COST VALUE</u>
A. ASSETS		
1. Cash and Cash Equivalents	\$11,556	\$11,505
2. Investments		
a. Fixed Income	70,774	66,210
b. Equity	95,698	69,104
c. Real Estate	729	729
3. Equity in Minnesota Post-Retirement Investment Fund (MPRIF)	0	0
4. Other	3,426	3,426
	-----	-----
B. TOTAL ASSETS	\$182,183	\$150,974
	=====	=====
C. AMOUNTS CURRENTLY PAYABLE	\$1,503	\$1,503
D. ASSETS AVAILABLE FOR BENEFITS		
1. Member Reserves	\$45,482	\$45,482
2. Employer Reserves	135,198	103,989
3. MPRIF Reserves	0	0
4. Non-MPRIF Reserves	0	0
	-----	-----
5. Total Assets Available for Benefits	\$180,680	\$149,471
	-----	-----
E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS	\$182,183	\$150,974
	=====	=====
F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
1. Cost Value of Assets Available for Benefits (D5)		\$149,471
2. Market Value (D5)	\$180,680	
3. Cost Value (D5)	149,471	

4. Market Over Cost (F2-F3)	\$31,209	
5. 1/3 of Market Over Cost(F4)/3		10,403

6. Actuarial Value of Assets (F1+F5) (Same as "Current Assets")		\$159,874
		=====

TABLE 2

ST. PAUL TEACHERS' RETIREMENT FUND

CHANGES IN ASSETS AVAILABLE FOR BENEFITS AND ASSET ALLOCATION
(DOLLARS IN THOUSANDS)

SIX MONTH PERIOD ENDING JUNE 30, 1985

	<u>MARKET VALUE</u>	<u>COST VALUE</u>
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$152,425	\$142,654
B. OPERATING REVENUES		
1. Member Contributions	\$3,144	\$3,144
2. Employer Contributions	4,563	4,563
3. Investment Income	5,866	5,866
4. MPRIF Income	0	0
5. Net Realized Gain (Loss)	1,209	1,209
6. Other	0	0
7. Net Change in Unrealized Gain (Loss)	21,438	0
	-----	-----
8. Total Revenue	\$36,220	\$14,782
	-----	-----
C. OPERATING EXPENSES		
1. Service Retirements	\$4,801	\$4,801
2. Disability Benefits	235	235
3. Survivor Benefits	289	289
4. Refunds	405	405
5. Expenses	149	149
6. Other	0	0
	-----	-----
7. Total Disbursements	\$5,879	\$5,879
	-----	-----
D. CHANGES IN ACCOUNTING METHOD	(2,086)	(2,086)
E. ASSETS AVAILABLE AT END OF PERIOD	\$180,680	\$149,471
	=====	=====

TABLE 2
(cont)

ST. PAUL TEACHERS' RETIREMENT FUND

CHANGES IN ASSETS AVAILABLE FOR BENEFITS AND ASSET ALLOCATION
(DOLLARS IN THOUSANDS)

SIX MONTH PERIOD ENDING JUNE 30, 1985

	<u>BASIC</u>	<u>COORDINATED</u>	<u>TOTAL</u>
F. BEGINNING OF PERIOD			
1. Current Assets	\$137,156	\$6,444	\$143,600
2. MPRIF Reserves	0	0	0
3. Allocable Assets(A1-A2)	137,156	6,444	143,600
G. RECEIPTS			
1. Member Contributions	2,655	489	3,144
2. Employer Contributions	4,074	489	4,563
3. Other	0	0	0
	-----	-----	-----
4. Total	6,729	978	7,707
H. DISBURSEMENTS			
1. MPRIF New Annuitants	0	0	0
2. Non-MPRIF Benefits	5,301	24	5,325
3. Refunds	359	46	405
4. Expenses	143 *	6 *	149
5. Other	0	0	0
	-----	-----	-----
6. Total	5,803	76	5,879
I. EXPECTED INVESTMENT RETURN 4% OF (F3+.5XG4-.5XH6)	5,505	276	5,781
J. ALLOCATION OF REMAINING ASSETS IN PROPORTION TO LINE I	8,251	414	8,665
K. END OF PERIOD			
1. Allocable Assets	151,838	8,036	159,874
2. MPRIF Reserves	0	0	0
3. Current Assets	151,838	8,036	159,874

* Allocated by Wyatt

TABLE 3

ST. PAUL TEACHERS' RETIREMENT FUND

ACTIVE MEMBERS AS OF JUNE 30, 1985

AGE	YEARS OF SERVICE								TOTAL
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	
<25	66	16	2						84
25-29	86	86	38						210
30-34	67	96	135	27					325
35-39	71	72	137	181	120				581
40-44	88	61	75	78	176	44			522
45-49	18	43	50	68	109	99	30		417
50-54	27	27	37	36	75	59	79	27	367
55-59	10	13	21	23	34	37	45	56	239
60-64	8	8	8	8	19	18	20	26	115
65+	7	2	3	2	6	2	2	4	28
TOTAL	448	424	506	423	539	259	176	113	2,888

AVERAGE ANNUAL EARNINGS

AGE	YEARS OF SERVICE								ALL
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	
<25	3,814	16,376	17,418						6,531
25-29	4,457	16,503	18,515						11,934
30-34	3,974	17,162	20,703	26,110					16,657
35-39	4,367	18,132	23,643	28,284	32,185				23,815
40-44	3,528	17,208	27,649	31,103	34,498	35,499			25,850
45-49	3,416	17,350	26,993	32,322	34,063	35,982	36,196		30,494
50-54	3,919	16,102	25,374	32,846	33,809	34,659	35,194	36,549	29,999
55-59	4,270	14,174	18,327	31,157	33,439	35,207	36,610	39,624	31,943
60-64	1,744	11,158	20,802	31,708	34,914	35,132	34,448	37,754	30,344
65+	1,731	1,805	17,294	36,256	33,913	28,979	29,585	28,458	20,520
ALL	3,924	16,844	23,197	29,961	33,741	35,375	35,579	38,064	24,661

PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY YEARS OF SERVICE

<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	TOTAL
1,758	7,142	11,738	12,674	18,185	9,162	6,262	4,301	71,222

TABLE 4

ST. PAUL TEACHERS' RETIREMENT FUND

SERVICE RETIREMENTS AS OF JUNE 30, 1985

AGE	YEARS RETIRED							TOTAL
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50								0
50-54								0
55-59	24	36						60
60-64	27	108	21					156
65-69	14	70	77	5				166
70-74		7	113	46	1			167
75-79			24	82	27	3	1	137
80-84				44	60	20	16	140
85+					20	46	71	137
TOTAL	65	221	235	177	108	69	88	963

AVERAGE ANNUAL ANNUITY

AGE	YEARS RETIRED							ALL
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50								0
50-54								0
55-59	20,134	10,175						14,159
60-64	16,828	15,900	10,268					15,303
65-69	15,822	12,477	12,714	5,318				12,653
70-74		13,299	8,552	9,061	4,825			8,869
75-79			8,561	7,844	4,803	3,321	2,414	7,232
80-84				7,009	4,959	4,178	2,620	5,224
85+					5,008	4,163	3,402	3,892
ALL	17,832	13,801	10,070	7,881	4,928	4,131	3,248	9,422

TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS OF RETIREMENT

	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>TOTAL</u>
	1,159	3,051	2,366	1,395	532	285	286	9,074

TABLE 5

ST. PAUL TEACHERS' RETIREMENT FUND

DISABILITY RETIREMENTS AS OF JUNE 30, 1985

AGE	YEARS DISABLED							TOTAL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50		1	1					2
50-54	1	2	1					4
55-59	1	4	3	1				9
60-64		3	3					6
65-69		3	2	1				6
70-74			1					1
75-79								0
80-84								0
85+								0
TOTAL	2	13	11	2	0	0	0	28

AVERAGE ANNUAL BENEFIT

AGE	YEARS DISABLED							ALL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50		16,405	9,709					13,057
50-54	23,940	13,725	14,929					16,580
55-59	32,767	22,284	12,107	13,548				19,086
60-64		21,252	14,907					18,079
65-69		13,521	14,563	10,590				13,380
70-74			12,951					12,951
75-79								0
80-84								0
85+								0
TOTAL	28,354	18,254	13,432	12,069	0	0	0	16,640

TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS OF DISABILITY

<1	1-4	5-9	10-14	15-19	20-24	25+	TOTAL
57	237	148	24	0	0	0	466

TABLE 6

ST. PAUL TEACHERS' RETIREMENT FUND

SURVIVORS AS OF JUNE 30, 1985

AGE	YEARS SINCE DEATH							TOTAL
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50		8	9		1			18
50-54	2	1						3
55-59	1	4	3					8
60-64	2	8	2	3				15
65-69	1	5	8	2				16
70-74	4	5	5	2	1			17
75-79	3	6	3	1	2	1	1	17
80-84	2	2	5	1		1		11
85+	1	1	1	3	1			7
TOTAL	16	40	36	12	5	2	1	112

AVERAGE ANNUAL BENEFIT

AGE	YEARS SINCE DEATH							ALL
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50		6,099	4,604		3,350			5,199
50-54	6,275	10,285						7,611
55-59	14,645	7,340	4,358					7,135
60-64	6,645	6,893	5,398	3,060				5,894
65-69	3,263	6,825	7,080	6,245				6,657
70-74	5,882	9,050	5,885	4,102	2,280			6,393
75-79	6,108	3,587	6,099	1,839	1,980	1,371	1,441	3,927
80-84	7,308	3,850	4,557	3,405		2,685		4,654
85+	3,470	2,567	3,228	2,354	4,734			3,009
ALL	6,480	6,369	5,436	3,515	2,865	2,028	1,441	5,501

TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS SINCE DEATH

<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>TOTAL</u>
104	255	196	42	14	4	1	616

TABLE 7

ST. PAUL TEACHERS' RETIREMENT FUND
RECONCILIATION OF MEMBERS

	<u>ACTIVES</u>	<u>TERMINATED</u>	
		<u>DEFERRED RETIREMENT</u>	<u>OTHER NON-VESTED</u>
A. On December 31, 1984	2,946	35	NA
B. Additions	186	12	0
C. Deletions:			
1. Service Retirement	(56)	0	
2. Disability	(3)		
3. Death	0	0	
4. Terminated-Deferred	0		
5. Terminated-Refund	(63)	0	(13)
6. Terminated-Other Non-vested	(30)		
7. Returned as Active		0	0
D. Data Adjustments	42	(11)	(98)
	Vested	1,579	
	Non-Vested	1,443	
E. Total on June 30, 1985	3,022	36	1,770

	<u>RECIPIENTS</u>		
	<u>RETIREMENT ANNUITANTS</u>	<u>DISABLED</u>	<u>SURVIVORS</u>
A. On December 31, 1984	927	28	106
B. Additions	56	3	8
C. Deletions:			
1. Service Retirement		0	
2. Death	(20)	(3)	(1)
3. Annuity Expired	0	0	(1)
4. Returned as Active	0	0	
D. Data Adjustments	0	0	0
E. Total on June 30, 1985	963	28	112

TABLE 8

ST. PAUL TEACHERS' RETIREMENT FUND

ACTUARIAL BALANCE SHEET
(DOLLARS IN THOUSANDS)

JULY 1, 1985

A. CURRENT ASSETS (TABLE 1, F6)				\$159,874
B. EXPECTED FUTURE ASSETS				
1. Present Value of Expected Future Supplemental Contributions				84,040
2. Present Value of Future Normal Costs				96,429
3. Total Expected Future Assets				180,469
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS				\$340,343
D. CURRENT BENEFIT OBLIGATIONS	<u>Non-Vested</u>	<u>Vested</u>	<u>Total</u>	
1. Benefit Recipients				
a. Retirement Annuities		\$87,437		\$87,437
b. Disability Benefits		3,603		3,603
c. Surviving Spouse's Benefits		4,981		4,981
d. Surviving Children's Benefits		214		214
2. Deferred Retirements with Future Augmentation		1,628		1,628
3. Former Members without Vested Rights		635		635
4. Active Members				
a. Retirement Annuities	6,533	142,516		149,049
b. Disability Benefits	1,053	11,974		13,027
c. Survivors' Benefits	399	8,619		9,018
d. Deferred Retirements	0	0		0
e. Refund Liability Due to Death or Withdrawal	2,703	10,293		12,996
5. Total Current Benefit Obligations	\$10,688	\$271,900		\$282,588
E. EXPECTED FUTURE BENEFIT OBLIGATIONS				\$121,248
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS				\$403,836
G. CURRENT UNFUNDED LIABILITY (D5-A)				\$122,714
H. CURRENT AND FUTURE UNFUNDED LIABILITY (F-C)				\$63,493

TABLE 9

ST. PAUL TEACHERS' RETIREMENT FUND

**DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY
AND SUPPLEMENTAL CONTRIBUTION RATE
(DOLLARS IN THOUSANDS)**

JULY 1, 1985

	ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS (1)	ACTUARIAL PRESENT VALUE OF FUTURE NORMAL COSTS (2)	ACTUARIAL ACCRUED LIABILITY (3)=(1)-(2)
A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)			
1. Active Members			
a. Retirement Annuities	\$253,863	\$66,761	\$187,102
b. Disability Benefits	19,629	8,917	10,712
c. Survivors Benefits	13,203	5,292	7,911
d. Deferred Retirements	0	0	0
e. Refunds Due to Death or Withdrawal	18,643	15,459	3,184
f. Total	<u>\$305,338</u>	<u>\$96,429</u>	<u>\$208,909</u>
2. Deferred Retirements with Future Augmentation	\$1,628		\$1,628
3. Former Members Without Vested Rights	635		635
4. Annuitants in MPRIF	0		0
5. Recipients Not in MPRIF	96,235		96,235
6. Total AAL	<u>\$403,836</u>	<u>\$96,429</u>	<u>\$307,407</u>
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. AAL (A6)			\$307,407
2. Current Assets (Table 1,F6)			159,874
3. UAAL (B1-B2)			<u>\$147,533</u>
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2009			\$1,494,281
2. Supplemental Contribution Rate (B3/C1)			9.87%

TABLE 10

ST. PAUL TEACHERS' RETIREMENT FUND

CHANGES IN UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)
(DOLLARS IN THOUSANDS)

SIX MONTH PERIOD ENDING JUNE 30, 1985

A. UAAL AT BEGINNING OF PERIOD	\$116,509
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
1. Normal Cost and Expenses	\$4,063
2. Contribution	(7,707)
3. Interest on A, B1, and B2	4,587
4. Total (B1+B2+B3)	<u>\$943</u>
C. EXPECTED UAAL AT END OF PERIOD (A+B4)	\$117,452
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
1. Salary Increases	\$6,597
2. Investment Return	(8,665)
3. MPRIF Mortality	0
4. Mortality of Other Benefit Recipients	(795)
5. Active Members' Turnover, Retirement, Mortality and Disability	557
6. Other Items	14,096
7. Total	<u>\$11,790</u>
E. UAAL AT END OF PERIOD BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C+D7)	\$129,242
F. CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO PLAN AMENDMENTS	\$18,291
G. CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	\$0
H. UAAL AT END OF PERIOD (E+F+G)	<u><u>\$147,533</u></u>

TABLE 11

ST. PAUL TEACHERS' RETIREMENT FUND
DETERMINATION OF CONTRIBUTION SUFFICIENCY
(DOLLARS IN THOUSANDS)

JULY 1, 1985

	<u>% OF PAYROLL</u>	<u>\$ AMOUNT</u>
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	7.12%	\$5,402
2. Employer Contributions	10.59%	8,032
3. Total	----- 17.71% =====	----- \$13,434 =====
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	8.10%	\$6,143
b. Disability Benefits	1.10%	838
c. Survivors	0.66%	500
d. Deferred Retirement Benefits	0.00%	0
e. Refunds Due to Death or Withdrawal	1.88%	1,426
f. Total	----- 11.74% -----	----- \$8,907 -----
2. Supplemental Contribution Amortization by July 1, 2009 of UAAL of \$147,533	9.87%	\$7,486
3. Allowance for Expenses	0.34%	\$258
4. Total	----- 21.95%	----- \$16,651
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) (A3-B4)	-4.24%	(\$3,217)

Note: Projected Annual Payroll for Fiscal Year Beginning
on July 1, 1985 is \$75,852

ST. PAUL TEACHERS' RETIREMENT FUND

TABLE 12

PROJECTED CASH FLOW
(DOLLARS IN THOUSANDS)

<u>FISCAL YEAR</u>	<u>STATUTORY CONTRIBUTIONS</u>	<u>TRANSFERS TO MPRIF</u>	<u>OTHER DISBURSEMENTS</u>	<u>INVESTMENT RETURN</u>	<u>NON-MPRIF ASSETS YEAR END</u>
1985					\$159,874
1986	\$13,434	\$0	\$12,305	\$12,835	172,100
1987	13,710	0	15,381	13,701	182,288
1988	14,179	0	15,904	14,514	193,127
1989	14,739	0	16,558	15,377	204,618
1990	15,248	0	17,591	16,276	216,365
1991	15,798	0	18,631	17,196	228,421
1992	16,319	0	20,082	18,124	240,354
1993	16,882	0	21,593	19,040	252,136
1994	17,457	0	23,177	19,943	263,696
1995	18,000	0	25,249	20,806	274,480
1996	18,592	0	27,229	21,612	284,581
1997	19,287	0	28,921	22,381	294,354
1998	19,991	0	30,810	23,116	303,585
1999	20,612	0	33,281	23,780	311,549
2000	21,275	0	35,954	24,336	317,994
2001	22,027	0	38,571	24,777	322,965
2002	22,963	0	40,656	25,129	327,097
2003	23,893	0	42,978	25,404	330,081
2004	24,929	0	45,258	25,594	331,993
2005	25,869	0	48,615	25,650	331,548
2006	26,927	0	51,726	25,532	328,958
2007	28,111	0	54,606	25,257	324,443
2008	29,405	0	57,338	24,838	318,134
2009	30,709	0	60,727	24,250	309,243
2010	32,071	0	64,583	23,439	297,168

TABLE 13

ST. PAUL TEACHERS' RETIREMENT FUND
SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Interest:	Pre-Retirement: 8% per annum
	Post-Retirement: 8% per annum
Salary Increases:	Total reported pay for prior fiscal year increased 6.5% to current fiscal year and 6.5% annually for each future year.
Mortality:	Pre-Retirement:
	Male - 1983 GAM
	Female - 1983 GAM set forward 1 year
	Post-Retirement:
	Male - Same as above
	Female - Same as above
	Post-Disability:
	Male - 1983 GAM set forward 10 years
	Female - 1983 GAM set forward 11 years
Retirement Age:	Greater of age 62 and one year from valuation date or earliest date eligible for unreduced benefit. 25% of employees are assumed to retire under the Rule of 85 when first eligible.
Separation:	Graded rates shown in rate table.
Disability:	Rates as shown in rate table.
Administrative and Investment Expenses:	Prior year expenses expressed as percentage of prior year payroll. (0.34% of payroll)
Return of Contributions:	All employees withdrawing for reasons other than retirement, disability or death were assumed to receive a refund of their employee contributions.
Family Composition:	85% of male members and 60% of female members are assumed to be married. Female is four years younger than male. Assume members have two children.
Social Security:	NA
Benefit Increases After Retirement:	NA
Special Consideration:	Annual bonus payment totaling 1% of the year end assets is accounted for by using a 7% post and pre-retirement interest rate.

TABLE 13
(cont)

Actuarial Cost Method:	Entry Age Normal Cost Method with normal costs expressed as a level percentage of earnings. Under this method Actuarial Gains(Losses) reduce(increase) the Unfunded Actuarial Accrued Liability.
Asset Valuation Method:	Cost Value plus one-third Unrealized Gains or Losses.
Payment on the Unfunded Actuarial Accrued Liability:	A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 6.5% per annum.
Projected Cash Flow Method:	Cash flows from the Fund were projected based on the current plan benefits, participant data, and actuarial assumptions. In addition, new entrants were assumed so that the total payroll would increase by 6.5% per annum.

TABLE 13
(cont)SEPARATIONS EXPRESSED AS THE
NUMBER OF OCCURRENCES PER 10,000

Age	Death		Withdrawal		Disability		Retirement	
	Male	Female	Male	Female	Male	Female	Male	Female
20	4	2	600	1,000	7	7	0	0
21	4	2	600	1,000	7	7	0	0
22	4	2	600	1,000	7	7	0	0
23	4	2	600	1,000	7	7	0	0
24	4	3	600	1,000	7	7	0	0
25	5	3	600	1,000	8	8	0	0
26	5	3	600	1,000	8	8	0	0
27	5	3	600	1,000	8	8	0	0
28	5	3	600	1,000	8	8	0	0
29	6	3	600	1,000	8	8	0	0
30	6	4	600	1,000	8	8	0	0
31	6	4	570	1,000	9	9	0	0
32	7	4	540	1,000	9	9	0	0
33	7	4	510	1,000	9	9	0	0
34	8	5	480	1,000	9	9	0	0
35	9	5	450	1,000	10	10	0	0
36	9	5	430	960	10	10	0	0
37	10	6	410	920	10	10	0	0
38	10	6	390	880	11	11	0	0
39	11	7	370	840	11	11	0	0
40	12	7	350	800	11	11	0	0
41	14	8	340	720	12	12	0	0
42	15	8	330	640	13	13	0	0
43	17	9	320	560	14	14	0	0
44	19	10	310	530	15	15	0	0
45	22	11	300	500	16	16	0	0
46	25	12	280	460	18	18	0	0
47	28	14	260	420	19	19	0	0
48	31	15	240	380	21	21	0	0
49	35	16	220	340	22	22	0	0
50	39	18	200	300	24	24	0	0
51	43	19	180	260	26	26	0	0
52	48	21	160	220	29	29	0	0
53	52	23	140	180	32	32	0	0
54	57	25	120	140	36	36	0	0

TABLE 13
(cont)

<u>Age</u>	<u>Death</u>		<u>Withdrawal</u>		<u>Disability</u>		<u>Retirement</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
55	61	28	100	100	40	40	0	0
56	66	31	80	80	46	46	0	0
57	71	34	60	60	53	53	0	0
58	77	38	40	40	61	61	0	0
59	84	42	20	20	72	72	0	0
60	92	47	0	0	84	84	0	0
61	101	52	0	0	97	97	0	0
62	111	58	0	0	113	113	10,000	10,000
63	124	64	0	0	130	130	0	0
64	139	71	0	0	149	149	0	0
65	156	78	0	0	0	0	0	0
66	176	87	0	0	0	0	0	0
67	198	97	0	0	0	0	0	0
68	222	109	0	0	0	0	0	0
69	248	124	0	0	0	0	0	0
70	275	141	0	0	0	0	0	0

TABLE 15

ST. PAUL TEACHERS' RETIREMENT FUND

MEMBERSHIP CHANGES
(DOLLARS IN THOUSANDS)

JUNE 30, 1985

A. ACTIVE MEMBERS		
	<u>NUMBER</u>	<u>PAYROLL</u>
1. As of the Last Valuation Date	2,946	\$73,020
2. New Entrants	186	NA
3. Total	3,132	NA
4. Separations from Active Service		
a. Refund of Contributions	(63)	NA
b. Separation with Deferred Annuity	0	NA
c. Separation with neither Refund nor Deferred Annuity	(30)	NA
d. Disability	(3)	NA
e. Death	0	NA
f. Retirement with Service Annuity	(56)	NA
5. Total Separations	(152)	NA
6. Data Adjustments	42	NA
7. As of Current Valuation Date	3,022	\$71,222
B. SERVICE RETIREMENT ANNUITANTS		
	<u>NUMBER</u>	<u>ANNUAL ANNUITY</u>
1. As of the Last Valuation Date	927	\$8,123
2. New Entrants	56	1,069
3. Total	983	9,192
4. Terminations		
a. Deaths	(20)	(110)
b. Others	0	0
5. Total Terminations	(20)	(110)
6. Data Adjustments	0	(9)
7. As of Current Valuation Date	963	\$9,073
C. DISABLED ANNUITANTS		
	<u>NUMBER</u>	<u>ANNUAL ANNUITY</u>
1. As of the Last Valuation Date	28	\$437
2. New Entrants	3	81
3. Total	31	518
4. Terminations		
a. Deaths	(3)	(60)
b. Others	0	0
5. Total Terminations	(3)	(60)
6. Data Adjustments	0	8
7. As of Current Valuation Date	28	\$466

TABLE 15

(cont)

D. SURVIVING SPOUSE ANNUITANTS		
	<u>NUMBER</u>	<u>ANNUAL ANNUITY</u>
1. As of the Last Valuation Date	91	\$501
2. New Entrants	8	50
3. Total	99	551
4. Terminations		
a. Deaths	(1)	(3)
b. Others	0	0
5. Total Terminations	(1)	(3)
6. Data Adjustments	0	2
7. As of Current Valuation Date	98	\$550
E. SURVIVING CHILDREN ANNUITANTS		
	<u>NUMBER</u>	<u>ANNUAL ANNUITY</u>
1. As of the Last Valuation Date	15	\$70
2. New Entrants	0	0
3. Total	15	70
4. Terminations		
a. Deaths	0	0
b. Others	(1)	(4)
5. Total Terminations	(1)	(4)
6. Data Adjustments	0	0
7. As of Current Valuation Date	14	\$66
F. DEFERRED ANNUITANTS		
	<u>NUMBER</u>	<u>ANNUAL ANNUITY</u>
1. As of the Last Valuation Date	35	NA
2. New Entrants	12	NA
3. Total	47	NA
4. Terminations		
a. Deaths	0	NA
b. Others	0	NA
5. Total Terminations	0	NA
6. Data Adjustments	(11)	NA
7. As of Current Valuation Date	36	\$234

ST. PAUL TEACHERS' RETIREMENT FUND

BASIC

REPORT HIGHLIGHTS
(DOLLARS IN THOUSANDS)

	<u>12/31/84</u> <u>VALUATION</u>	<u>07/01/85</u> <u>VALUATION</u>
A. CONTRIBUTIONS (TABLE 11A)		
1. Statutory Contributions - Chapter 354A % of Payroll	20.63%	20.63%
2. Required Contributions - Chapter 356 % of Payroll	20.90%	26.39%
3. Sufficiency (Deficiency) (A1-A2)	-0.27%	-5.76%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 2)	NA	\$151,838
b. Current Benefit Obligations (Table 8A)	NA	\$273,824
c. Funding Ratio (a/b)	NA	55.45%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 2)	\$137,156	\$151,838
b. Actuarial Accrued Liability (Table 9A)	\$252,827	\$296,043
c. Funding Ratio (a/b)	54.25%	51.29%
3. Projected Benefit Funding Ratio (Table 8A)		
a. Current and Expected Future Assets	NA	\$309,754
b. Current and Expected Future Benefit Obligations	NA	\$374,276
c. Funding Ratio (a/b)	NA	82.76%
C. PLAN PARTICIPANTS		
1. Active Members (Table 3A)		
a. Number	1,734	1,647
b. Projected Annual Earnings	\$55,309	\$56,811
c. Average Annual Earnings (Actual \$)	\$31,897	\$34,494
d. Average Age	46.5	46.8
e. Average Service	17.4	17.8
f. Additional Members on Leave of Absence	82	88
2. Others		
a. Service Retirements (Table 4A)	917	953
b. Disability Retirements (Table 5A)	28	28
c. Survivors (Table 6A)	106	112
d. Deferred Retirements (Table 7A)	35	35
e. Terminated Other Non-vested (Table 7A)	NA	151
f. Total	1,086	1,279

ST. PAUL TEACHERS' RETIREMENT FUND

TABLE 3A
BASIC

ACTIVE MEMBERS AS OF JUNE 30, 1985

AGE	YEARS OF SERVICE								TOTAL
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	
<25			1						1
25-29			2						2
30-34			51	25					76
35-39		4	61	171	111				347
40-44		3	32	74	168	41			318
45-49			16	61	106	97	30		310
50-54		1	18	34	74	57	78	27	289
55-59		1	7	20	31	37	45	56	197
60-64			2	7	17	18	20	26	90
65+			1	2	6	2	2	4	17
TOTAL	0	9	191	394	513	252	175	113	1,647

AVERAGE ANNUAL EARNINGS

AGE	YEARS OF SERVICE								ALL
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	
<25			12,577						12,577
25-29			19,194						19,194
30-34			20,094	26,071					22,060
35-39		18,107	24,185	28,183	32,274				28,673
40-44		23,523	27,216	31,339	34,316	35,714			32,987
45-49			28,026	32,604	34,138	36,088	36,196		34,330
50-54		30,460	26,040	32,798	33,804	34,794	35,237	36,549	34,029
55-59		17,819	24,740	31,463	33,546	35,207	36,610	39,624	35,681
60-64			16,725	31,695	33,929	35,132	34,448	37,754	34,834
65+			28,765	36,256	33,913	28,979	29,585	28,458	31,513
ALL	0	21,253	23,950	29,995	33,699	35,480	35,600	38,064	32,388

PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY YEARS OF SERVICE

<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	TOTAL
0	191	4,574	11,818	17,289	8,941	6,230	4,301	53,344

ST. PAUL TEACHERS' RETIREMENT FUND

TABLE 4A
BASIC

SERVICE RETIREMENTS AS OF JUNE 30, 1985

AGE	YEARS RETIRED							TOTAL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50								0
50-54								0
55-59	24	36						60
60-64	27	106	21					154
65-69	14	64	77	5				160
70-74		7	111	46	1			165
75-79			24	82	27	3	1	137
80-84				44	60	20	16	140
85+					20	46	71	137
TOTAL	65	213	233	177	108	69	88	953

AVERAGE ANNUAL ANNUITY

AGE	YEARS RETIRED							ALL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50								0
50-54								0
55-59	20,134	10,175						14,159
60-64	16,828	16,083	10,268					15,421
65-69	15,822	13,174	12,714	5,318				12,939
70-74		13,299	8,689	9,061	4,825			8,965
75-79			8,561	7,844	4,803	3,321	2,414	7,232
80-84				7,009	4,959	4,178	2,620	5,224
85+					5,008	4,163	3,402	3,892
ALL	17,832	14,119	10,148	7,881	4,928	4,131	3,248	9,474

TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS OF RETIREMENT

	<1	1-4	5-9	10-14	15-19	20-24	25+	TOTAL
	1,159	3,007	2,365	1,395	532	285	286	9,029

ST. PAUL TEACHERS' RETIREMENT FUND

TABLE 5A
BASIC

DISABILITY RETIREMENTS AS OF JUNE 30, 1985

AGE	YEARS DISABLED							TOTAL
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50		1	1					2
50-54	1	2	1					4
55-59	1	4	3	1				9
60-64		3	3					6
65-69		3	2	1				6
70-74			1					1
75-79								0
80-84								0
85+								0
TOTAL	2	13	11	2	0	0	0	28

AVERAGE ANNUAL BENEFIT

AGE	YEARS DISABLED							ALL
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50		16,405	9,709					13,057
50-54	23,940	13,725	14,929					16,580
55-59	32,767	22,284	12,107	13,548				19,086
60-64		21,252	14,907					18,079
65-69		13,521	14,563	10,590				13,380
70-74			12,951					12,951
75-79								0
80-84								0
85+								0
TOTAL	28,354	18,254	13,432	12,069	0	0	0	16,640

TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS OF DISABILITY

<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>TOTAL</u>
57	237	148	24	0	0	0	466

ST. PAUL TEACHERS' RETIREMENT FUND

TABLE 6A
BASIC

SURVIVORS AS OF JUNE 30, 1985

AGE	YEARS SINCE DEATH							TOTAL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50		8	9		1			18
50-54	2	1						3
55-59	1	4	3					8
60-64	2	8	2	3				15
65-69	1	5	8	2				16
70-74	4	5	5	2	1			17
75-79	3	6	3	1	2	1	1	17
80-84	2	2	5	1		1		11
85+	1	1	1	3	1			7
TOTAL	16	40	36	12	5	2	1	112

AVERAGE ANNUAL BENEFIT

AGE	YEARS SINCE DEATH							ALL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50		6,099	4,604		3,350			5,199
50-54	6,275	10,285						7,611
55-59	14,645	7,340	4,358					7,135
60-64	6,645	6,893	5,398	3,060				5,894
65-69	3,263	6,825	7,080	6,245				6,657
70-74	5,882	9,050	5,885	4,102	2,280			6,393
75-79	6,108	3,587	6,099	1,839	1,980	1,371	1,441	3,927
80-84	7,308	3,850	4,557	3,405		2,685		4,654
85+	3,470	2,567	3,228	2,354	4,734			3,009
ALL	6,480	6,369	5,436	3,515	2,865	2,028	1,441	5,501

TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS SINCE DEATH

<1	1-4	5-9	10-14	15-19	20-24	25+	TOTAL
104	255	196	42	14	4	1	616

ST. PAUL TEACHERS' RETIREMENT FUND

TABLE 7A
BASIC

RECONCILIATION OF MEMBERS

	<u>ACTIVES</u>	<u>TERMINATED</u>	
		<u>DEFERRED RETIREMENT</u>	<u>OTHER NON-VESTED</u>
A. On December 31, 1984	1,816	35	NA
B. Additions	0	12	NA
C. Deletions:			
1. Service Retirement	(56)	0	
2. Disability	(3)		
3. Death	0	0	
4. Terminated-Deferred	0		
5. Terminated-Refund	(13)	0	(13)
6. Terminated-Other Non-vested	(6)		
7. Returned as Active		0	NA
D. Data Adjustments	(3)	(12)	(47)
	Vested 1,515		
	Non-Vested 220		
E. Total on June 30, 1985	1,735	35	151

	<u>RECIPIENTS</u>		
	<u>RETIREMENT ANNUITANTS</u>	<u>DISABLED</u>	<u>SURVIVORS</u>
A. On December 31, 1984	917	28	106
B. Additions	56	3	8
C. Deletions:			
1. Service Retirement		0	
2. Death	(20)	(3)	(1)
3. Annuity Expired	0	0	(1)
4. Returned as Active	0	0	
D. Data Adjustments	0	0	0
E. Total on June 30, 1985	953	28	112

ST. PAUL TEACHERS' RETIREMENT FUND

TABLE 8A
BASICACTUARIAL BALANCE SHEET
(DOLLARS IN THOUSANDS)

JULY 1, 1985

A. CURRENT ASSETS (TABLE 2, K3)				\$151,838
B. EXPECTED FUTURE ASSETS				
1. Present Value of Expected Future Supplemental Contributions				79,683
2. Present Value of Future Normal Costs				78,233
3. Total Expected Future Assets				157,916
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS				\$309,754
D. CURRENT BENEFIT OBLIGATIONS	<u>Non-Vested</u>	<u>Vested</u>	<u>Total</u>	
1. Benefit Recipients				
a. Retirement Annuities		\$86,998		\$86,998
b. Disability Benefits		3,603		3,603
c. Surviving Spouse's Benefits		4,981		4,981
d. Surviving Children's Benefits		214		214
2. Deferred Retirements with Future Augmentation		1,592		1,592
3. Former Members without Vested Rights		339		339
4. Active Members				
a. Retirement Annuities	3,419	139,963		143,382
b. Disability Benefits	783	11,778		12,561
c. Survivors' Benefits	342	8,568		8,910
d. Deferred Retirements	0	0		0
e. Refund Liability Due to Death or Withdrawal	1,317	9,927		11,244
5. Total Current Benefit Obligations	\$5,861	\$267,963		\$273,824
E. EXPECTED FUTURE BENEFIT OBLIGATIONS				\$100,452
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS				\$374,276
G. CURRENT UNFUNDED LIABILITY (D5-A)				\$121,986
H. CURRENT AND FUTURE UNFUNDED LIABILITY (F-C)				\$64,522

ST. PAUL TEACHERS' RETIREMENT FUND

TABLE 9A
BASICDETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY
AND SUPPLEMENTAL CONTRIBUTION RATE
(DOLLARS IN THOUSANDS)

JULY 1, 1985

	ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS (1)	ACTUARIAL PRESENT VALUE OF FUTURE NORMAL COSTS (2)	ACTUARIAL ACCRUED LIABILITY (3)=(1)-(2)
A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)			
1. Active Members			
a. Retirement Annuities	\$230,733	\$52,690	\$178,043
b. Disability Benefits	18,151	8,019	10,132
c. Survivors Benefits	12,785	5,049	7,736
d. Deferred Retirements	0	0	0
e. Refunds Due to Death or Withdrawal	14,880	12,475	2,405
f. Total	<u>\$276,549</u>	<u>\$78,233</u>	<u>\$198,316</u>
2. Deferred Retirements with Future Augmentation	\$1,592		\$1,592
3. Former Members Without Vested Rights	339		339
4. Annuitants in MPRIF	0		0
5. Recipients Not in MPRIF	95,796		95,796
6. Total AAL	<u>\$374,276</u>	<u>\$78,233</u>	<u>\$296,043</u>
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. AAL (A6)			\$296,043
2. Current Assets (Table 2, K3)			151,838
3. UAAL (B1-B2)			<u>\$144,205</u>
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls to the Amortization Date of July 1, 2009			\$1,119,173
2. Supplemental Contribution Rate (B3/C1)			12.88%

ST. PAUL TEACHERS' RETIREMENT FUND

CHANGES IN UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)
(DOLLARS IN THOUSANDS)

TABLE 10A
BASIC

SIX MONTH PERIOD ENDING JUNE 30, 1985

A. UAAL AT BEGINNING OF PERIOD	\$115,671
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
1. Normal Cost and Expenses	\$3,537
2. Contribution	(6,729)
3. Interest on A, B1, and B2	4,563

4. Total (B1+B2+B3)	\$1,371

C. EXPECTED UAAL AT END OF PERIOD (A+B4)	\$117,042
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
1. Salary Increases	\$6,597
2. Investment Return	(8,251)
3. MPRIF Mortality	0
4. Mortality of Other Benefit Recipients	(799)
5. Active Members' Turnover, Retirement, Mortality and Disability	573
6. Other Items	11,612

7. Total	\$9,732

E. UAAL AT END OF PERIOD BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C+D7)	\$126,774
F. CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO PLAN AMENDMENTS	\$17,431
G. CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	\$0

H. UAAL AT END OF PERIOD (E+F+G)	\$144,205
	=====

ST. PAUL TEACHERS' RETIREMENT FUND
DETERMINATION OF CONTRIBUTION SUFFICIENCY
(DOLLARS IN THOUSANDS)

TABLE 11A
BASIC

JULY 1, 1985

	<u>% OF PAYROLL</u>	<u>\$ AMOUNT</u>
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	8.00%	\$4,545
2. Employer Contributions	12.63%	7,175
3. Total	----- 20.63% =====	----- \$11,720 =====
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	8.87%	\$5,039
b. Disability Benefits	1.35%	767
c. Survivors	0.85%	482
d. Deferred Retirement Benefits	0.00%	0
e. Refunds Due to Death or Withdrawal	2.10%	1,192
f. Total	----- 13.17% -----	----- \$7,480 -----
2. Supplemental Contribution Amortization by July 1, 2009 of UAAL of \$144,205	12.88%	\$7,317
3. Allowance for Expenses	0.34%	\$193
4. Total	----- 26.39%	----- \$14,990
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) (A3-B4)	-5.76%	(\$3,270)

Note: Projected Annual Payroll for Fiscal Year Beginning
on July 1, 1985 is \$56,811

ST. PAUL TEACHERS' RETIREMENT FUND

TABLE 12A
BASICPROJECTED CASH FLOW
JULY 1, 1985

<u>FISCAL YEAR</u>	<u>STATUTORY CONTRIBUTIONS</u>	<u>TRANSFERS TO MPRIF</u>	<u>OTHER DISBURSEMENTS</u>	<u>INVESTMENT RETURN</u>	<u>CURRENT ASSETS YEAR END</u>
1985					\$151,838
1986	\$11,720	\$0	\$12,026	\$12,135	162,030
1987	11,422	0	14,966	12,821	169,594
1988	11,417	0	15,414	13,408	177,215
1989	11,517	0	15,970	13,999	184,894
1990	11,469	0	16,878	14,575	192,119
1991	11,433	0	17,771	15,116	198,888
1992	11,279	0	19,066	15,600	204,634
1993	11,128	0	20,391	16,000	209,257
1994	10,926	0	21,753	16,308	212,591
1995	10,586	0	23,516	16,490	213,989
1996	10,249	0	25,191	16,521	213,413
1997	10,003	0	26,484	16,414	211,212
1998	9,679	0	28,058	16,162	206,905
1999	9,105	0	30,159	15,710	199,546
2000	8,495	0	32,275	15,012	188,870
2001	7,930	0	34,259	14,056	174,831
2002	7,565	0	35,595	12,865	158,069
2003	7,059	0	37,238	11,438	137,935
2004	6,600	0	38,657	9,753	114,475
2005	5,822	0	40,880	7,756	86,301
2006	5,095	0	42,845	5,394	53,406
2007	4,421	0	44,487	2,670	15,849
2008	3,764	0	45,876	(417)	(26,413)
2009	2,931	0	47,655	(3,902)	(74,288)
2010	1,996	0	49,409	(7,840)	(128,246)

ST. PAUL TEACHERS' RETIREMENT FUND**TABLE 14A
BASIC****SUMMARY OF PLAN PROVISIONS**

Eligibility	A teacher who is employed in a public school district located in the corporate limits of the City of St. Paul and who is not covered by the Social Security Act. Also includes employees of the St. Paul Teachers Retirement Fund.
Contributions	
Member	8.0% of Salary.
Employer	12.63% of Salary.
Allowable Service	A year is earned during a school year if the Member works the agreed number of "duty days" with credit prorated for fewer days. May also include sabbatical leave, a period of disability, and military duty. Up to 8 years of credit may be purchased for prior service.
Salary	Annual contract salary.
Average Salary	Average of the 5 highest years of Salary during the last 10 years while making contributions or while disabled.
RETIREMENT	
Normal Retirement Benefit	
Eligibility	Age 65 and 10 years of Allowable Service. Age 60 and 25 years of Allowable Service. Rule of 85: Age 55 and age plus Allowable Service totals 85 and retirement prior to 1/1/87.
Amount	2% of Average Salary for each year of Allowable Service not to exceed 40 years.
Early Retirement Benefit	
Eligibility	Age 55 and 10 years of Allowable Service.
Amount	Normal Retirement Benefit based on Allowable Service and Average Salary at retirement date. If the member has at least 25 years of service, the benefit is reduced 0.5% for each month the member is under age 60. Otherwise the reduction is 0.5% for each of the first 60 months the member is under age 65 and 0.25% for each month the member is under age 60.
Form of Payment	Life annuity.

TABLE 14A
BASIC
(cont)

Benefit Increases	If the investment income of the fund was at least 6% of the asset value of the fund at the end of the year, the Board of Trustees may declare a bonus of up to 1% of the asset value of the fund at the end of the previous fiscal year. This bonus is allocated to those eligible on a prorated basis according to the combined number of years of service and years receiving a benefit. A retired member is eligible if receiving an annuity for at least 3 years.
DISABILITY	
Disability Benefit Eligibility	Totally and permanently disabled before the age of 65 with 5 years of St. Paul service.
Amount	An annuity of 75% of the annual contract salary for the last full year of service reduced by any Social Security and Workers' Compensation benefits. Payments stop at age 65, or earlier if disability ceases or death occurs.
Form of Payment	Life annuity.
Benefit Increases	Same as for retirement.
Retirement After Disability Eligibility	Age 65 with continued disability.
Amount	Normal Retirement Benefit based on Average Salary and Allowable Service as if member had continued in his latest position during the period of his disability.
Form of Payment	Same as for retirement.
Benefit Increases	Same as for retirement.
DEATH	
Family Benefits Eligibility	Active member with 3 years of St. Paul service.

TABLE 14A
BASIC
(cont)

Amount	Benefit of 15% of B.A. salary to spouse plus 25% of B.A. salary to each eligible child (maximum of 2). B.A. salary is the maximum salary payable to a teacher holding a B.A. degree.
Survivor's Benefits Eligibility	Spouse's benefits cease upon remarriage, death, or when the spouse elects survivor's benefits. Such election does not affect benefits paid to children but total benefits may not exceed 90% of the Member's final salary. Children's benefits cease upon marriage or age 18 (22 if full time student).
Amount	Active or retired member with 10 years of St Paul service. A surviving spouse must have been married to the Member for 3 years at the time of his death or retirement, whichever occurs first.
Benefit Increases	Survivor's payment of the 100% joint and survivor benefit earned by the member to the date of his death or his retirement, whichever occurs first.
Refund of Contributions Eligibility	Same as for a retired person if payments have been made over three years. The allocation is based on the years of service of the person on whose behalf the annuity is paid and the years receiving payment.
Amount	Death of a member or former member when Family Benefits and Survivor's Benefits are not payable.
Amount	The excess of the member's contributions with 5% interest (unless the member was disabled) over total benefits paid.
TERMINATION	
Refund of Contributions Eligibility	Termination of teaching service.
Amount	Member's contributions with 5% interest. A deferred annuity may be elected in lieu of a refund.
Deferred Annuity Eligibility	10 years of Allowable Service.
Amount	Benefit computed under law in effect at termination and increased by the following annual percentage: 5% before 1/1/80 and 3% thereafter until the annuity begins. Amount is payable as a normal or early retirement.

ST. PAUL TEACHERS' RETIREMENT FUND

TABLE 15A
BASICMEMBERSHIP CHANGES
(DOLLARS IN THOUSANDS)

JUNE 30, 1985

A. ACTIVE MEMBERS		<u>NUMBER</u>	<u>PAYROLL</u>
1. As of the Last Valuation Date		1,816	\$53,153
2. New Entrants		0	0
3. Total		1,816	53,153
4. Separations from Active Service			
a. Refund of Contributions	(13)		NA
b. Separation with Deferred Annuity	0		0
c. Separation with neither Refund nor Deferred Annuity	(6)		(138)
d. Disability	(3)		(106)
e. Death	0		0
f. Retirement with Service Annuity	(56)		(1,828)
5. Total Separations	(78)		NA
6. Data Adjustments	(3)		NA
7. As of Current Valuation Date		1,735	\$53,344
B. SERVICE RETIREMENT ANNUITANTS		<u>NUMBER</u>	<u>ANNUAL ANNUITY</u>
1. As of the Last Valuation Date		917	\$8,079
2. New Entrants		56	1,069
3. Total		973	9,148
4. Terminations			
a. Deaths	(20)		(110)
b. Others	0		0
5. Total Terminations	(20)		(110)
6. Data Adjustments	0		(9)
7. As of Current Valuation Date		953	\$9,029
C. DISABLED ANNUITANTS		<u>NUMBER</u>	<u>ANNUAL ANNUITY</u>
1. As of the Last Valuation Date		28	\$437
2. New Entrants		3	81
3. Total		31	518
4. Terminations			
a. Deaths	(3)		(60)
b. Others	0		0
5. Total Terminations	(3)		(60)
6. Data Adjustments	0		8
7. As of Current Valuation Date		28	\$466

TABLE 15A
BASIC
(cont)

D. SURVIVING SPOUSE ANNUITANTS		
	<u>NUMBER</u>	<u>ANNUAL ANNUITY</u>
1. As of the Last Valuation Date	91	\$501
2. New Entrants	8	50
3. Total	99	551
4. Terminations		
a. Deaths	(1)	(3)
b. Others	0	0
5. Total Terminations	(1)	(3)
6. Data Adjustments	0	2
7. As of Current Valuation Date	98	\$550
E. SURVIVING CHILDREN ANNUITANTS		
	<u>NUMBER</u>	<u>ANNUAL ANNUITY</u>
1. As of the Last Valuation Date	15	\$70
2. New Entrants	0	0
3. Total	15	70
4. Terminations		
a. Deaths	0	0
b. Others	(1)	(4)
5. Total Terminations	(1)	(4)
6. Data Adjustments	0	0
7. As of Current Valuation Date	14	\$66
F. DEFERRED ANNUITANTS		
	<u>NUMBER</u>	<u>ANNUAL ANNUITY</u>
1. As of the Last Valuation Date	35	NA
2. New Entrants	12	NA
3. Total	47	NA
4. Terminations		
a. Deaths	0	NA
b. Others	0	NA
5. Total Terminations	0	NA
6. Data Adjustments	(12)	NA
7. As of Current Valuation Date	35	\$228

ST. PAUL TEACHERS' RETIREMENT FUND

COORDINATED

REPORT HIGHLIGHTS - COORDINATED
(DOLLARS IN THOUSANDS)

	<u>12/31/84</u> <u>VALUATION</u>	<u>07/01/85</u> <u>VALUATION</u>
A. CONTRIBUTIONS (TABLE 11B)		
1. Statutory Contributions - Chapter 354A % of Payroll	9.00%	9.00%
2. Required Contributions - Chapter 356 % of Payroll	5.04%	8.72%
3. Sufficiency (Deficiency) (A1-A2)	3.96%	0.28%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 2)	NA	\$8,036
b. Current Benefit Obligations (Table 8B)	NA	\$8,764
c. Funding Ratio (a/b)	NA	91.69%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 2)	\$6,444	\$8,036
b. Actuarial Accrued Liability (Table 9B)	\$7,282	\$11,364
c. Funding Ratio (a/b)	88.49%	70.71%
3. Projected Benefit Funding Ratio (Table 8B)		
a. Current and Expected Future Assets	NA	\$30,589
b. Current and Expected Future Benefit Obligations	NA	\$29,560
c. Funding Ratio (a/b)	NA	103.48%
C. PLAN PARTICIPANTS		
1. Active Members (Table 3B)		
a. Number	1,072	1,241
b. Projected Annual Earnings	\$20,674	\$19,041
c. Average Annual Earnings (Actual \$)	\$19,285	\$15,343
d. Average Age	37.1	37.8
e. Average Service	2.6	3.3
f. Additional Members on Leave of Absence	58	46
2. Others		
a. Service Retirements (Table 4B)	10	10
b. Disability Retirements (Table 5B)	0	0
c. Survivors (Table 6B)	0	0
d. Deferred Retirements (Table 7B)	0	1
e. Terminated Other Non-vested (Table 7B)	NA	1,619
f. Total	10	1,630

ST. PAUL TEACHERS' RETIREMENT FUND

TABLE 3B
COORDINATED

ACTIVE MEMBERS AS OF JUNE 30, 1985

AGE	YEARS OF SERVICE								TOTAL
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<25	66	16	1						83
25-29	86	86	36						208
30-34	67	96	84	2					249
35-39	71	68	76	10	9				234
40-44	88	58	43	4	8	3			204
45-49	18	43	34	7	3	2			107
50-54	27	26	19	2	1	2	1		78
55-59	10	12	14	3	3				42
60-64	8	8	6	1	2				25
65+	7	2	2						11
TOTAL	448	415	315	29	26	7	1	0	1,241

AVERAGE ANNUAL EARNINGS

AGE	YEARS OF SERVICE								ALL
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<25	3,814	16,376	22,259						6,458
25-29	4,457	16,503	18,477						11,864
30-34	3,974	17,162	21,073	26,595					15,008
35-39	4,367	18,134	23,208	30,016	31,083				16,610
40-44	3,528	16,881	27,971	26,738	38,325	32,553			14,723
45-49	3,416	17,350	26,507	29,860	31,437	30,843			19,381
50-54	3,919	15,550	24,742	33,664	34,198	30,837	31,880		15,068
55-59	4,270	13,870	15,121	29,116	32,329				14,409
60-64	1,744	11,158	22,161	31,800	43,288				14,182
65+	1,731	1,805	11,559						3,531
ALL	3,924	16,749	22,740	29,510	34,555	31,574	31,880	0	14,407

PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY YEARS OF SERVICE

<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>
1,758	6,951	7,163	856	898	221	32	0	17,879

ST. PAUL TEACHERS' RETIREMENT FUND

TABLE 4B
COORDINATED

SERVICE RETIREMENTS AS OF JUNE 30, 1985

AGE	YEARS RETIRED							TOTAL
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50								0
50-54								0
55-59								0
60-64		2						2
65-69		6						6
70-74			2					2
75-79								0
80-84								0
85+								0
TOTAL	0	8	2	0	0	0	0	10

AVERAGE ANNUAL ANNUITY

AGE	YEARS RETIRED							ALL
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50								0
50-54								0
55-59								0
60-64		6,179						6,179
65-69		5,035						5,035
70-74			948					948
75-79								0
80-84								0
85+								0
ALL	0	5,321	948	0	0	0	0	4,446

TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS OF RETIREMENT

<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	TOTAL
0	42	2	0	0	0	0	44

ST. PAUL TEACHERS' RETIREMENT FUND

TABLE 7B
COORDINATED

RECONCILIATION OF MEMBERS

	<u>ACTIVES</u>	<u>TERMINATED</u>	
		<u>DEFERRED RETIREMENT</u>	<u>OTHER NON-VESTED</u>
A. On December 31, 1984	1,130	0	NA
B. Additions	186	0	NA
C. Deletions:			
1. Service Retirement	0	0	
2. Disability	0		
3. Death	0	0	
4. Terminated-Deferred	0		
5. Terminated-Refund	(50)	0	
6. Terminated-Other Non-vested	(24)		
7. Returned as Active		0	NA
D. Data Adjustments	45	1	51
	Vested 64		
	Non-Vested 1,223		
E. Total on June 30, 1985	1,287	1	1,619

	<u>RECIPIENTS</u>		
	<u>RETIREMENT ANNUITANTS</u>	<u>DISABLED</u>	<u>SURVIVORS</u>
A. On December 31, 1984	10	0	0
B. Additions	0	0	0
C. Deletions:			
1. Service Retirement		0	
2. Death	0	0	0
3. Annuity Expired	0	0	0
4. Returned as Active	0	0	
D. Data Adjustments	0	0	0
E. Total on June 30, 1985	10	0	0

ST. PAUL TEACHERS' RETIREMENT FUND

TABLE 8B
COORDINATEDACTUARIAL BALANCE SHEET
(DOLLARS IN THOUSANDS)

JULY 1, 1985

A. CURRENT ASSETS (TABLE 2, K3)				\$8,036
B. EXPECTED FUTURE ASSETS				
1. Present Value of Expected Future Supplemental Contributions				4,357
2. Present Value of Future Normal Costs				18,196
3. Total Expected Future Assets				22,553
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS				\$30,589
D. CURRENT BENEFIT OBLIGATIONS	<u>Non-Vested</u>	<u>Vested</u>	<u>Total</u>	
1. Benefit Recipients				
a. Retirement Annuities		\$439		\$439
b. Disability Benefits		0		0
c. Surviving Spouse's Benefits		0		0
d. Surviving Children's Benefits		0		0
2. Deferred Retirements with Future Augmentation		36		36
3. Former Members without Vested Rights		296		296
4. Active Members				
a. Retirement Annuities	3,114	2,553		5,667
b. Disability Benefits	270	196		466
c. Survivors' Benefits	57	51		108
d. Deferred Retirements	0	0		0
e. Refund Liability Due to Death or Withdrawal	1,386	366		1,752
5. Total Current Benefit Obligations	\$4,827	\$3,937		\$8,764
E. EXPECTED FUTURE BENEFIT OBLIGATIONS				\$20,796
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS				\$29,560
G. CURRENT UNFUNDED LIABILITY (D5-A)				\$728
H. CURRENT AND FUTURE UNFUNDED LIABILITY (F-C)				(\$1,029)

ST. PAUL TEACHERS' RETIREMENT FUND

TABLE 9B
COORDINATEDDETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY
AND SUPPLEMENTAL CONTRIBUTION RATE
(DOLLARS IN THOUSANDS)

JULY 1, 1985

	ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS (1)	ACTUARIAL PRESENT VALUE OF FUTURE NORMAL COSTS (2)	ACTUARIAL ACCRUED LIABILITY (3)=(1)-(2)
A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)			
1. Active Members			
a. Retirement Annuities	\$23,130	\$14,071	\$9,059
b. Disability Benefits	1,478	898	580
c. Survivors Benefits	418	243	175
d. Deferred Retirements	0	0	0
e. Refunds Due to Death or Withdrawal	3,763	2,984	779
f. Total	<u>\$28,789</u>	<u>\$18,196</u>	<u>\$10,593</u>
2. Deferred Retirements with Future Augmentation	\$36		\$36
3. Former Members Without Vested Rights	296		296
4. Annuitants in MPRIF	0		0
5. Recipients Not in MPRIF	439		439
6. Total AAL	<u>\$29,560</u>	<u>\$18,196</u>	<u>\$11,364</u>
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. AAL (A6)			\$11,364
1. Current Assets (Table 2, K3)			8,036
3. UAAL (B1-B2)			<u>\$3,328</u>
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls to the Amortization Date of July 1, 2009			\$375,108
2. Supplemental Contribution Rate (B3/C1)			0.89%

ST. PAUL TEACHERS' RETIREMENT FUND

TABLE 10B
COORDINATEDCHANGES IN UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)
(DOLLARS IN THOUSANDS)

SIX MONTH PERIOD ENDING JUNE 30, 1985

A. UAAL AT BEGINNING OF PERIOD	\$838
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
1. Normal Cost and Expenses	\$526
2. Contribution	(978)
3. Interest on A, B1, and B2	24
4. Total (B1+B2+B3)	----- (\$428) -----
C. EXPECTED UAAL AT END OF PERIOD (A+B4)	\$410
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
1. Salary Increases	NA
2. Investment Return	(414)
3. MPRIF Mortality	0
4. Mortality of Other Benefit Recipients	4
5. Active Members' Turnover, Retirement, Mortality and Disability	(16)
6. Other Items	2,484
7. Total	----- \$2,058 -----
E. UAAL AT END OF PERIOD BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C+D7)	\$2,468
F. CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO PLAN AMENDMENTS	\$860
G. CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	\$0
H. UAAL AT END OF PERIOD (E+F+G)	----- \$3,328 =====

ST. PAUL TEACHERS' RETIREMENT FUND
DETERMINATION OF CONTRIBUTION SUFFICIENCY
(DOLLARS IN THOUSANDS)

TABLE 11B
COORDINATED

JULY 1, 1985

	<u>% OF PAYROLL</u>	<u>\$ AMOUNT</u>
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	4.50%	\$857
2. Employer Contributions	4.50%	857
	-----	-----
3. Total	9.00%	\$1,714
	=====	=====
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	5.80%	\$1,104
b. Disability Benefits	0.37%	71
c. Survivors	0.10%	18
d. Deferred Retirement Benefits	0.00%	0
e. Refunds Due to Death or Withdrawal	1.23%	234
	-----	-----
f. Total	7.50%	\$1,427
	-----	-----
2. Supplemental Contribution Amortization by July 1, 2009 of UAAL of \$3,328	0.89%	\$169
3. Allowance for Expenses	0.34%	\$65
	-----	-----
4. Total	8.72%	\$1,661
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) (A3-B4)		
	0.28%	\$53

Note: Projected Annual Payroll for Fiscal Year Beginning
on July 1, 1985 is \$19,041

ST. PAUL TEACHERS' RETIREMENT FUND

TABLE 12B
COORDINATEDPROJECTED CASH FLOW
(DOLLARS IN THOUSANDS)

<u>FISCAL YEAR</u>	<u>STATUTORY CONTRIBUTIONS</u>	<u>TRANSFERS TO MPRIF</u>	<u>OTHER DISBURSEMENTS</u>	<u>INVESTMENT RETURN</u>	<u>CURRENT ASSETS YEAR END</u>
1985					\$8,036
1986	\$1,714	\$0	\$279	\$700	10,069
1987	2,288	0	415	880	12,694
1988	2,762	0	490	1,106	15,911
1989	3,222	0	588	1,378	19,724
1990	3,779	0	713	1,701	24,246
1991	4,365	0	860	2,080	29,533
1992	5,040	0	1,016	2,524	35,720
1993	5,754	0	1,202	3,040	42,879
1994	6,531	0	1,424	3,635	51,105
1995	7,414	0	1,733	4,316	60,491
1996	8,343	0	2,038	5,091	71,168
1997	9,284	0	2,437	5,967	83,142
1998	10,312	0	2,752	6,954	96,679
1999	11,507	0	3,122	8,070	112,003
2000	12,780	0	3,679	9,324	129,124
2001	14,097	0	4,312	10,721	148,134
2002	15,398	0	5,061	12,264	169,027
2003	16,834	0	5,740	13,966	192,146
2004	18,329	0	6,601	15,841	217,518
2005	20,047	0	7,735	17,894	245,247
2006	21,832	0	8,881	20,138	275,553
2007	23,690	0	10,119	22,587	308,593
2008	25,641	0	11,462	25,255	344,547
2009	27,778	0	13,072	28,152	383,531
2010	30,075	0	15,174	31,279	425,414

ST. PAUL TEACHERS' RETIREMENT FUND**TABLE 14B
COORDINATED****SUMMARY OF PLAN PROVISIONS**

Eligibility	A teacher who is employed by a public school district located in the corporate limits of the City of St. Paul and who is covered by the Social Security Act. Also includes employees of the St. Paul Teachers Retirement Fund.
Contributions	
Member	4.5% of Salary.
Employer	4.5% of Salary.
Allowable Service	Earned if the member is employed in a covered position and employee contributions are deducted. May also include certain part-time service, extended leaves of absence, sabbatical leaves, and military service.
Salary	Total compensation. Excludes any sick leave payments and lump sum payments for annual leave or at separation.
Average Salary	Average of the 5 highest successive years of Salary.
RETIREMENT	
Normal Retirement Benefit	
Eligibility	Age 65 and 10 years of Allowable Service. Age 62 and 30 years of Allowable Service. Rule of 85: Age 55 and age plus Allowable Service totals 85 and retirement prior to 1/1/87.
Amount	1% of Average Salary for the first 10 years of Allowable Service and 1.5% of Average Salary for each subsequent year.
Early Retirement Benefit	
Eligibility	Age 55 and 10 years of Allowable Service. Any age with 30 years of Allowable Service.
Amount	Normal Retirement Benefit based on Allowable Service and Average Salary at retirement date with reduction for benefits commencing prior to the normal retirement age 65 (age 62 if 30 years of Allowable Service). The monthly reduction factor is 0.50% from normal retirement to age 60 and 0.25% from age 60 to the date benefits begin.

TABLE 14B
COORDINATED
(cont)

Form of Payment	Life annuity. Actuarially equivalent options are: Guaranteed refund 15 year certain and life 50% or 100% bounce back joint and survivor (option is cancelled if Member is pre-deceased by beneficiary).
Benefit Increases	If the investment income of the fund was at least 6% of the asset value of the fund at the end of the year, the Board of Trustees may declare a bonus of up to 1% of the asset value of the fund at the end of the previous fiscal year. This bonus is allocated to those eligible on a prorated basis according to the combined number of years of service and years receiving a benefit. A retired member is eligible if receiving an annuity for at least 3 years.
DISABILITY	
Disability Benefit Eligibility	Total and permanent disability before age 65 with 5 years of Allowable Service if age 50 or older, or with 10 years of Allowable Service if younger than age 50. Also the last 5 years must have been uninterrupted.
Amount	Normal Retirement Benefit based on Allowable Service and Average Salary at disability without reduction for commencement before age 65. Benefit is reduced by Workers' Compensation. Payments stop at age 65, or earlier if disability ceases or death occurs. Benefits may be reduced on resumption of partial employment.
Form of Payment	Same as for retirement.
Benefit Increases	None.
Retirement After Disability	
Eligibility	Age 65 with continued disability.
Amount	Any optional annuity continues. Otherwise the larger of the disability benefit paid before age 65 or the normal retirement benefit available at age 65, or an actuarially equivalent optional annuity.
Benefit Increases	Same as for retirement.

TABLE 14B
COORDINATED
(cont)

DEATH

Surviving Spouse Annuity
Eligibility

Member who dies before retirement benefits commence if age 55 with 20 years of Allowable Service or any age with 30 years of Allowable Service.

Amount

Survivor's payment of the 100% joint and survivor benefit the member could have elected if terminated.

Benefit Increases

Same as for a retired person if payments have been made over three years. The allocation is based on the years of service of the person on whose behalf the annuity is paid and the years receiving payment.

Refund of Contributions
Eligibility

Member or former Member dies before receiving any disability or retirement benefits and survivor benefits are not payable.

Amount

Member's contributions with 5% interest.

TERMINATION

Refund of Contributions
Eligibility

Termination of teaching service.

Amount

Member's contributions with 5% interest. A deferred annuity may be elected in lieu of a refund.

Deferred Annuity
Eligibility

10 years of Allowable Service.

Amount

Benefit computed under law in effect at termination and increased by the following annual percentages: 5% before 1/1/80 and 3% thereafter until the annuity begins. Amount is payable as a normal or early retirement.

ST. PAUL TEACHERS' RETIREMENT FUND

TABLE 15B
COORDINATEDMEMBERSHIP CHANGES
(DOLLARS IN THOUSANDS)

JUNE 30, 1985

A. ACTIVE MEMBERS		<u>NUMBER</u>	<u>PAYROLL</u>
1. As of the Last Valuation Date		1,130	\$19,868
2. New Entrants		186	NA
3. Total		1,316	NA
4. Separations from Active Service			
a. Refund of Contributions	(50)		NA
b. Separation with Deferred Annuity	0		NA
c. Separation with neither Refund nor Deferred Annuity	(24)		NA
d. Disability	0		NA
e. Death	0		NA
f. Retirement with Service Annuity	0		NA
5. Total Separations	(74)		NA
6. Data Adjustments	45		NA
7. As of Current Valuation Date	1,287		\$17,879
B. SERVICE RETIREMENT ANNUITANTS		<u>NUMBER</u>	<u>ANNUAL ANNUITY</u>
1. As of the Last Valuation Date		10	\$44
2. New Entrants		0	0
3. Total		10	44
4. Terminations			
a. Deaths	0		0
b. Others	0		0
5. Total Terminations	0		0
6. Data Adjustments	0		0
7. As of Current Valuation Date	10		\$44
C. DISABLED ANNUITANTS		<u>NUMBER</u>	<u>ANNUAL ANNUITY</u>
1. As of the Last Valuation Date		0	\$0
2. New Entrants		0	0
3. Total		0	0
4. Terminations			
a. Deaths	0		0
b. Others	0		0
5. Total Terminations	0		0
6. Data Adjustments	0		0
7. As of Current Valuation Date	0		\$0

TABLE 15B
COORDINATED
(cont)

D. SURVIVING SPOUSE ANNUITANTS	<u>NUMBER</u>	<u>ANNUAL ANNUITY</u>
1. As of the Last Valuation Date	0	\$0
2. New Entrants	0	0
3. Total	0	0
4. Terminations		
a. Deaths	0	0
b. Others	0	0
5. Total Terminations	0	0
6. Data Adjustments	0	0
7. As of Current Valuation Date	0	\$0
E. SURVIVING CHILDREN ANNUITANTS	<u>NUMBER</u>	<u>ANNUAL ANNUITY</u>
1. As of the Last Valuation Date	0	\$0
2. New Entrants	0	0
3. Total	0	0
4. Terminations		
a. Deaths	0	0
b. Others	0	0
5. Total Terminations	0	0
6. Data Adjustments	0	0
7. As of Current Valuation Date	0	\$0
F. DEFERRED ANNUITANTS	<u>NUMBER</u>	<u>ANNUAL ANNUITY</u>
1. As of the Last Valuation Date	0	\$0
2. New Entrants	0	0
3. Total	0	0
4. Terminations		
a. Deaths	0	0
b. Others	0	0
5. Total Terminations	0	0
6. Data Adjustments	1	7
7. As of Current Valuation Date	1	\$7