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Teachers' Retirement Fund Association
St. Paul, Minnesota

ACTUARIAL VALUATION REPORT
as of
December 31, 1974

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STATE CAPITOL
ST. PAUL, MINN. 55155

A. S. Hansen, inc.

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Teachers' Retirement Fund Association
St. Paul, Minnesota

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A. S. Hansen, inc.

ACTUARIES AND CONSULTANTS

1080 Green Bay Road
Lake Bluff, Illinois 60044
Telephone 312-234-3400

May 13, 1975

Board of Trustees
St. Paul Teachers' Retirement Fund Association
555 Wabasha Street, Room 303
St. Paul, Minnesota 55102

Gentlemen:

In accordance with your request, we have made an actuarial valuation of the St. Paul Teachers' Retirement Fund Association for the year ended December 31, 1974, in order to determine the adequacy of the contributions being made to that system and to prepare the financial and actuarial reports as required by the laws of the State of Minnesota.

The results of our analysis are set forth in the following report. The basic financial and employee data are those submitted to us by the Association office; the summaries and actuarial figures are those prepared by us from such data.

On the basis of the foregoing, and the assumptions indicated herein, we hereby certify that, to the best of our knowledge and belief, the attached statements are true and correct.

Respectfully submitted,

A. S. HANSEN, INC.



Thomas G. Brand
Member, American Academy
of Actuaries

TGB:bm
13078-01-85

Teachers' Retirement Fund Association
St. Paul, Minnesota

COMMENTS

This report sets forth the information on the Teachers' Retirement Fund Association of the City of St. Paul, Minnesota required by law for the legislature based on the annual actuarial valuation.

These figures have been prepared in accordance with the requirements of the law under the supervision of an approved actuary. Included in these requirements are the use of the Entry Age Normal Cost Method, anticipated salary increases of 3-1/2% per year, and an assumed interest of 5% per year. Other assumptions as to retirement age, mortality, disability and withdrawal generally reflect the recent experience of the retirement system as developed by an experience analysis and with consideration for discernible trends in such rates. This experience analysis measured the experience of the Teachers' System for the four-year period ended December 31, 1969 and is presented in the report for the year ended December 31, 1969.

The actuarial valuation measures all aspects of the St. Paul Teachers' Fund in accordance with the plan described in the section of this report titled "Summary of the Plan".

Exhibit 4 shows the present value of all benefits to both active members, and retirees (and beneficiaries) now receiving benefits at 5%. This amount does not reflect the value of increases granted retirees in 1955 and subsequent years. This is appropriate because the funds required for these benefit increases are provided from another source.

Exhibit 4 also indicates an amount of Unfunded Accumulated Contribution Requirement of \$71,873,162. This amount represents an increase of \$8,299,968. The primary reasons for the increase are estimated in Exhibit 7. The single most important reason for the increase in the Unfunded is due to the substantive changes in benefits under the plan as amended effective June 30, 1974.

Exhibit 5 restates the dollar amount of obligation in Exhibit 4 as percentages based on the payroll of members. The resulting percentage total rate requirement may then be compared with the statutory contribution rate to ascertain the actuarial balance of the Fund.

While the actuarial balance continues to reveal deficits, we remain of the opinion that the ultimate asset accumulation will be sufficient to provide for the teachers' benefits should the program ever be terminated. This opinion is supported by the historical presentation of the statutory deficit on a 5% basis as follows:

<u>Year Ending December 31</u>	
1970	(5.00%)
1971	(4.54%)
1972	(4.20%)
1973	(2.62%)
1974	(2.67%)

Under these conditions, we do not believe it necessary or appropriate to call for an increase in the teacher or city contribution rate at this time.

Exhibit 5(a) was included in the report at the request of Mr. Lyle Farmer. This exhibit also restates the dollar obligations of Exhibit 4 as percentages based on the payroll of members but assumes that the amount to be amortized will be amortized by January 1, 2005 or over a future 30-year period.

FINANCIAL EXHIBITS

Teachers' Retirement Fund Association
St. Paul, Minnesota

FINANCIAL BALANCE SHEET
 (December 31, 1974)

ASSETS

Cash		\$ 80,570.07
Receivables		
Interest	\$425,376.55	
Dividends Declared not Received	<u>16,211.00</u>	441,587.55
Short Term Notes, at Discounted Value		9,259,865.02
Bonds, at Amortized Cost		20,790,117.41
Stocks, at Cost		8,396,440.01
Deferred Yield Adjustment Account		1,796,266.67
Furniture and Equipment, Less Depreciation		3,597.40
Administrative Expenses Payable		<u>(5,225.43)</u>
<u>Total Assets</u>		<u>\$40,763,218.70</u>

Members Accumulated Contributions (without interest) \$ 18,500,211.37

Administration Expenses 1974 - \$101,000.22

Teachers' Retirement Fund Association
St. Paul, Minnesota

SOURCES AND USES OF FUNDS

SOURCES

Cash Balance January 1, 1974		\$ 21,456.37
Income from Taxes:		
City of St. Paul	\$1,669,773.49	
State of Minnesota	<u>3,931,219.27</u>	5,600,992.76
Income from Members:		
Payroll Deductions	\$2,934,974.76	
Prior Service	1,003,026.43	
Back Dues	54,615.17	
Return of Refunds	<u>37,567.74</u>	4,030,184.10
Income from Investments:		
Interest	\$2,023,809.26	
Dividends	165,108.98	
Miscellaneous	<u>1,505.36</u>	2,190,423.60
Investments Sold		<u>48,117,930.30</u>
<u>Total</u>		<u>\$59,960,987.13</u>

USES

Pensions Paid:		
Retirement	\$3,318,061.75	
Survivor	54,390.80	
Children	<u>37,600.32</u>	\$ 3,410,052.87
Refunds of Dues		305,637.22
Administrative Expenses:		
Salaries	\$ 54,774.14	
Office Expense	10,026.22	
Legal and Actuarial Services	10,280.00	
Taxes, Insurance and Members Dues	4,594.26	
Office Equipment	529.55	
Delegate Expense	2,550.00	
Data Processing	2,850.00	
Investment Counsel Service	<u>16,802.49</u>	102,406.66
Refund - Investment Received not Earned		29,009.60
Investments Purchased		<u>56,033,310.71</u>
Sub-Total		\$59,880,417.06
Cash Balance December 31, 1974		<u>80,570.07</u>
<u>Total</u>		<u>\$59,960,987.13</u>

Teachers' Retirement Fund Association
St. Paul, Minnesota

RECONCILIATION OF ASSET BALANCES
 (December 31, 1974)

Asset Balance - December 31, 1973		\$33,004,303.20
Additions:		
Taxes	\$5,600,992.76	
From Member Contributions	4,030,184.10	
Investment Income	<u>2,243,848.79</u>	<u>11,875,025.65</u>
		<u>\$44,879,328.85</u>
Deductions:		
Benefit Payments	\$3,408,618.92	
Refunds	305,637.25	
Administrative Expenses	101,000.22	
Net Loss on Sale of Investments	<u>300,853.76</u>	<u>\$ 4,116,110.15</u>
Asset Balance, December 31, 1974		<u>\$40,763,218.70</u>

Teacher's Retirement Fund Association
St. Paul, Minnesota

ACTUARIAL REQUIREMENTS - 5%

Teachers' Retirement Fund Association
St. Paul, Minnesota

FINANCIAL BALANCE SHEET
 (December 31, 1974)

Present Value of Benefits Expected to be Paid by Retirement Fund

To Active Teachers for		
Retirement	\$112,156,790.00	
Disability	9,036,965.00	
Survivorship	9,961,384.00	
Refund	<u>3,878,997.00</u>	
Total		\$135,034,136.00
To Vested Teachers		178,886.00
To Teachers on Leave		272,164.00
To Former Teachers without Vested Rights		18,172.00
To Teachers and Beneficiaries Now Receiving Benefits for		
Retirement	\$ 27,589,564.00	
Disability	259,583.00	
Survivorship	<u>811,085.00</u>	
Total		<u>\$ 28,660,232.00</u>
Total Value of Benefits		\$164,163,590.00
Less Value of Expected Future Contributions*		<u>51,527,209.00</u>
Accumulated Contribution Requirement Assuming Full Funding During Prior Service Period		\$112,636,381.00
Assets on Hand		<u>40,763,218.70</u>
Accumulated Contribution Requirement to be Amortized by 1997		<u>\$ 71,873,162.30</u>

*As Determined by the Entry Age Normal Cost Method.

5%

Teachers' Retirement Fund Association
St. Paul, Minnesota

ACTUARIAL REQUIREMENTS
(December 31, 1974)

TOTAL REQUIREMENTS

Expected Future Contributions on Behalf of Active Teachers	\$ 51,527,209
Accumulated Contribution Assuming Full Funding During Prior Service Period	<u>112,636,381</u>
Total - Value of All Benefits Payable to Present Members	\$164,163,590

AMORTIZATION RATE REQUIREMENT

Accumulated Contribution Requirement	\$112,636,381	
Assets on Hand	<u>40,763,219</u>	
Amount to be Amortized	\$ 71,873,162	
Contribution Requirement for Amortization Period of 23 Years	\$ 5,328,461	
Current Payroll	\$ 41,808,570	
Amortization Rate Requirement		12.74%

LEVEL CONTRIBUTION (ENTRY AGE NORMAL) RATE REQUIREMENT

Expected Future Contributions on Behalf of Active Teachers	\$ 51,527,209	
Expected Future Payroll	460,280,500	
Total Entry Age Normal Rate Requirement	11.19%	
Teacher Contribution Rate	<u>8.00</u>	
Employer Entry Age Normal Rate Requirement		3.19%

ACTUARIAL BALANCE

Employer Statutory Contribution Rate		13.50%
Rate Requirements		
Amortization Rate Requirement	12.74%	
Entry Age Normal Rate Requirement	3.19	
Expenses Rate Requirement	<u>.24</u>	
Total Rate Requirement		16.17%
Deficit of Statutory Rate over Rate Requirement		(2.67%)

Teachers' Retirement Fund Association
St. Paul, Minnesota

ACTUARIAL REQUIREMENTS
(December 31, 1974)

TOTAL REQUIREMENTS

Expected Future Contributions on Behalf of Active Teachers	\$ 51,527,209
Accumulated Contribution Assuming Full Funding During Prior Service Period	<u>112,636,381</u>
Total - Value of All Benefits Payable to Present Members	\$164,163,590

AMORTIZATION RATE REQUIREMENT

Accumulated Contribution Requirement	\$112,636,381	
Assets on Hand	<u>40,763,219</u>	
Amount to be Amortized	\$ 71,873,162	
Contribution Requirement for Amortization Period of 30 Years	\$ 4,675,421	
Current Payroll	\$ 41,808,570	
Amortization Rate Requirement		11.18%

LEVEL CONTRIBUTION (ENTRY AGE NORMAL) RATE REQUIREMENT

Expected Future Contributions on Behalf of Active Teachers	\$ 51,527,209	
Expected Future Payroll	460,280,500	
Total Entry Age Normal Rate Requirement	11.19%	
Teacher Contribution Rate	<u>8.00</u>	
Employer Entry Age Normal Rate Requirement		3.19%

ACTUARIAL BALANCE

Employer Statutory Contribution Rate		13.50%
Rate Requirements		
Amortization Rate Requirement	11.18%	
Entry Age Normal Rate Requirement	3.19	
Expenses Rate Requirement	<u>.24</u>	
Total Rate Requirement		14.61%
Deficit of Statutory Rate over Rate Requirement		(1.11%)

Teachers' Retirement Fund Association
St. Paul, Minnesota

STATEMENT OF REVENUE, EXPENDITURES, CHANGES IN
 UNFUNDED ACCUMULATED CONTRIBUTION REQUIREMENT
 (Year Ended December 31, 1974)

Revenue:

Employer Contributions	\$5,600,992.76	
Employee Contributions	4,030,184.10	
Net Investment Income*	<u>1,942,995.03</u>	
Total Revenue		\$11,574,171.89

Expenditure:

Benefits	\$3,408,618.92	
Refund of Dues	305,637.25	
Administrative Expense	<u>101,000.22</u>	
Total Expenditures		<u>3,815,256.39</u>
Increase in Assets (1974)		\$ 7,758,915.50
Increase in Accumulated Contribution Requirement		<u>16,058,884.00</u>
Increase (Decrease) in Unfunded Accumulated Contribution Requirement		<u>\$ 8,299,968.50</u>

*Investment Income minus \$300,853.76 Net Loss on Sale of Investments.

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Teachers' Retirement Fund Association
St. Paul, Minnesota

INCREASE (DECREASE) IN UNFUNDED REQUIREMENTS

Unfunded	December 31, 1973	\$ 63,573,194
Unfunded	December 31, 1974	<u>71,873,162</u>
Increase (Decrease)		<u>\$ 8,299,968</u>

ALLOCATION OF INCREASE (DECREASE) IN UNFUNDED REQUIREMENT

(1) Change in Benefits		\$ 6,074,154
(2) Change in Actuarial Assumptions		-
(3) Net Actuarial Loss (Gain)		2,562,155
(4) Principal of Unfunded Anticipated in Total Rate Requirement	\$1,428,553	
Deficiency in Total Rate Requirement over Statutory Rate	<u>993,867</u>	
Decrease Due to Amortization		(434,686)
(5) Increase - Inclusion of Part-time Teachers		<u>98,345</u>
Total Increase (Decrease)		<u>\$ 8,299,968</u>

ALLOCATION OF NET ACTUARIAL LOSS (GAIN)

Increase in Average Earnings		\$ 3,484,331
Investment Income in excess of 5%: Loss (Gain)		(98,807)
Decline in the Size of the Group before Inclusion of Part-time Teachers		(923,209)
Experience Variation: Loss (Gain)		<u>99,840</u>
<u>Total Increase</u>		<u>\$ 2,562,155</u>

EMPLOYEE STATISTICS

Teachers' Retirement Fund Association
St. Paul, Minnesota

RECONCILIATION OF MEMBERS

ACTIVE

Active (Including 102 on Leave) December 31, 1973		2,897
Additions:		
New Appointments	160	
Reappointments	<u>40</u>	<u>200</u>
Total		3,097
Separations:		
Retirements	44	
Deaths	3	
Terminations	<u>181</u>	<u>228</u>
Active (Including 128 on Leave) December 31, 1974		<u>2,869</u>
Substitutes		<u>380</u>
Inactive Members		<u>6</u>

RETIRED

Retired and Deferred Pensioners December 31, 1973		744
Additions:		
Retirement	43	
Disability	1	
Deferred	<u>2</u>	<u>46</u>
Total		790
Separations - Deaths		<u>36</u>
Retired and Deferred Pensioners, December 31, 1974		<u>754</u>
Beneficiaries:		
Reversionary	10	
Survivor	18	
Children	<u>16</u>	
Total	<u>44</u>	

Teachers' Retirement Fund Association
St. Paul, Minnesota

RETIRED ON SERVICE PENSION

Age	Male		Female	
	Number	Annual Pension	Number	Annual Pension
57	-	\$ -	1	\$ 3,732
58	-	-	1	4,644
59	-	-	1	4,212
60	2	31,908	3	18,528
61	3	29,136	3	17,688
62	4	36,948	2	11,532
63	1	9,384	3	24,624
64	2	9,384	16	96,972
65	5	31,644	11	74,964
66	4	31,968	18	122,352
67	3	26,640	18	114,720
68	3	27,384	32	184,704
69	5	45,528	25	147,324
70	6	51,138	34	200,124
71	3	20,124	39	213,959
72	8	50,333	41	179,162
73	3	18,374	18	83,489
74	5	24,359	31	121,233
75	5	23,245	24	95,887
76	3	11,920	36	137,794
77	2	9,317	27	100,790
78	1	4,037	31	110,790
79	1	4,182	31	104,522
80	5	18,191	25	90,608
81	1	3,923	26	92,741
82	1	3,884	20	66,289
83	-	-	17	62,447
84	1	2,189	13	43,773
85	-	-	15	50,668
86	1	2,966	12	40,121
87	-	-	9	23,972
88	1	3,080	5	15,642
89	-	-	9	26,010
90	-	-	8	23,285
91	1	2,823	6	15,433
92	-	-	4	10,877
93	-	-	3	7,566
94	1	2,456	-	-
95	-	-	1	2,704
96	-	-	-	-
97	-	-	1	2,633
98	-	-	1	2,704
99	-	-	1	2,856
100	-	-	1	2,736
<u>Total</u>	<u>81</u>	<u>\$ 536,465</u>	<u>623</u>	<u>\$2,756,811</u>

Teachers' Retirement Fund Association
St. Paul, Minnesota

RETIRED ON LIMITED PENSION

<u>Age</u>	<u>Male</u>		<u>Female</u>	
	<u>Number</u>	<u>Annual Pension</u>	<u>Number</u>	<u>Annual Pension</u>
68	-	\$ -	1	\$ 4,836
69	1	3,132	1	3,912
70	-	-	1	2,256
71	1	3,180	3	11,016
72	-	-	1	2,460
74	-	-	2	4,206
77	-	-	4	9,448
78	1	2,118	-	-
79	-	-	2	4,633
80	1	2,436	1	2,233
81	-	-	1	2,308
82	1	2,189	-	-
83	-	-	1	2,055
87	-	-	2	3,597
<u>Totals</u>	<u>5</u>	<u>\$13,055</u>	<u>20</u>	<u>\$52,960</u>

Teachers' Retirement Fund Association
St. Paul, Minnesota

RETIRED WITH REVERSIONARY PENSIONS

<u>Age</u>	<u>Male</u>		<u>Female</u>	
	<u>Number</u>	<u>Annual Pension</u>	<u>Number</u>	<u>Annual Pension</u>
73	1	\$ 3,343	-	\$ -
74	1	2,433	-	-
75	1	4,124	1	3,434
76	-	-	1	4,774
78	1	4,076	1	3,819
79	1	3,091	-	-
83	2	6,985	-	-
84	1	3,061	-	-
<u>Totals</u>	<u>8</u>	<u>\$27,113</u>	<u>3</u>	<u>\$12,027</u>

Teachers' Retirement Fund Association
St. Paul, Minnesota

RETIRED ON DISABILITY PENSION

<u>Age</u>	<u>Male</u>		<u>Female</u>	
	<u>Number</u>	<u>Annual Pension</u>	<u>Number</u>	<u>Annual Pension</u>
47	-	\$ -	1	\$ 1,368
52	1	4,644	-	-
53	1	3,324	-	-
57	-	-	1	3,780
61	1	6,228	-	-
62	1	4,188	-	-
65	-	-	1	3,744
68	-	-	1	2,352
69	-	-	1	1,596
71	-	-	1	2,815
73	-	-	2	5,094
76	-	-	1	1,720
97	-	-	1	2,017
<u>Totals</u>	<u>4</u>	<u>\$18,384</u>	<u>10</u>	<u>\$24,486</u>

Teachers' Retirement Fund Association
St. Paul, Minnesota

SURVIVOR ANNUITIES

CHILDREN

<u>Number</u>	<u>Annual Pension</u>
<u>16</u>	<u>\$53,601</u>

MALE

(Regular Survivors)

<u>Age</u>	<u>Number</u>	<u>Annual Pension</u>
50	1	\$ 3,900
66	1	1,548
74	1	6,228
76	1	4,175
78	1	5,232
<u>Totals</u>	<u>5</u>	<u>\$21,083</u>

FEMALE

<u>Age</u>	<u>Reversionary Survivors</u>		<u>Regular Survivors</u>	
	<u>Number</u>	<u>Annual Pension</u>	<u>Number</u>	<u>Annual Pension</u>
51	-	\$ -	1	\$ 2,520
53	-	-	1	2,760
55	-	-	1	8,532
57	-	-	1	3,384
63	-	-	2	8,086
64	1	1,208	1	2,280
65	-	-	1	2,129
67	-	-	1	1,392
68	1	1,270	-	-
70	1	910	1	3,290
72	1	2,541	-	-
74	2	5,103	-	-
75	-	-	1	4,613
78	2	3,292	-	-
79	1	1,388	-	-
80	1	1,248	-	-
83	-	-	1	2,634
93	-	-	1	4,428
<u>Totals</u>	<u>10</u>	<u>\$16,960</u>	<u>13</u>	<u>\$46,048</u>

Teachers' Retirement Fund Association
St. Paul, Minnesota

Exhibit 14

CONSIDERED EARNINGS
(Year Ended December 31, 1974)

Active Male Employees
(Age and Service as of December 31, 1974)

Age	YEARS OF SERVICE							
	Under 1		1 to 2		2 to 5		5 to 10	
	No.	Earnings	No.	Earnings	No.	Earnings	No.	Earnings
Under 25	14	\$ 54,300	-	\$ -	2	\$ 18,500	-	\$ -
25 to 30	80	374,794	11	103,160	105	1,130,640	26	291,570
30 to 35	29	226,862	4	53,398	57	740,349	103	1,450,353
35 to 40	5	55,568	2	32,764	24	366,300	53	841,097
40 to 45	5	37,295	1	24,300	23	392,787	27	541,689
45 to 50	4	20,620	1	9,190	4	59,900	25	407,192
50 to 55	3	6,120	-	-	2	35,645	9	182,223
55 to 60	1	2,040	-	-	2	30,200	5	87,900
60 to 65	2	16,540	-	-	2	32,200	2	29,900
65 to 70	2	4,080	-	-	-	-	1	18,400
70 & Up	-	-	-	-	-	-	-	-
<u>Total</u>	<u>145</u>	<u>\$ 798,219</u>	<u>19</u>	<u>\$ 222,812</u>	<u>221</u>	<u>\$2,806,521</u>	<u>251</u>	<u>\$ 3,850,324</u>

Age	YEARS OF SERVICE							
	10 to 15		15 to 20		20 to 25		25 to 30	
	No.	Earnings	No.	Earnings	No.	Earnings	No.	Earnings
Under 25	-	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 30	-	-	-	-	-	-	-	-
30 to 35	11	171,290	-	-	-	-	-	-
35 to 40	90	1,602,189	11	212,295	-	-	-	-
40 to 45	45	883,968	62	1,266,152	7	141,027	-	-
45 to 50	23	400,851	58	1,092,444	59	1,203,591	13	268,200
50 to 55	18	328,664	20	379,170	51	1,004,366	46	997,078
55 to 60	8	141,450	11	202,357	18	329,458	26	530,235
60 to 65	4	67,100	1	16,200	6	124,893	15	312,500
65 to 70	-	-	-	-	1	20,940	2	38,100
70 & Up	-	-	-	-	-	-	-	-
<u>Total</u>	<u>199</u>	<u>\$3,595,512</u>	<u>163</u>	<u>\$3,168,618</u>	<u>142</u>	<u>\$2,824,275</u>	<u>102</u>	<u>\$ 2,146,113</u>

Age	YEARS OF SERVICE							
	30 to 35		35 to 40		40 & Up		All	
	No.	Earnings	No.	Earnings	No.	Earnings	No.	Earnings
Under 25	-	\$ -	-	\$ -	-	\$ -	16	\$ 72,800
25 to 30	-	-	-	-	-	-	222	1,900,164
30 to 35	-	-	-	-	-	-	204	2,642,252
35 to 40	-	-	-	-	-	-	185	3,110,213
40 to 45	-	-	-	-	-	-	170	3,287,218
45 to 50	-	-	-	-	-	-	187	3,461,988
50 to 55	5	120,855	-	-	-	-	154	3,054,121
55 to 60	15	385,493	-	-	-	-	86	1,709,133
60 to 65	18	391,615	5	110,510	1	30,896	56	1,132,354
65 to 70	3	80,799	4	73,190	1	21,140	14	256,649
70 & Up	-	-	-	-	-	-	-	-
<u>Total</u>	<u>41</u>	<u>\$ 978,762</u>	<u>9</u>	<u>\$ 183,700</u>	<u>2</u>	<u>\$ 52,036</u>	<u>1294</u>	<u>\$20,626,892</u>

Teachers' Retirement Fund Association
St. Paul, Minnesota

Exhibit 15

CONSIDERED EARNINGS
(Year Ended December 31, 1974)

Active Female Employees
(Age and Service as of December 31, 1974)

Age	YEARS OF SERVICE							
	Under 1		1 to 2		2 to 5		5 to 10	
	No.	Earnings	No.	Earnings	No.	Earnings	No.	Earnings
Under 25	95	\$ 404,625	12	\$ 105,990	1	\$ 8,700	-	\$ -
25 to 30	163	854,745	60	552,708	256	2,591,580	80	852,240
30 to 35	48	261,645	9	98,570	60	675,953	128	1,654,527
35 to 40	26	125,320	19	227,560	34	456,406	47	675,240
40 to 45	21	134,030	5	67,140	29	346,150	46	658,753
45 to 50	24	83,000	1	13,900	30	343,334	30	434,228
50 to 55	9	26,320	1	14,900	14	165,093	24	353,942
55 to 60	9	18,360	-	-	7	89,500	15	234,504
60 to 65	14	28,560	-	-	-	-	4	59,588
65 to 70	4	8,160	-	-	1	16,000	-	-
70 & Up	-	-	-	-	-	-	-	-
Total	413	\$1,944,765	107	\$1,080,768	432	\$4,692,716	374	\$ 4,923,022

Age	YEARS OF SERVICE							
	10 to 15		15 to 20		20 to 25		25 to 30	
	No.	Earnings	No.	Earnings	No.	Earnings	No.	Earnings
Under 25	-	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 30	1	13,700	-	-	-	-	-	-
30 to 35	17	257,600	-	-	-	-	-	-
35 to 40	54	981,083	8	127,700	-	-	-	-
40 to 45	23	360,502	25	415,404	8	140,190	-	-
45 to 50	29	467,490	22	390,550	22	374,992	4	62,700
50 to 55	29	488,128	17	301,420	15	256,850	12	218,818
55 to 60	22	335,912	16	292,162	21	365,086	17	285,602
60 to 65	10	173,063	13	214,990	19	311,834	22	399,008
65 to 70	1	14,900	4	61,200	5	81,300	8	142,380
70 & Up	-	-	-	-	-	-	-	-
Total	186	\$3,092,378	105	\$1,803,426	90	\$1,530,252	63	\$ 1,108,508

Age	YEARS OF SERVICE							
	30 to 35		35 to 40		40 & Up		All	
	No.	Earnings	No.	Earnings	No.	Earnings	No.	Earnings
Under 25	-	\$ -	-	\$ -	-	\$ -	108	\$ 519,315
25 to 30	-	-	-	-	-	-	560	4,864,973
30 to 35	-	-	-	-	-	-	262	2,948,295
35 to 40	-	-	-	-	-	-	188	2,593,309
40 to 45	-	-	-	-	-	-	157	2,122,169
45 to 50	-	-	-	-	-	-	162	2,170,194
50 to 55	3	52,020	-	-	-	-	124	1,877,491
55 to 60	16	301,397	1	14,750	-	-	124	1,937,273
60 to 65	16	262,000	4	73,197	-	-	102	1,522,240
65 to 70	7	119,340	4	69,100	6	114,039	40	626,419
70 & Up	-	-	-	-	-	-	-	-
Total	42	\$ 734,757	9	\$ 157,047	6	\$ 114,039	1827	\$21,181,678

SUMMARY OF PLAN

LEGISLATIVE REFERENCE LIBRARY
STATE OF MINNESOTA

Teachers' Retirement Fund Association
St. Paul, Minnesota

SUMMARY OF PLAN
(As Amended Effective June 30, 1974)

1. Name

Teachers' Retirement Fund Association St. Paul, Minnesota.

2. Type of Plan

Self-insured, managed by a Board of Trustees consisting of the Mayor, the President of the Council of the City of St. Paul, Chairman of the Board of Independent School District Number 625, and nine others elected by and from members of the Teachers' Association.

3. Employers Included

Board of Education - City of St. Paul.

4. Employees Included

All employees regularly appointed to the St. Paul Public Schools in a position covered by a certificate issued by the Minnesota State Department of Education.

5. Service Considered for Benefits

All periods of service for which salary deductions were made or for which payments in lieu of salary deductions were deposited including military, governmental, outside, and previous St. Paul service, and service during sabbatical leave. After June 30, 1974 St. Paul service for part-time teachers is granted on a proportional basis of actual duty days to the agreed number of annual duty days.

6. Earnings Considered

Annual contract salary. Average salary based on the five years during the last 10 years of St. Paul service which produces the highest average. For any member employed on a part-time basis during any of the 10 years, the average is computed on the basis of the amount earned in the time required to complete one full year of service.

7. Employer Contributions

- (a) 13 $\frac{1}{2}$ % for calendar year 1975 and thereafter, plus
- (b) an amount required to provide for the increase in pension granted to retired members.

8. Employee Contributions

8% of annual contract salary including contract salary otherwise payable to a member on sabbatical leave.

If an employee elects to purchase eligible outside service, he may do so pursuant to Article IV, Section 2, Paragraph 2 (d) of the Articles of Incorporation and By-Laws as amended effective June 30, 1974.

9. Normal Retirement Benefit

On or after attainment of age 60 and completion of 25 years of service.

Pension equal to 1.8% of average salary multiplied by the number of years of accredited service; such accredited service limited to a maximum of 40 years.

10. Limited Service Benefit

Automatic retirement at age 68.

Employees compelled to retire may receive an annuity after completion of 10 years of service. Annuity determined as for Normal Retirement considering service and earnings to actual retirement.

11. Early Retirement Benefit

After attainment of age 55 and completion of 25 years of service. Annuity determined as for Normal Retirement considering service and earnings to actual retirement and reduced by 1/2 of 1% for each month or major fraction thereof between actual retirement and attainment of age 60.

12. Disability Benefit

In the event of total and permanent disability after completion of five years of accredited St. Paul service.

Until age 65 the pension is equal to 75% of annual contract salary for last full year of service minus any Social Security and/or Workmen's Compensation benefits being received.

At age 65 the benefit is recomputed as per Normal Retirement considering average salary and accredited service the disabled member would have had if he had continued to teach in his latest position during his period of disability.

13. Deferred Vested Benefit

In the event of termination after completion of ten years of service. Annuity determined as for Normal Retirement payable at age 65.

14. Death Benefit

Active

- (a) In the event of death prior to retirement and after completion of three years of service, an annuity is payable:
 - (i) for each dependent child, subject to a maximum of two at one time, equal to 25% of the maximum salary payable to a teacher holding a B.A. degree for the year in which the member died, and
 - (ii) to the surviving spouse, maintaining a home and having legal custody of the dependent child or children equal to 15% of the maximum salary in (i) above.

If the surviving spouse is also eligible for the benefits in (b) next following, such spouse may elect either benefits under (b) or the 15% benefit in (ii) above. All benefits attributable to one deceased member are limited to 90% of such member's final pay.

- (b) In the event of death after completion of 10 years of accredited service, the survivor, as defined in the plan, becomes entitled to a benefit based on the annuity earned to the date of the member's death and payable for life or until remarriage, equal to a joint-and-last survivorship annuity under which 100% of the reduced benefit is payable to the survivor.

Retired

In the event of death after retirement, the survivor receives a life annuity equal to the amount earned by the member to the date of his retirement after reduction to a 100% joint-and-last survivorship form of annuity.

15. Cash Refund of Dues

- (a) Upon termination or death of an active member prior to eligibility for any other pension, the full amount of his dues, without interest, paid since January 1, 1940, will be returned to him or to his beneficiary.
- (b) Upon the death of an active member eligible for a dependent children's benefit, but no other benefit under the Plan, the amount of the dues paid since January 1, 1940 which is in excess of the amount payable to the dependent children, without interest, shall be returned to his beneficiary.
- (c) Upon the death of a retired member, who was not survived by a survivor entitled to any other pension under the plan, the amount of dues paid since January 1, 1940, without interest, in excess of that amount already paid in pension, will be returned to his beneficiary.

In all cases above if the member has completed the probationary employment period under the applicable teacher tenure law, all amounts payable are credited with interest in a manner to be determined by the Board of Trustees.

16. Saving Provision

Any member who retires after December 31, 1954 on a Normal, Limited, Early, or Disability Pension, shall receive a pension not less than the maximum amount payable to any member who retired before January 1, 1955 for an equal period of service, including all increases of the pension of such previously retired member becoming effective after December 31, 1954.

Teachers' Retirement Fund Association
St. Paul, Minnesota

STATEMENT OF ACTUARIAL ASSUMPTIONS

Based on the experience analysis through December 31, 1969, the following assumptions have been used in determining the actuarial liabilities of the Fund:

Interest:	5% per annum, compounded annually.
Mortality:	Group Annuity Table for 1951 projected through 1965. See following tables.
Retirement Age:	Age 65 for Normal Service Pensioners; Age 68 for Limited Service Pensioners.
Disability:	See following tables.
Separation:	See following tables.
Salary Scale:	3½% per annum, compounded annually. See following table.

A detailed statement of the mortality rates, disability rates, turnover rates and salary progression is set forth on the following pages.

Teachers' Retirement Fund Association
St. Paul, Minnesota

MORTALITY RATES

(Per 1,000 Employees)

Male Employees

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	.517	45	3.002
21	.537	46	3.409
22	.558	47	3.856
23	.581	48	4.344
24	.607	49	4.869
25	.636	50	5.429
26	.667	51	6.027
27	.703	52	6.656
28	.742	53	7.321
29	.784	54	8.019
30	.831	55	8.751
31	.884	56	9.514
32	.941	57	10.312
33	1.005	58	11.154
34	1.074	59	12.057
35	1.152	60	13.043
36	1.237	61	14.143
37	1.331	62	15.390
38	1.435	63	16.828
39	1.550	64	18.504
40	1.677	65	20.475
41	1.838		
42	2.054		
43	2.322		
44	2.639		

Teachers' Retirement Fund Association
St. Paul, Minnesota

MORTALITY RATES

(Per 1,000 Employees)

Female Employees

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	.311	45	1.672
21	.330	46	1.819
22	.349	47	1.980
23	.369	48	2.158
24	.392	49	2.355
25	.415	50	2.574
26	.439	51	2.783
27	.466	52	3.016
28	.496	53	3.277
29	.527	54	3.570
30	.561	55	3.898
31	.597	56	4.278
32	.637	57	4.727
33	.681	58	5.253
34	.728	59	5.867
35	.780	60	6.572
36	.836	61	7.369
37	.898	62	8.258
38	.966	63	9.232
39	1.040	64	10.284
40	1.122	65	11.402
41	1.213		
42	1.311		
43	1.420		
44	1.540		

Teachers' Retirement Fund Association
St. Paul, Minnesota

DISABILITY RATES

(Per 1,000 Employees)

All Employees

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	.70	45	1.62
21	.71	46	1.76
22	.72	47	1.91
23	.73	48	2.07
24	.74	49	2.23
25	.75	50	2.40
26	.76	51	2.60
27	.78	52	2.86
28	.80	53	3.18
29	.82	54	3.56
30	.84	55	4.00
31	.86	56	4.59
32	.88	57	5.34
33	.90	58	6.10
34	.93	59	7.20
35	.96	60	8.43
36	.99	61	9.75
37	1.03	62	11.30
38	1.07	63	13.05
39	1.11	64	14.90
40	1.15		
41	1.20		
42	1.27		
43	1.36		
44	1.48		

Teachers' Retirement Fund Association
St. Paul, Minnesota

SEPARATION RATES

(Per 1,000 Employees)

Male Employees

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	191	40	25
21	177	41	23
22	163	42	21
23	149	43	19
24	135	44	17
25	122	45	16
26	112	46	16
27	102	47	15
28	92	48	14
29	83	49	13
30	74	50	12
31	67	51	12
32	61	52	11
33	55	53	11
34	49	54	10
35	43	55	9
36	39	56	7
37	35	57	5
38	31	58	3
39	28	59	1

Teachers' Retirement Fund Association
St. Paul, Minnesota

SEPARATION RATES

(Per 1,000 Employees)

Female Employees

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	275	40	80
21	271	41	72
22	267	42	64
23	263	43	56
24	259	44	49
25	255	45	42
26	247	46	37
27	239	47	32
28	231	48	27
29	222	49	23
30	213	50	19
31	199	51	16
32	185	52	14
33	171	53	12
34	157	54	10
35	142	55	8
36	129	56	6
37	116	57	4
38	104	58	2
39	92	59	1

LEGISLATIVE REFERENCE LIBRARY
STATE OF MINNESOTA

Teachers' Retirement Fund Association
St. Paul, Minnesota

EARNINGS PROGRESSION

All Employees

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	.2127	45	.5026
21	.2201	46	.5202
22	.2278	47	.5384
23	.2358	48	.5572
24	.2440	49	.5767
25	.2526	50	.5969
26	.2614	51	.6178
27	.2706	52	.6394
28	.2800	53	.6618
29	.2898	54	.6849
30	.3000	55	.7089
31	.3105	56	.7337
32	.3213	57	.7594
33	.3326	58	.7860
34	.3442	59	.8135
35	.3563	60	.8420
36	.3687	61	.8714
37	.3817	62	.9019
38	.3950	63	.9335
39	.4088	64	.9662
40	.4231	65	1.0000
41	.4380		
42	.4533		
43	.4692		
44	.4856		