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SCHOOL EMPLOYEES RETIREMENT SYSTEM
OF OHIO

ACTUARIAL VALUATION
JUNE 30, 1970

HUGGINS
& COMPANY, INC.

CONSULTING ACTUARIES • EMPLOYEE BENEFIT PLAN CONSULTANTS

PHILADELPHIA

PART I - ACTUARIAL BALANCE SHEET

Using the various monetary tables developed in connection with the 1965 Evaluation, a complete valuation of the system was made as of June 30, 1970 in which the present and prospective assets and liabilities were calculated, based on the contributions and benefits in effect on that date. The results are shown in the actuarial balance sheet on the following page.

It will be noted that the assets in the balance sheet consist of not only the present assets but also future assets represented by prospective contributions. The various fund balances included in the total present assets of \$296,919,585 obtained from the financial reports of the Board are shown in the balance sheet and the physical distribution of the present assets according to cash, investments, accrual items and furniture and equipment is shown in the footnote. The present value of the future employee contributions of the present members and the present value of the future employer contributions is shown in a combined total of \$544,446,397. In Part II we discuss the proper allocation of this total between the normal and deficiency contributions.

On the liability side of the balance sheet the main division of the total liability of \$841,365,982 is between the liability for the benefits presently payable on account of present retirants and beneficiaries amounting to \$192,618,654 and the liabilities for present active and inactive members amounting to \$648,578,722. In addition, there is a minor reserve of \$168,606. An analysis of the various liability items and a comparison of liabilities with the corresponding fund balances follow the balance sheet, beginning on page 3.

ACTUARIAL BALANCE SHEET SHOWING PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES
OF THE SCHOOL EMPLOYEES RETIREMENT SYSTEM - JUNE 30, 1970

A S S E T S

L I A B I L I T I E S

Present assets:

Employees' Savings Fund	\$100,892,443
Interest Reserve Fund	3,728,066
Annuity and Pension Reserve Fund	133,834,618
Survivors' Benefit Fund	21,284,725
Employers' Trust Fund	37,006,740
Cleveland Custodians' Fund	4,387
General Fixed Assets	168,606
Expense Fund	0
Miscellaneous	0

Total present assets

Survivors' Benefit Fund

Total present assets

Future assets:

Present value of prospective employee and employer contributions

Present value of benefits payable on account of active and inactive members -

Superannuation pensions	\$472,974,574
Disability pensions	20,443,957
Survivor benefits	32,180,764
Refunds	94,596,566
Medicare equivalent	28,378,474
Cleveland Custodians' Fund ...	4,387
Additional annuities	0

Total active and inactive members

Reserve for expenses

Reserve for contingencies; miscellaneous

TOTAL ASSETS

TOTAL LIABILITIES

*Distributed as follows: Cash

Investments (at Book Value) ...

Accounts Receivable (including \$13,293,630 due from employers)

Accrued interest

Furniture and equipment

Liability related to present retirants and beneficiaries \$192,618,654

A breakdown of the liability of \$192,618,654 related to present retirants and beneficiaries according to the type of benefit payment is shown in the following table.

<u>CATEGORY</u>	<u>LIABILITY - JUNE 30, 1970</u>		
	<u>Total Allowance</u>	<u>Medicare Equivalent</u>	<u>Total</u>
Superannuation retirants	\$140,428,907	\$57,056	\$140,485,963
Beneficiaries receiving optional allowances	7,192,350	3,462	7,195,812
Disability retirants	<u>12,033,320</u>	<u>960</u>	<u>12,034,280</u>
Sub-total	\$159,654,577	\$61,478	\$159,716,055
Survivors' Benefit Fund beneficiaries	<u>32,901,639</u>	<u>960</u>	<u>32,902,599</u>
Total Liability	<u>\$192,556,216</u>	<u>\$62,438</u>	<u>\$192,618,654</u>

It is interesting to compare the above liabilities with the corresponding fund balances shown in the actuarial balance sheet. Thus, the liabilities charged against the Annuity and Pension Reserve Fund result from the regular allowances to superannuation and disability retirants and the optional allowances payable to surviving beneficiaries of deceased retirants. The total of these liabilities is \$159,654,577. In addition, there is a liability to provide the Medicare Equivalent Benefit of \$61,478. This is a total liability of \$159,716,055 charged to the Annuity and Pension Reserve Fund as compared with the fund balance of \$133,834,618, leading to a deficit of \$25,881,437. This deficit compares with a surplus of \$4,818,397 a year earlier. The deficit is due mainly to the annual cost-of-living increases included in the 1970 legislation.

It will also be noted that the Survivors' Benefit Fund had a fund balance of \$21,284,725 as compared with the liability of \$32,902,599, indicating a deficit of \$11,617,874 in that Fund compared with a deficit of \$707,350 a year earlier. The increase in this deficit also was a result of the 1970 legislation.

The total deficiency in these two Funds is \$37,499,311.

The corresponding number of retirants and beneficiaries and their annual allowances as of June 30, 1970 are shown in the following table.

<u>CATEGORY</u>	<u>NUMBER</u>	<u>ANNUAL ALLOWANCE</u>
Superannuation retirants	10,760	\$13,147,046
Beneficiaries receiving optional allowances	764	734,773
Disability retirants	<u>777</u>	<u>997,428</u>
Sub-total	12,301	\$14,879,247
Survivors' Benefit Fund beneficiaries	<u>1,522</u>	<u>2,304,224</u>
Total Allowances on August 31, 1970	<u>13,823</u>	<u>\$17,183,471</u>

The age distributions of the retirants and beneficiaries in the various categories are shown in schedules at the end of this report as follows:

	<u>SCHEDULE</u>
Superannuation retirants - men	A
Superannuation retirants - women	B
Beneficiaries receiving optional allowances	C
Disability retirants - men and women	D
Survivor beneficiaries:	
Receiving allowances	E
Entitled to deferred allowances	F

Liability related to present active and inactive members \$648,578,722

The \$648,578,722 of liability related to the active and inactive members of the system is based on the data summarized briefly in the table below.

	<u>M e n</u>	<u>W o m e n</u>	<u>T o t a l</u>
Active members:			
Number	28,031	53,797	81,828
Salaries	-\$130,254,939	\$132,812,578	\$263,067,517
Present value of 1% of future salaries-	\$ 11,202,014	\$ 11,784,246	\$ 22,986,260
Number of inactive members	- 15,937	21,901	37,838

The age distribution of the active members is shown at the end of this report in Schedule G and the age distribution of the inactive members is shown in Schedule H.

Reserve for expenses \$ 0

There was no balance in the Expense Fund, after payment of the operating expenses.

Reserve for contingencies; miscellaneous \$ 168,606

This is the Investment in General Fixed Assets.

Total liabilities \$ 841,365,982

The total liability represents the present value of all obligations of the System for all future benefits, both those related to service prior to June 30, 1970 and those that will be related to subsequent service.

The actuarial assumptions used in this valuation are summarized in Schedule I at the end of this report.

PART II - RATES OF CONTRIBUTIONS

In connection with the 1970 valuation, a New Entrant study was made in order to determine the normal contribution rate. The results of that study indicated a total normal rate of 17.79% of salary, with the breakdown shown in the table below:

Superannuation retirement benefits	11.24%
Disability retirement benefits	0.62
Survivor benefits	1.40
Refund of contributions	3.86
Medicare equivalent benefit	<u>0.67</u>
 Total normal contribution rate	 17.79%

In order to determine what portion of the future asset item of \$544,446,397 will be funded by the total normal contribution rate of 17.79% of salary, we have determined that the present value of the present members' future salaries is \$2,298,626,000. The present value of future normal contributions is, therefore, 17.79% of \$2,298,626,000, or \$408,925,565. This leaves a deficiency of \$135,520,832 to be funded by the remainder of the future contributions. The corresponding figure a year earlier was \$90,494,487, which means that the deficiency increased by \$45,026,345.

In order to analyze the deficiency funding, let us start with the present total contribution rate of 19.30% of payroll. If we deduct the normal contribution rate of 17.79%, we are left with a balance of 1.51% available for funding the deficiency. The question to be answered is over how long a period will this rate of 1.51% be required in order to fund the deficiency of \$135,520,832.

Before making this calculation, we should be aware of the consistently large increases in total payroll of the members in recent years, which have been as follows:

<u>Year Ending June 30</u>	<u>Total Payroll of Members</u>	<u>Percentage Increase</u>
1961	\$101,278,000	8.6%
1962	108,558,000	7.2
1963	116,378,000	7.2
1964	124,121,000	6.7
1965	133,134,000	7.3
1966	149,160,000	12.0
1967	176,422,000	18.3
1968	199,733,000	13.2
1969	220,278,000	10.3
1970	247,774,000	12.5

While we would not want to project future increases at these rates, which have averaged over 10% annually during the past ten years, we have made our calculations on three different bases, in this respect, as follows:

1. Assuming that payrolls will continue at the 1969-1970 level of approximately \$248,000,000.
2. Assuming that payrolls will increase in the future at the rate of 3% per annum, compounded annually.
3. Assuming that payrolls will increase in the future at the rate of 5% per annum, compounded annually.

Our calculations indicate that, for the present total contribution rate of 19.30% of payroll, of which 17.79% is on account of the normal cost and 1.51% is on account of the deficiency, the funding periods on the three different assumptions as to future payrolls are as follows:

	<u>Assumptions as to Future Payrolls</u>		
	<u>No Increase</u>	<u>3% Annual Increase</u>	<u>5% Annual Increase</u>
Period of deficiency funding	Never	46.5 years	32.3 years

These calculations indicate that the total employer rate of 11.4% of payroll, along with a member contribution rate of 7.9%, will fund the normal cost each year and complete the funding of the deficiency in periods varying from 32.0 years to never, depending on those three assumptions as to future payroll increases. These periods are considerably longer than the corresponding periods determined in the valuation as of June 30, 1969. This increase, however, was anticipated since it resulted from the large increases in deficiencies, previously referred to in this report, caused by the 1970 liberalizations.

PART III - SUMMARY

This valuation reveals a substantial expansion of the retirement system with increases in the assets and the liabilities due to the continued increases in membership and payroll and also due to the liberalizations of 1970. With the continuation of the member contribution rate at 7.9% of salary and the employer contribution rate at 11.4% of payroll, the indicated funding period for the deficiency shows a marked increase since our valuation as of June 30, 1969. Using the results for the deficiency funding period based on assumed 3% annual increases in total payroll of covered members in the future, we find that the funding period for the deficiency increased from 14.7 years to 46.5 years.

After the Legislature has completed its action on the retirement bills this year, we will reconsider the question of the contribution rates and make final recommendations for the rates to be effective in the future. In order to modernize the actuarial assumptions we hope to use the new tables based on the experience of 1965-1970 and a higher interest rate, probably 4³%. However, such a change will have to await the completion of our actuarial investigation.

SUPERANNUATION RETIRANTS - JUNE 30, 1970 - MEN

Age	Straight Life		Options		Total	
	Number	Annual Allowance	Number	Annual Allowance	Number	Annual Allowance
52	-	\$ -	1	\$ 4,141	1	\$ 4,141
53	-	-	-	-	-	-
54	1	4,111	-	-	1	4,111
55	-	-	1	1,079	1	1,079
56	3	6,123	3	6,769	6	12,892
57	5	6,020	1	1,822	6	7,842
58	5	10,992	5	8,194	10	19,186
59	5	6,561	9	34,390	14	40,951
60	22	36,364	21	30,502	43	66,866
61	48	78,706	31	59,631	79	138,337
62	69	96,090	38	76,634	107	172,724
63	78	89,717	56	74,144	134	163,861
64	111	148,924	57	67,798	168	216,722
65	101	117,584	68	83,125	169	200,709
66	146	183,235	80	112,591	226	295,826
67	215	274,068	92	165,620	307	439,688
68	171	212,621	100	145,716	271	358,337
69	145	155,644	97	134,086	242	289,730
70	169	227,998	100	173,155	269	401,153
71	189	254,730	109	171,676	298	426,406
72	200	248,510	88	140,460	288	388,970
73	184	268,888	101	175,144	285	444,032
74	167	206,497	78	122,274	245	328,771
75	159	232,751	91	117,752	250	350,503
76	171	229,365	71	105,196	242	334,561
77	190	239,228	41	54,122	231	293,350
78	157	206,469	51	61,579	208	268,048
79	129	161,401	45	62,854	174	224,255
80	116	151,031	36	41,435	152	192,466
81	109	134,616	34	46,425	143	181,041
82	90	116,214	32	36,882	122	153,096
83	73	74,427	27	31,005	100	105,432
84	73	89,089	31	36,247	104	125,336
85	49	55,595	14	11,571	63	67,166
86	52	62,121	14	11,796	66	73,917
87	39	50,035	10	12,098	49	62,133
88	32	32,224	7	10,053	39	42,277
89	20	23,160	4	3,059	24	26,219
90	16	19,977	-	-	16	19,977
91	12	12,209	4	3,056	16	15,265
92	6	4,148	-	-	6	4,148
93	7	10,325	-	-	7	10,325
94	2	1,141	1	1,427	3	2,568
95	2	1,147	2	949	4	2,096
96	4	2,122	1	427	5	2,549
97	-	-	1	402	1	402
98	1	1,267	-	-	1	1,267
Total	<u>3,543</u>	<u>\$4,543,445</u>	<u>1,653</u>	<u>\$2,437,286</u>	<u>5,196</u>	<u>\$6,980,731</u>

SCHEDULE A

SUPERANNUATION RETIRANTS - JUNE 30, 1970 - WOMEN

Age	Straight Life		Options		Total	
	Number	Annual Allowance	Number	Annual Allowance	Number	Annual Allowance
54	-	\$ -	1	\$ 4,550	1	\$ 4,550
55	1	5,234	-	-	1	5,234
56	2	2,315	-	-	2	2,315
57	6	8,497	-	-	6	8,497
58	7	24,487	1	3,810	8	28,297
59	6	17,603	1	1,250	7	18,853
60	43	60,414	19	23,540	62	83,954
61	163	164,672	13	12,254	176	176,926
62	168	171,122	10	11,114	178	182,236
63	242	263,735	25	27,021	267	290,756
64	285	309,508	20	30,390	305	339,898
65	264	297,768	9	12,128	273	309,896
66	286	318,695	11	24,879	297	343,574
67	299	312,931	20	24,503	319	337,434
68	317	344,478	21	32,352	338	376,830
69	254	269,659	16	19,102	270	288,761
70	292	318,527	14	21,791	306	340,318
71	249	283,154	12	16,417	261	299,571
72	307	352,828	7	12,194	314	365,022
73	245	281,664	12	12,454	257	294,118
74	241	281,312	8	13,939	249	295,251
75	242	253,141	11	10,838	253	263,979
76	223	218,619	6	10,227	229	228,846
77	201	212,983	2	2,197	203	215,180
78	158	174,418	8	7,883	166	182,301
79	161	177,195	6	6,010	167	183,205
80	113	128,620	3	1,894	116	130,514
81	104	112,720	5	4,285	109	117,005
82	101	103,275	4	6,135	105	109,410
83	76	91,345	1	597	77	91,942
84	66	74,755	1	1,936	67	76,691
85	55	58,383	1	477	56	58,860
86	35	39,031	1	542	36	39,573
87	22	18,485	1	694	23	19,179
88	23	23,406	-	-	23	23,406
89	16	17,942	-	-	16	17,942
90	6	5,800	-	-	6	5,800
91	5	2,894	-	-	5	2,894
92	4	3,658	-	-	4	3,658
93	2	1,234	-	-	2	1,234
94	2	1,462	-	-	2	1,462
95	2	943	-	-	2	943
Total	5,294	\$5,808,912	270	\$ 357,403	5,564	\$6,166,315

SCHEDULE B

BENEFICIARIES RECEIVING OPTIONAL ALLOWANCES - JUNE 30, 1970

Age	Optional Life Pensions				Optional Term Certain Pensions		
	Men		Women		Year of Expiry	Number	Annual Allowance
	Number	Annual Allowance	Number	Annual Allowance			
39	1	\$ 370	-	\$ -	70	7	\$ 14,138
40	-	-	1	457			
46	-	-	1	193	71	17	23,909
47	-	-	1	788			
48	-	-	3	3,102	72	20	20,759
49	-	-	-	-			
50	-	-	-	-	73	18	24,617
51	-	-	2	1,004			
52	-	-	1	1,280	74	18	33,901
53	-	-	1	1,111			
54	-	-	4	2,149	75	6	7,445
55	-	-	3	3,305			
56	-	-	-	-	76	5	4,934
57	1	343	3	2,891			
58	-	-	7	5,411	77	4	4,888
59	1	260	13	16,145			
60	-	-	6	5,428	78	5	4,323
61	-	-	7	4,952			
62	1	823	10	11,616	79	6	12,587
63	-	-	12	12,072			
64	-	-	18	16,025	80	1	754
65	1	767	23	19,323			
66	-	-	20	19,002	81	1	869
67	1	1,077	28	27,572			
68	1	595	26	23,761	84	1	2,084
69	-	-	29	28,610			
70	1	496	28	31,538			
71	1	875	21	25,690			
72	-	-	29	31,419			
73	1	529	29	24,753			
74	1	1,831	29	36,526			
75	-	-	31	26,120			
76	-	-	22	14,742			
77	-	-	31	23,744			
78	2	2,056	29	22,286			
79	-	-	25	16,988			
80	2	1,552	19	13,554			
81	-	-	22	15,261			
82	-	-	19	13,418			
83	-	-	20	14,392			
84	-	-	15	11,031			
85	-	-	19	13,703			
86	-	-	4	1,757			
87	-	-	4	3,205			
88	-	-	6	3,925			
89	-	-	9	5,492			
90	-	-	5	9,218			
91	-	-	2	1,030			
92	-	-	1	310			
95	-	-	1	1,073			
96	-	-	1	619			
Total	<u>15</u>	<u>\$11,574</u>	<u>640</u>	<u>\$567,991</u>		<u>109</u>	<u>\$155,208</u>

DISABILITY RETIRANTS - JUNE 30, 1970

Age	M E N		W O M E N	
	Number	Annual Allowance	Number	Annual Allowance
29	1	\$ 1,777	-	\$ -
37	-	-	1	1,850
38	2	6,700	-	-
39	2	2,078	1	2,604
40	1	612	-	-
41	2	4,558	1	2,852
42	1	1,588	1	2,059
43	2	1,852	-	-
44	3	8,466	3	4,740
45	3	3,865	2	3,377
46	7	13,142	2	3,428
47	7	13,850	2	3,120
48	9	23,421	2	2,884
49	12	14,268	1	1,359
50	10	14,239	8	11,160
51	13	21,934	3	2,169
52	10	14,753	11	13,938
53	11	18,272	15	20,109
54	22	28,877	13	15,751
55	18	30,889	18	22,120
56	22	23,231	17	23,249
57	19	24,886	21	28,600
58	29	33,368	19	22,667
59	33	40,677	23	27,358
60	38	48,224	24	26,275
61	34	47,646	26	29,676
62	25	37,462	26	25,329
63	23	26,339	14	13,754
64	14	16,166	14	13,468
65	16	17,284	13	15,959
66	16	19,488	12	11,054
67	15	17,863	8	8,604
68	4	4,851	5	4,297
69	5	8,069	1	858
70	4	2,795	6	4,201
71	5	3,904	3	2,460
72	5	6,734	4	2,929
73	-	-	4	3,486
74	3	3,504	4	8,738
75	-	-	3	3,314
Total	446	\$607,632	331	\$389,796

SCHEDULE D

SURVIVORS' BENEFIT FUND - JUNE 30, 1970

BENEFICIARIES CURRENTLY RECEIVING ALLOWANCES - MEN

AGE	OPTION 1 ALLOWANCES		SPOUSE WITH ELIGIBLE CHILDREN		DEPENDENT PARENT OR SPOUSE WITH NO ELIGIBLE CHILD	
	No.	Annual Allowance	No.	Annual Allowance	No.	Annual Allowance
15					1	\$ 1,139
16					4	5,484
17					3	4,261
37			1	\$ 2,256	1	2,256
38			-	-	-	-
39			1	1,872	2	3,060
40			4	8,208	4	7,308
41			1	1,152	1	1,152
42			-	-	-	-
43			1	2,592	1	2,592
44			1	1,872	1	1,872
45			1	1,152	-	-
46			-	-	-	-
47			2	3,384	2	3,384
48	1	\$ 765	1	1,152	-	-
49	-	-	-	-	-	-
50	-	-	1	1,152	1	1,152
51	-	-	1	2,592	1	2,592
52	-	-	-	-	-	-
53	-	-	2	3,341	2	3,341
54	-	-	-	-	-	-
55	-	-	3	5,058	2	3,186
56	1	342	-	-	-	-
57	-	-	-	-	-	-
58	-	-	1	1,152	3	3,612
59	-	-	-	-	-	-
60	1	655	-	-	1	1,091
61	-	-	2	3,024	2	3,024
62	-	-	-	-	1	1,152
63	2	1,535	-	-	-	-
64	3	3,014	1	1,937	2	3,089
65	1	738	-	-	1	972
66	-	-	-	-	3	3,276
67	-	-	-	-	2	2,260
68	1	1,880	-	-	6	7,020
69	1	1,207	-	-	4	4,716
70	1	524	-	-	2	2,376
71	-	-	-	-	4	4,745
72	-	-	1	1,152	8	9,000
73	-	-	-	-	2	2,392

SCHEDULE E(1)

SURVIVORS' BENEFIT FUND - JUNE 30, 1970

BENEFICIARIES CURRENTLY RECEIVING ALLOWANCES - MEN

AGE	OPTION 1 ALLOWANCES		SPOUSE WITH ELIGIBLE CHILDREN		DEPENDENT PARENT OR SPOUSE WITH NO ELIGIBLE CHILD	
	No.	Annual Allowance	No.	Annual Allowance	No.	Annual Allowance
74	4	\$ 4,345			1	\$ 1,188
75	-	-			4	4,580
76	-	-			6	6,994
77	-	-			2	2,376
78	2	650			1	1,210
79	-	-			3	3,009
80	1	1,668			1	1,136
81	-	-			-	-
82	-	-			-	-
83	-	-			-	-
84	-	-			1	1,008
85	-	-			-	-
86	-	-			-	-
87	1	1,714			-	-
109	-	-			1	1,909
110	-	-			1	1,188
113	-	-			1	1,152
Total	<u>20</u>	<u>\$19,037</u>	<u>25</u>	<u>\$43,048</u>	<u>89</u>	<u>\$117,254</u>

SCHEDULE E(1)
(concluded)

SURVIVORS' BENEFIT FUND - JUNE 30, 1970

BENEFICIARIES CURRENTLY RECEIVING ALLOWANCES - WOMEN

AGE	OPTION 1 ALLOWANCES		SPOUSE WITH ELIGIBLE CHILDREN		DEPENDENT PARENT OR SPOUSE WITH NO ELIGIBLE CHILD	
	No.	Annual Allowance	No.	Annual Allowance	No.	Annual Allowance
15					.2	\$ 2,304
16					1	1,798
17					2	2,160
18					2	3,097
20					-	-
21					-	-
22					1	1,188
23					1	2,832
24					-	-
25					-	-
26					-	-
27			1	\$ 1,992	1	1,992
28			-	-	1	2,378
29			-	-	-	-
30			-	-	2	4,104
31			-	-	1	2,886
32			-	-	-	-
33			-	-	2	3,984
34			1	1,963	1	1,963
35			1	2,889	1	2,889
36			1	2,439	1	2,439
37			3	7,536	4	8,448
38			3	7,600	3	7,600
39			3	7,208	3	7,208
40			7	16,975	7	16,375
41			9	22,192	6	14,631
42			5	12,310	3	7,954
43			5	12,126	5	11,491
44			12	28,788	11	24,923
45			4	9,515	4	9,507
46			11	25,932	10	23,610
47	1	\$ 482	8	16,998	8	15,584
48	4	2,246	14	32,772	12	27,997
49	-	-	9	21,473	9	21,474
50	-	-	14	31,815	11	22,175
51	1	826	8	19,703	9	18,645
52	2	1,400	17	35,085	16	32,199
53	3	5,487	9	21,060	8	17,730
54	2	1,584	9	20,351	13	23,818
55	4	4,650	8	17,612	11	16,940
56	7	8,156	8	16,634	14	23,947
57	7	9,986	11	25,456	16	30,945
58	10	11,878	5	11,196	9	15,384
59	5	8,392	1	2,290	11	15,106

SCHEDULE E(2)

SURVIVORS' BENEFIT FUND - JUNE 30, 1970

BENEFICIARIES CURRENTLY RECEIVING ALLOWANCES - WOMEN

AGE	OPTION 1 ALLOWANCES		SPOUSE WITH ELIGIBLE CHILDREN		DEPENDENT PARENT OR SPOUSE WITH NO ELIGIBLE CHILD	
	No.	Annual Allowance	No.	Annual Allowance	No.	Annual Allowance
60	13	\$ 11,623	1	\$ 2,285	7	\$ 8,859
61	13	23,876	-	-	6	8,037
62	15	19,358	1	2,012	19	22,956
63	13	20,201	-	-	38	45,396
64	15	18,847	1	2,255	31	37,889
65	11	12,885	2	3,018	32	38,829
66	15	27,178	1	2,412	33	40,401
67	15	29,800	-	-	33	39,010
68	16	27,606	-	-	26	30,437
69	10	10,786	-	-	25	30,573
70	8	8,992	-	-	32	39,284
71	12	24,964	1	2,412	18	21,805
72	14	17,671	-	-	26	30,280
73	13	19,118	-	-	25	30,214
74	9	11,615	-	-	21	24,066
75	15	24,328	-	-	13	15,913
76	6	6,484	-	-	19	22,952
77	7	9,085	-	-	11	12,365
78	8	11,929	-	-	14	15,127
79	3	5,828	-	-	20	22,189
80	2	2,276	1	2,085	10	12,032
81	4	2,762	-	-	10	11,267
82	1	1,711	-	-	6	6,264
83	1	1,059	-	-	5	4,917
84	2	1,332	-	-	6	6,581
85	-	-	-	-	1	763
86	-	-	-	-	4	5,060
87	-	-	-	-	2	1,882
88	1	970	-	-	-	-
89	-	-	-	-	-	-
90	-	-	-	-	-	-
91	-	-	-	-	-	-
92	-	-	-	-	1	1,048
93	-	-	-	-	-	-
94	-	-	-	-	-	-
95	-	-	-	-	-	-
96	1	270	-	-	-	-
Total	<u>289</u>	<u>\$407,641</u>	<u>195</u>	<u>\$448,389</u>	<u>716</u>	<u>\$1,036,101</u>

SCHEDULE E(2)
(concluded)

SURVIVORS' BENEFIT FUND - JUNE 30, 1970

BENEFICIARIES CURRENTLY RECEIVING ALLOWANCES - CHILDREN WITH NO ELIGIBLE PARENT

AGE OF YOUNGEST CHILD	N U M B E R O F C H I L D R E N A G E																ANNUAL TOTAL ALLOWANCE											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		17	18	19	20	21	22	33	39	46		
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$ 1,152	
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	4	3,857	
8	-	-	-	-	-	-	4	1	-	-	1	1	-	-	-	1	-	-	-	-	-	-	-	-	-	8	7,007	
9	-	-	-	-	-	-	4	4	-	-	1	1	2	-	-	-	-	1	-	-	-	-	-	-	-	8	7,001	
10	-	-	-	-	-	-	-	-	4	3	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	9	8,451	
11	-	-	-	-	-	-	-	-	2	1	-	-	-	2	-	-	1	-	-	-	-	-	-	-	-	6	4,021	
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	1	1	-	-	-	-	-	-	-	10	9,724	
14	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	1	-	-	-	-	-	-	-	3	3,106	
15	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	5	5,783	
16	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	1	-	-	-	-	-	-	-	-	-	10	11,811	
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	6	7,020	
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	2	2,315	
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	1,188	
39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1,152	
46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1,188	
Total	1	-	-	-	-	-	2	4	5	4	5	3	8	6	7	11	9	7	-	-	-	1	1	1	1	1	76	\$75,986

SURVIVORS' BENEFIT FUND - JUNE 30, 1970

BENEFICIARIES NOW ENTITLED TO DEFERRED ALLOWANCE ONLY

AGE	DEFERRED TO AGE 65		DEFERRED TO AGE 62		DEFERRED TO AGE 50	
	No.	Annual Allowance	No.	Annual Allowance	No.	Annual Allowance
41			1	\$ 1,152		
42			-	-		
43			-	-		
44			-	-		
45			-	-		
46			1	1,152	1	\$ 1,200
47			-	-	-	-
48			-	-	1	1,272
49			-	-	-	-
50	1	\$ 1,152	3	3,456	2	2,544
51	-	-	4	4,608	-	-
52	1	1,152	4	4,608	-	-
53	2	2,229	5	5,542	-	-
54	1	972	5	5,580	-	-
55	-	-	6	6,912	-	-
56	-	-	12	13,644	-	-
57	-	-	7	8,064	-	-
58	2	2,304	10	11,160	-	-
59	1	1,152	13	14,830	-	-
60	1	1,007	15	17,180	-	-
61	-	-	15	16,991	-	-
62	1	1,152	16	17,773	-	-
63	1	1,068	-	-	-	-
64	4	4,608	-	-	-	-
65	2	2,304	-	-	-	-
Total	<u>17</u>	<u>\$19,100</u>	<u>117</u>	<u>\$132,652</u>	<u>4</u>	<u>\$ 5,016</u>

SCHEDULE F

CONTRIBUTING ACTIVE MEMBERS - JUNE 30, 1970

AGE	M E N		W O M E N	
	Number	Salaries	Number	Salaries
15	-	\$ -	-	\$ -
16	19	19,927	4	5,534
17	25	26,375	19	15,101
18	100	108,807	137	154,868
19	294	617,436	509	950,761
20	356	813,968	747	1,554,864
21	361	855,095	890	1,904,257
22	434	1,045,717	707	1,455,731
23	437	1,145,931	756	1,865,925
24	402	1,049,703	469	1,206,118
25	341	1,042,770	364	936,326
26	394	1,167,408	390	952,044
27	431	1,297,041	417	995,407
28	433	1,483,677	550	1,203,810
29	426	1,482,418	607	1,199,934
30	392	1,331,510	721	1,392,355
31	449	1,601,371	810	1,529,476
32	455	1,693,871	969	1,868,289
33	484	1,754,626	1,095	2,137,309
34	477	1,898,546	1,173	2,197,734
35	519	2,009,711	1,324	2,544,177
36	522	1,981,169	1,362	2,642,592
37	512	2,118,992	1,386	2,851,016
38	496	2,163,816	1,516	3,171,995
39	541	2,384,824	1,497	3,154,579
40	610	2,544,838	1,590	3,515,637
41	581	2,680,477	1,666	3,719,816
42	557	2,439,801	1,696	3,901,807
43	640	3,065,582	1,773	4,324,314
44	621	2,851,382	1,765	4,327,873
45	677	3,270,095	1,729	4,305,857
46	685	3,545,659	1,894	4,879,653
47	700	3,791,353	1,744	4,494,552
48	718	3,806,484	1,880	5,093,142
49	685	3,664,127	1,887	5,187,047
50	724	3,961,385	1,747	4,820,784
51	690	3,629,684	1,553	4,361,777
52	706	3,820,718	1,650	4,579,680
53	714	3,822,026	1,465	4,269,646
54	738	4,311,366	1,424	4,044,255

SCHEDULE G

CONTRIBUTING ACTIVE MEMBERS - JUNE 30, 1970
(continued)

AGE	M E N		W O M E N	
	<u>Number</u>	<u>Salaries</u>	<u>Number</u>	<u>Salaries</u>
55	740	\$ 4,351,817	1,405	\$ 4,083,689
56	770	4,247,068	1,286	3,757,425
57	786	4,452,394	1,160	3,262,108
58	798	4,471,605	1,111	3,205,283
59	724	4,108,574	903	2,716,698
60	720	4,001,072	870	2,713,611
61	665	3,701,770	679	2,021,481
62	611	3,495,056	608	1,872,325
63	547	3,267,790	428	1,347,506
64	508	2,974,958	355	1,093,392
65	426	2,325,231	321	908,930
66	319	1,700,187	214	590,577
67	266	1,367,460	150	415,245
68	231	1,149,072	125	333,902
69	143	659,547	98	246,370
70	159	685,912	94	243,500
71	74	303,357	35	116,679
72	48	189,136	17	37,373
73	44	166,043	18	52,805
74	20	49,434	12	23,257
75	24	90,393	6	19,117
76	9	37,405	6	10,307
77	11	32,318	4	8,586
78	15	43,281	3	6,282
79	6	14,978	4	5,718
80	9	38,525	1	405
81	4	6,494	2	3,965
82	3	6,103	-	-
83	3	12,108	-	-
84	-	-	-	-
85	2	6,165	-	-
Totals	<u>28,031</u>	<u>\$130,254,939</u>	<u>53,797</u>	<u>\$132,812,578</u>

SCHEDULE G
(concluded)

INACTIVE MEMBERS - JUNE 30, 1970

<u>AGE</u>	<u>MEN</u>	<u>WOMEN</u>	<u>AGE</u>	<u>MEN</u>	<u>WOMEN</u>
08	-	1	54	301	496
14	1	-	55	310	487
16	2	1	56	297	495
17	6	2	57	283	468
18	10	5	58	301	419
19	33	32	59	273	371
20	88	141	60	263	349
21	250	326	61	220	258
22	377	659	62	199	247
23	384	898	63	154	160
24	343	704	64	150	178
25	318	465	65	145	151
26	320	454	66	95	110
27	367	396	67	82	87
28	382	372	68	94	67
29	362	328	69	60	45
30	340	355	70	89	75
31	369	337	71	35	39
32	359	354	72	21	32
33	347	419	73	21	26
34	382	414	74	21	10
35	356	420	75	27	22
36	351	464	76	15	15
37	366	433	77	13	11
38	382	520	78	10	12
39	388	514	79	15	9
40	423	565	80	9	3
41	420	505	81	9	7
42	435	586	82	9	3
43	455	582	83	3	4
44	430	605	84	4	-
45	458	594	85	1	3
46	414	628	86	3	1
47	406	595	87	1	-
48	354	589	88	2	2
49	354	652	89	2	-
50	343	642	92	1	-
51	322	555	93	2	-
52	366	584			
53	334	543			
			Totals	<u>15,937</u>	<u>21,901</u>

SCHEDULE H

ACTUARIAL ASSUMPTIONS - JUNE 30, 1970

SUPERANNUATION RETIRANTS, BENEFICIARIES,
AND SURVIVOR BENEFICIARIES

INTEREST: 4% per annum, compounded annually.

MORTALITY: 1955 American Annuity Table, with ages set up 2 years for Males, set back 4 years for Female Members and set back 5 years for Female Beneficiaries.

DISABILITY RETIRANTS

INTEREST: 4% per annum, compounded annually.

MORTALITY: Rates developed in 1965 Evaluation, based on 1961-1965 experience.

ACTIVE AND INACTIVE MEMBERS

INTEREST: 4% per annum, compounded annually.

WITHDRAWAL, MORTALITY, DISABILITY and SUPERANNUATION RATES and SALARY SCALES: Rates and scales developed in 1965 Evaluation, based on 1961-1965 experience. Values at specific men ages are shown in the table below.

	AGE	RATES OF SEPARATION DUE TO:				SALARY SCALE
		Withdrawal	Death	Disability	Superannuation	
<u>MEN</u>	20	.1855	.0005	-	-	\$2,726
	30	.0913	.0006	.0002	-	3,876
	40	.0556	.0019	.0009	-	5,141
	50	.0382	.0062	.0029	-	6,374
	55	.0314	.0094	.0047	.0048	6,964
	60	.0264	.0127	-	.0459	7,530
	65	.0245	.0159	-	.1735	8,005
	70	-	.0193	-	.3177	8,280
<u>WOMEN</u>	20	.2389	-	-	-	2,726
	30	.1146	.0001	.0001	-	3,876
	40	.0664	.0002	.0002	-	5,141
	50	.0409	.0015	.0015	-	6,374
	55	.0337	.0036	.0036	.0025	6,964
	60	.0309	-	-	.0759	7,530
	65	.0301	-	-	.1651	8,005
	70	-	-	-	.3210	8,280

SCHEDULE I