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REPORT ON  
ACTUARIAL VALUATION  
OF THE  
CITY EMPLOYEES' RETIREMENT SYSTEM  
OF THE  
CITY OF LOS ANGELES  
AS OF  
JUNE 30, 1968

February 5, 1969

OFFICES IN  
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PASADENA

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February 5, 1969

Board of Administration  
City Employees' Retirement System  
1303 City Hall  
Los Angeles, California 90012

Gentlemen:

We are pleased to transmit herewith our Report on the Actuarial Valuation of your Retirement System made as of June 30, 1968.

We will be most happy to meet with you at your convenience to discuss the items contained in this Report.

Very truly yours,

COATES, HERFURTH & ENGLAND  
Consulting Actuaries

By

  
E. L. Chapin

ELC:th

REPORT ON  
ACTUARIAL VALUATION  
OF THE  
CITY EMPLOYEES' RETIREMENT SYSTEM  
OF THE  
CITY OF LOS ANGELES

In accordance with our agreement we have completed the actuarial valuation of the City Employees' Retirement System as of June 30, 1968.

In order to complete this valuation, the office of the Retirement System furnished us with punched cards which contain all the pertinent information for each member of the System as of June 30, 1968, including such information as current compensation, years of service credited, rates of contribution, and accumulated contributions. In addition to the above information on active members, we were also furnished punched cards for each person currently receiving an allowance from the Retirement System, together with such data as was necessary to determine the value of the allowance already entered upon.

During the year ending June 30, 1968, a net increase of 660 active members of the System occurred. There were also net increases of 189 persons receiving service retirement allowances and one person receiving survivorship allowances.

A summary of the active and retired membership of the System as of June 30, 1968 is shown in the following table.

SUMMARY OF MEMBERSHIP OF SYSTEM  
AS OF JUNE 30, 1968

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ACTIVE MEMBERS\*

	<u>Number</u>	<u>Annual Salary</u>
Males	12,420	\$118,486,548
Females	<u>3,963</u>	<u>27,489,660</u>
Total	16,383	\$145,976,208

\*Does not include members on military leave or members who terminated with a vested interest.

BENEFICIARIES

	<u>Number</u>	<u>Annual Retirement Allowances</u>
Service Retirement**		
Males	2,060	\$6,574,601.04
Females	<u>874</u>	<u>1,948,856.04</u>
Total	2,934	\$8,523,457.08

\*\*Including survivors under options

Disability Retirements

Males	124	\$ 225,494.40
Females	<u>71</u>	<u>104,746.68</u>
Total	195	\$ 330,241.08

Survivorships

Male	3	\$ 7,490.88
Female	<u>162</u>	<u>387,421.80</u>
Total	165	\$ 394,912.68
<u>Grand Total</u>	3,294	\$9,248,610.84

## COMPENSATION EXPERIENCE

Since benefits under the System are based upon compensation of members, it is of interest to compare the average monthly compensation from year to year. These averages for the years indicated are as follows:

	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
Males	\$641	\$662	\$690	\$720	\$753	\$795
Females	<u>488</u>	<u>498</u>	<u>511</u>	<u>529</u>	<u>546</u>	<u>578</u>
Combined	\$603	\$623	\$648	\$674	\$703	\$743

## MORTALITY EXPERIENCE

Although the experience in mortality after retirement for only one year cannot be considered as significant, we nevertheless tested this experience against the mortality tables recommended in 1964 and obtained the following results:

	<u>Expected Deaths</u>	<u>Actual Deaths</u>	Ratio of Actual to <u>Expected</u>
Male	128	103	80%
Female	<u>30</u>	<u>26</u>	<u>87%</u>
Total	158	129	82%

## DISABILITY PENSIONS

	<u>Expected Deaths</u>	<u>Actual Deaths and Recoveries From Disability Retirement</u>	<u>Ratio Actual to Expected</u>
Male	7	11	157%
Female	<u>4</u>	<u>4</u>	<u>100%</u>
Total	11	15	136%

The above comparison does not include the actual or expected deaths of those who retired subsequent to June 30, 1967.

## ACCOUNTING BALANCE SHEET

We have been furnished with an Accounting Balance Sheet of the Retirement System as of June 30, 1968, which shows the distribution of the reserves now held by the System. This statement of assets was used in the completion of the actuarial valuation and no physical audit was required nor has been made by us.

## ACTUARIAL BALANCE SHEET

Upon the basis of the actuarial assumptions adopted and factors developed at the time of the actuarial investigation and valuation made as of June 30, 1964, we have completed a valuation of the actuarial assets and liabilities of the Retirement System and show the results on the Balance Sheet which follows the Accounting Balance Sheet.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

ACCOUNTING BALANCE SHEET  
AS OF  
JUNE 30, 1968

ASSETS

FUNDS:

Cash in City Treasury	\$ 359,558.56
Cash on Hand	<u>50.00</u>

TOTAL CASH \$ 359,608.56

RECEIVABLES:

Accrued Interest on Bonds	\$ 2,448,157.27
Dividends Declared and Payable	<u>1,020.00</u>

TOTAL RECEIVABLES 2,449,177.27

INVESTMENTS:

Bonds on Hand - Par Value	\$215,460,384.24
Less Bond Discount - Unamortized (Net)	<u>(1,518,525.30)</u>
Bonds on Hand at Book Value	213,941,858.94
Stocks on Hand at Cost	<u>6,309,853.77</u>

TOTAL INVESTMENTS 220,251,712.71

TOTAL ASSETS \$223,060,498.54

LIABILITIES

Accounts Payable \$ 55,495.47

RESERVES:

Accumulated Contributions of Members	\$ 84,657,021.17
Annuities and Interest Thereon Prior Service	23,124,710.53
Subsequent Service	7,972,714.98
Disability Allowances	89,190,190.29
Death Benefits	4,237,992.64
Cost of Living (Section 510.1)	10,609,998.12
Family Death Benefit Insurance	2,001,654.91
	<u>593,818.30</u>

TOTAL RESERVES \$222,388,100.94

SURPLUS:

Undistributed Interest	\$ 35,831.70
Reserve for Investment Fluctuation	466,311.42
Surplus	<u>114,759.01</u>

TOTAL SURPLUS \$ 616,902.13

TOTAL LIABILITIES \$223,060,498.54

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL BALANCE SHEET

ACTUARIAL VALUATION OF ASSETS AND LIABILITIES  
AS OF JUNE 30, 1968

ASSETS

1. Total Assets from Accounting Balance Sheet		\$223,060,498.54
2. Present Value of Future Contributions of Members		91,585,428.00
3. Present Value of Future Contributions by the City on Account of:		
(a) Subsequent Service Pensions and Continuance to Eligible Spouse Future Service Benefits	\$72,261,523.18	
(b) Disability Pensions	1,941,751.36	
(c) Death Benefits	2,776,021.25	
(d) Prior Service Pensions and Minimum Pensions	8,896,891.02	
(e) Continuance to Eligible Spouse Prior Service Benefits	8,766,437.00	
(f) Cost of Living Pensions, Service Prior to July 1, 1967	30,512,042.00	
(g) Cost of Living Pensions, Future Service	<u>10,615,821.09</u>	<u>135,770,486.90</u>
4. TOTAL ASSETS		<u><u>\$450,416,413.44</u></u>



LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL BALANCE SHEET

(Continued)

LIABILITIES

5.	Accounts Payable		\$	55,495.47
6.	Limited Pensions Payable			57,641.37
7.	Death Benefits Payable			3,000.00
8.	Service Retirement Allowances Now Being Paid:			
	(a) Annuities	\$ 20,232,794.00		
	(b) Subsequent Service Pensions	41,614,595.00		
	(c) Prior Service Pensions and Minimum Pensions	14,266,948.00		
	(d) Cost of Living Pensions	<u>5,761,609.00</u>		81,875,946.00
9.	Disability Allowances Now Being Paid:			
	(a) Annuities	\$ 694,614.00		
	(b) Disability Pensions and Minimum Pensions	2,345,317.00		
	(c) Cost of Living Pensions	<u>222,895.00</u>		3,262,826.00
10.	Survivorship Death Allowances Now Being Paid:			
	(a) Annuities	\$ 1,095,367.00		
	(b) Survivorship Pensions	3,004,736.00		
	(c) Cost of Living Pensions	<u>424,673.00</u>		4,524,776.00
11.	Service Retirement Allowances to be Granted in the Future For:			
	(a) Subsequent Service	\$233,286,658.00		
	(b) Prior Service and Minimum	<u>2,355,416.00</u>		235,642,074.00

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL BALANCE SHEET  
(Continued)

LIABILITIES (Continued)

12. Cost of Living Pensions to be Granted in the Future For:		
(a) Active Members	\$ 35,237,559.00	
(b) Retired Members	<u>10,789,356.00</u>	\$ 46,026,915.00
13. Disability Allowances to be Granted in the Future		7,968,566.00
14. Death Benefits to be Granted in the Future		27,737,198.94
15. Contributions to be Returned upon Withdrawal:		
(a) Past	\$ 20,306,275.00	
(b) Future	<u>20,800,344.00</u>	41,106,619.00
16. Investment Reserve, Undistributed Interest, and Surplus		616,902.13
17. Contributions of Inactive Members		944,635.23
18. Family Death Benefit Insurance Reserve		<u>593,818.30</u>
19. TOTAL LIABILITIES		<u>\$450,416,413.44</u>

## COMMENTS ON ACTUARIAL BALANCE SHEET

The Actuarial Balance Sheet has been prepared in the same form as was used for the valuation made as of June 30, 1967. Item 3 on the asset side of the balance sheet shows the present value of the future contributions to be made by the City on account of (a) Subsequent Service Pensions and Continuance to Eligible Spouse Future Service Benefits, (b) Disability Pensions, (c) Death Benefits, (d) Prior Service Pensions and Minimum Pensions, (e) Continuance to Eligible Spouse Prior Service Benefits and (f) and (g) Cost of Living Pensions corresponding to the various rates which are recommended in this report.

Items 8 through 15 show the actuarially computed present values of all future benefits to be paid by the System on behalf of all presently retired and active members.

Item 16 sets forth the surplus which is shown on the Accounting Balance Sheet.

## RECOMMENDATIONS

Based upon the valuation completed herewith, we recommend the following contributions which, in our opinion, are in accordance with the provisions of the Charter and are adequate to maintain the System on a sound actuarial basis:

1. That members continue to contribute at the rates presently being used.
2. That City contributions for the fiscal year 1969-1970 be made up as follows:

- (a) For subsequent service pensions, continuance to eligible spouse future service benefits, disability pensions, death benefits and cost of living future service pensions, 6.155% of the compensation of members covered by the System.

The 6.155% rate is made up as follows:

Subsequent Service Pensions and Continuance to Eligible Spouse Benefits	5.078%	4.508
Disability Pensions	.136%	.085
Death Benefits	.195%	.151
Cost of Living Future Service	<u>.746%</u>	<u>.661</u>
Total	6.155%	5.405

- (b) For prior service pensions and minimum pensions; \$523,848.00. Annual contributions of this amount will liquidate the unfunded liability of \$8,896,891.02 for such pensions by June 30, 1997.
- (c) For continuance to eligible spouse benefits applicable to service rendered to June 30, 1965; \$606,627.00. Annual contributions of this amount will liquidate the unfunded liability of \$8,766,437.00 for such benefits over the period ending June 30, 1990.
- (d) For Cost of Living Benefits, Service to June 30, 1967; \$1,796,547.00. Annual contributions of this amount will liquidate the unfunded liability of \$30,512,042.00 for such benefits over the period ending June 30, 1997.
- (e) For the Family Death Benefit Insurance Plan; <sup>1.7%</sup> \$2.02 per month for each participating member.

The total City contributions recommended above represent an increase of approximately 10% over the contributions which would have been produced by the results of our prior valuation made as of June 30, 1967. An analysis of the funding calculations reveals that approximately two-thirds of this increase is directly attributable to the 5% wage increase which became effective July 1, 1968.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

Number of Active Members and Total Monthly Salary  
By Sex and Age Nearest Birthday

June 30, 1968

<u>Age</u>	<u>Male</u>		<u>Female</u>		<u>Total</u>	
	<u>Number</u>	<u>Salary</u>	<u>Number</u>	<u>Salary</u>	<u>Number</u>	<u>Salary</u>
20 and under	75	\$ 36,394	270	\$118,091	345	\$154,485
21	44	22,238	181	83,133	225	105,371
22	56	30,569	162	78,019	218	108,588
23	126	78,010	163	82,023	289	160,033
24	158	104,447	183	94,621	341	199,068
25	197	133,286	156	82,552	353	215,838
26	226	157,142	122	65,981	348	223,123
27	225	158,400	132	77,792	357	236,192
28	247	171,534	109	62,211	356	233,745
29	247	176,035	98	55,583	345	231,618
30	293	210,757	85	48,535	378	259,292
31	284	203,350	81	45,942	365	249,292
32	236	175,922	69	40,728	305	216,650
33	277	207,029	61	35,182	338	242,211
34	285	216,630	69	40,253	354	256,883
35	314	242,753	48	29,720	362	272,473
36	302	226,370	54	34,058	356	260,428
37	320	252,155	72	43,751	392	295,906
38	303	233,551	71	42,926	374	276,477
39	328	265,867	73	46,099	401	311,966
40	316	253,705	79	49,207	395	302,912
41	357	297,442	63	38,196	420	335,638
42	348	282,980	70	41,724	418	324,704
43	425	358,684	58	35,234	483	393,918
44	377	316,991	86	50,968	463	367,959
45	414	347,788	84	53,165	498	400,953
46	412	350,777	69	42,134	481	392,911
47	418	351,562	75	45,461	493	397,023
48	387	326,812	72	45,151	459	371,963
49	389	317,623	77	47,826	466	365,449

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

Number of Active Members and Total Monthly Salary  
By Sex and Age Nearest Birthday

June 30, 1968

<u>Age</u>	<u>Male</u>		<u>Female</u>		<u>Total</u>	
	<u>Number</u>	<u>Salary</u>	<u>Number</u>	<u>Salary</u>	<u>Number</u>	<u>Salary</u>
50	376	\$ 311,536	71	\$ 45,256	447	\$ 356,792
51	347	294,654	82	54,377	429	349,031
52	361	302,419	63	42,608	424	345,027
53	314	275,733	85	51,444	399	327,177
54	326	265,457	66	43,645	392	309,102
55	315	253,313	61	39,936	376	293,249
56	266	212,171	54	34,914	320	247,085
57	202	169,611	74	46,831	276	216,442
58	239	196,786	61	40,392	300	237,178
59	205	168,203	56	35,613	261	203,816
60	201	165,867	51	34,087	252	199,954
61	175	148,401	41	27,670	216	176,071
62	138	120,050	48	31,834	186	151,884
63	120	96,626	34	22,184	154	118,810
64	116	94,895	27	18,095	143	112,990
65	93	77,131	27	17,021	120	94,152
66	70	62,301	20	15,967	90	78,268
67	49	46,254	13	8,275	62	54,529
68	53	44,976	18	11,373	71	56,349
69	39	33,237	13	8,526	52	41,763
70 and over	29	27,454	6	4,491	35	31,945
<b>Total</b>	<b>12,420</b>	<b>\$9,873,878</b>	<b>3,963</b>	<b>\$2,290,805</b>	<b>16,383</b>	<b>\$12,164,683</b>

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

NUMBER OF ACTIVE MEMBERS AS OF JUNE 30, 1968 HAVING PRIOR SERVICE CREDIT

BY SEX AND AGE NEAREST BIRTHDAY

Age	Male			Female			Total		
	Number	Prior Service Years	Monthly Salary	Number	Prior Service Years	Monthly Salary	Number	Prior Service Years	Monthly Salary
49	1	2.0	\$ 797				1	2.0	\$ 797
50	2	1.9	2,283	1	1.2	715	3	3.1	2,998
51	3	5.4	4,414				3	5.4	4,414
52	4	6.6	5,984	1	.5	516	5	7.1	6,500
53	1	.9	867				1	.9	867
54	5	4.7	6,809	2	2.1	1,604	7	6.8	8,413
55	4	1.7	3,605	2	2.6	2,173	6	4.3	5,778
56	5	6.9	6,940	1	2.3	797	6	9.2	7,737
57	7	41.3	9,498	3	7.6	2,262	10	48.9	11,760
58	13	21.7	15,891	6	35.9	4,680	19	57.6	20,571
59	5	20.5	5,756	4	34.0	2,746	9	54.5	8,502
60	17	77.0	16,977	6	43.2	4,264	23	120.2	21,241
61	11	89.4	14,703	7	33.2	4,965	18	122.6	19,668
62	14	79.4	18,481	11	86.9	7,703	25	166.3	26,184
63	7	40.9	7,235	4	19.5	2,949	11	60.4	10,184
64	8	59.6	9,992	3	35.1	2,214	11	94.7	12,206
65	15	130.9	15,842	3	22.9	2,461	18	153.8	18,303
66	15	105.7	16,541	7	76.7	6,240	22	182.4	22,781
67	10	85.5	13,079	1	.4	440	11	85.9	13,519
68	13	99.1	13,619	2	12.2	1,249	15	111.3	14,868
69	8	40.5	7,764	1	14.1	715	9	54.6	8,479
70	7	57.6	9,650	2	25.0	1,991	9	82.6	11,641
71	3	33.0	3,803				3	33.0	3,803
72									
73				1	8.9	865	1	8.9	865
TOTAL	178	1,012.2	\$210,530	68	464.3	\$51,549	246	1,476.5	\$262,079