

Prepared By



Wyatt

December 10. 1992

Board of Administration City Employees' Retirement System 8th Floor 360 East Second Street Los Angeles, California 90012

Members of the Board:

We are pleased to present our actuarial valuation report as of June 30, 1992 for the City Employees' Retirement System. This report contains the results of the valuation of the retirement and health subsidy benefits provided by the System.

This report is divided into three parts:

- A. Valuation Summary: This section contains an overview of significant valuation results.
- B. Valuation Detail: This section contains more detailed results of the valuation. Section I contains details of the retirement valuation. Section II contains details of the health subsidy valuation.
- C. Exhibits: This section contains information on plan demographics, plan provisions, and actuarial assumptions used in the valuation.

We appreciate the opportunity to serve the City of Los Angeles and the Board of Administration as actuary for the City Employees' Retirement System.

Sincerely,

The WYATT Company

Sharon A. Peake, FSA Consulting Actuary

Steven G. Vernon, FSA Consulting Actuary

SAP:SGV:MC

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Valuation Summary

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Actuarial Valuation As Of June 30, 1992

Introduction

Officers and employees of the City of Los Angeles and their beneficiaries are entitled to retirement benefits (including disability and survivors' benefits) and health subsidy benefits under Article XXXIV of the Charter of the City of Los Angeles and by related ordinances. This retirement system is known as the City Employees' Retirement System.

This report contains the results of the June 30, 1992 valuation of both the retirement and health subsidy benefits of the Retirement System. It contains our calculations of the annual budget of the System, as provided in Section 506 of the Charter. It also contains the funded status and disclosure information as of June 30, 1992, required under Government Accounting Standards Board (GASB) Statement Number 5.

The valuation results were based on the demographic assumptions as outlined in Exhlbits VI through IX and the following economic assumptions:

- 8.0% annual interest,
- 6.0% annual salary increases,
- 3.0% annual increases in the Consumer Price index.

There were no changes made in actuarial assumptions for the retirement valuation. The medical trend rate assumption used in the valuation of health subsidy benefits was increased since the last valuation to better reflect the rising cost of health benefits. The new assumptions are described in Exhibit VII.

Effective with this valuation, the normal cost includes an amount to fund certain administration expenses expected to be paid from plan assets during 1993-1994. All other valuation methods remain unchanged since the last valuation.

We believe the assumptions and methods used are appropriate for use in the evaluation of the liabilities of the Retirement System at June 30, 1992.

After the June 30, 1991 valuation report was issued, a reallocation of System assets between retirement and health subsidy reserves was made. When June 30, 1991 results are shown in this report for comparison to current results, they are the results <u>after</u> the reallocation was complete. Therefore, some amounts may not match those found in our June 30, 1991 report.

This Valuation Summary contains an overview of our valuation results. More detail on these results can be found in the Valuation Detail and Exhibit sections of this report.

A schedule containing all of the significant results of our valuation can be found on the next page.

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Actuarial Valuation As Of June 30, 1992

Summary of Significant Valuation Results					
		June 30, 1992	June 30, 1991	Percent Change	
1.	Total Membership				
	A. Active Members B. Pensioners	23,399 11,359	23,572 10,862	-0.7% +4.6%	
и.	Salaries at June 30				
	A. Total Annual Payroll	\$915,343,121	\$833,128,768	+9.9%	
<u> </u>	B. Average Monthly Salary	\$3,259	\$2,945	+10.7%	
111.	Benefits to Current Pensioners and Beneficiarles				
	A. Total Annual Benefits	\$168,472,288	\$154,100,546	+9.3%	
	B. Average Monthly Benefit Amount	\$1,236	\$1,182	+4.6%	
IV.	Total System Assets (Actuarial Value)	\$3,298,714,000	\$2,943,327,000	+12.1%	
V .	Unfunded Actuarial Accrued Liability				
	A. Retirement Benefits	\$511,906,957	\$562,921,043	-9.1%	
	B. Health Subsidy Benefits	\$304,937,076	\$312,122,739	-2.3%	
Vi.	Budget Items				
	A. Retirement Benefits1. Normal Cost as a Percent of Pay	6.85%	5.74%	10.0%	
	2. Amortization of Unfunded	0,0370	5.74%	+19.3%	
	Actuarial Accrued Liability				
	i) Percent of Pay, plus	6.22%	6.52%	-4.6%	
	li) Fixed Dollar Amount	\$2,724,502	\$2,724,502	+ 0.0%	
	 Total Retirement Contribution B. Health Subsidy Contribution, as a 	13.07%	12.26%	+6.6%	
	Percent of Pay	3.26%	3.46%	-5.8%	
	C. Total Contribution (A+B)	0.2070	0.1070	0.070	
	i) Percent of Pay, plus	16.33%	15.72%	+3.9%	
	ii) Fixed Dollar Amount	\$2,724,502	\$2,724,502	+0.0%	
VII.	Funded Ratio				
	A. Retirement Benefits	85.8%	83.0%	+3.0%	
	B. Health Subsidy Benefits	39.1%	38.3%	+7.7%	
	C. Total	80.1%	77.0%	+4.0%	

Budget Requirements

The Charter of the City of Los Angeles requires that budget amounts for the City Employees' Retirement System be determined annually. In determining these amounts, the System currently uses the Projected Unit Credit Cost Method. The required annual contribution is made up of two parts:

- The Normal Cost, or the cost of the portion of the benefit that is earned each year.
- The payment to amortize the Unfunded Actuarial Accrued Liability (UAAL). Most of the UAAL is amortized as a level percent of pay over the period ending June 30, 2004. Increases in the UAAL due to assumption changes are amortized over 30 years and gains and losses are amortized over 15 years, both as a level percent of pay. Plan amendments are amortized over 30 years as a level percent of pay, unless the characteristics of the amendment dictate a shorter amortization period. Smaller pieces of the UAAL are amortized as a level dollar amount over various periods.

Below, we present a summary of budget requirements for the City Employees' Retirement System. In total, the recommended contribution increased by 3.9% from last year.

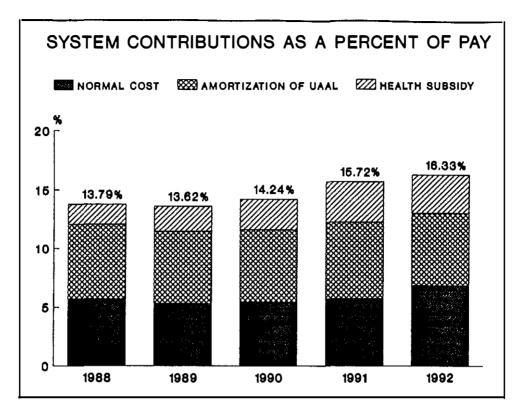
Recommended City Contributions For Fiscal Year 1993 - 1994					
	Percentage of Salary		Fixed Dollar Amount		
Contribution for Retirement, Disability, and Death Benefits	13.07%	plus	\$2,724,502		
Contribution for Health Subsidy Benefits	3.26%				
Total Contribution	16.33%	plus	\$2,724,502		

The contribution for retirement disability, and death benefits includes a cost of 0.87% of salary for certain administration expenses expected to be paid from plan assets in 1993-1994.

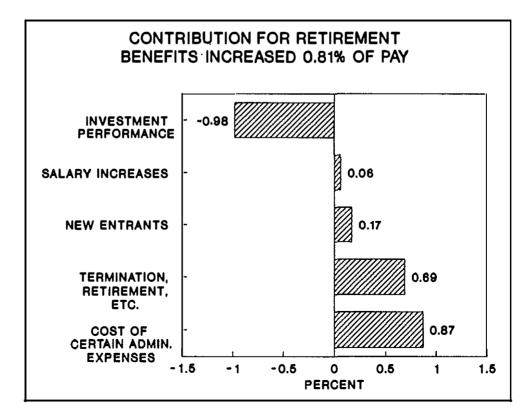
A more detailed explanation of these results can be found in the Valuation Detail section of this report.

As we determined in the June 30,1991 valuation, for the Family Death Benefit Plan, we recommend that the Members and the City each continue to contribute \$2.90 per month to participate in this Plan.

The following graph illustrates the funding levels of the past few years for both the retirement benefits and the health subsidy benefits. These percent-of-pay amounts do not include the small pieces of the UAAL being amortized as a level dollar amount.



The graph below Illustrates the effect of gains and losses over the past year on the recommended System contribution for retirement benefits.



Funded Status At June 30, 1992

In order to assess the funded status of the System, disclosure of a standardized measure of pension liability is required by Government Accounting Standards Board (GASB) Statement No. 5 - *Disclosure of Pension Information by Public Employee Retirement Systems and State and Local Governmental Employers.* This measure of funded status compares the present value of benefits accrued to June 30, 1992 to the value of accumulated plan assets. For retired Members and beneficiaries, the present value of remaining benefit payments is disclosed. For active Members, the present value of the benefits accrued to June 30, 1992 is disclosed. In the latter calculation, we calculate accrued benefits based upon service to June 30, 1992. We also recognize assumed future salary increases. GASB No. 5 covers only pension type benefits provided by public employee retirement systems.

Under GASB Statement No. 12, *Disclosure of Information on Post Employment Benefits Other Than Pensions by State and Local Government Employers*, issued in November 1989, the expenditures and expenses for the period are the only financial information that needs to be disclosed for postretirement health subsidy benefits. However, the statement encourages more complete disclosures of information, if available. Therefore, we have included a GASB No. 5 figure for the health subsidy benefits of the System in this report, as if GASB No. 5 applied to health subsidy benefits.

On the next page, we present the funded status of the System under GASB No. 5, along with a comparison of the System's funded status in the prior year. The current System assets available for retirement benefits are 165% of the present value of retirement benefits for current retired members and their beneficiaries. When the present value of accrued retirement benefits for active Members is added, the System assets available for retirement benefits represent 85.8% of the total present value of accrued retirement benefits on June 30, 1992. This funded ratio increased since the last valuation, primarily due to a return on assets which was greater than the 8% assumed.

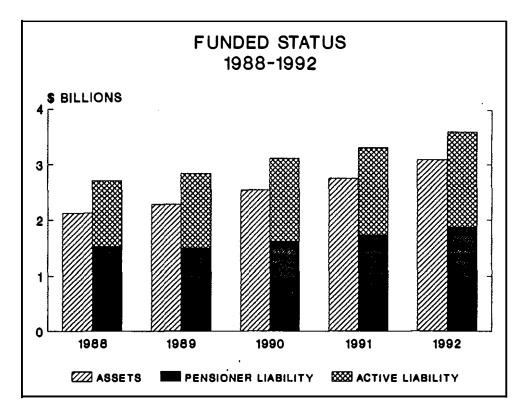
Current health subsidy reserves are 71.6% of the present value of health subsidy benefits for current retired Members. When the present value of health subsidy benefits for active Members with ten or more years of service is added, the funded ratio becomes 39.1%.

The combined funded ratio for retirement and health subsidy benefits is 80.1%.

FUNDED STATUS				
	June 30, 1992	June 30, 1991	Percent Change	
Retirement Benefits				
Present Value of Retirement Benefits Earned				
- Retired Members and Beneficiaries	\$1,866,586,901	\$1,729,600,097	+7.9%	
- Active Members	<u>1,730,837,672</u>	<u>1,582,425,209</u>	+9.4%	
- Total	\$3,597,424,573	\$3,312,025,306	+8.6%	
Actuarial Value of Assets Available for Retirement Benefits	\$3,085,517,616	\$2,749,104,263	+ 12.2%	
Funded Ratio for Retirement Benefits	85.8%	83.0%	+3.4%	
Health Subsidy Benefits				
Present Value of Heaith Subsidy Benefits Earned				
Retired Members	\$273,324,576	\$267,123,952	+2.3%	
- Active Members With Ten or More Years of Service	227,410,067	222,866,614	+2.0%	
- Total	\$500,734,643	\$489,990,566	+2.2%	
Actuarial Value of Assets Available for Heaith Subsidy Benefits	\$195,797,567	\$177,867,827	+ 10.1%	
Funded Ratio for Heaith Subsidy Benefits	39.1%	36.3%	+7.7%	
Combined Retirement and Health Subsidy Funded Ratio	80.1%	77.0%	+4.0%	

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The graph below compares assets to liabilities under GASB No. 5 for retirement benefits only, for the years 1988-1992. Assets exceed liabilities for pensioners, and are about 85.8% of retirement liabilities in 1992.



System Assets

The following asset information was provided to us by the Retirement Office. We have not audited or verified these figures.

	June 30, 1992	June 30, 1991	Percent Change
Total System Assets			
Market Value	\$3,416,697,000	\$3,024,302,000	+13.0%
Book Value	3,180,731,000	2,862,351,000	+ 11.1%
Actuarial Value	3,298,714,000	2,943,327,000	+12.1%

Rate of Return July 1, 1991 - June 30, 1992	
The rate of return on total plan assets was as follows:	
Market Value Book Value Actuarial Value	12.82% 10.94% 11.91%
These rates of return were based on the following cash flow information:	
Contributions City Members	\$ 164,867,033 43,196,687
Pensions Paid Retirement Allowances Family Death Benefits Heaith Benefits	162,882,617 593,041 20,893,244
Refunds of Member Contributions	7,972,903
Administration Expenses	8,737,198
Investment Earnings Realized Unrealized	311,395,534 74,014,749

The 11.91% rate of return on the actuarial value is greater than the 8.0% rate assumed for the prior year, which resulted in an actuarial gain. The budgeted contribution for the System would have been slightly higher if not for this gain.

More detail on System assets can be found in the Exhibits section of this report.

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Summary of System Funding

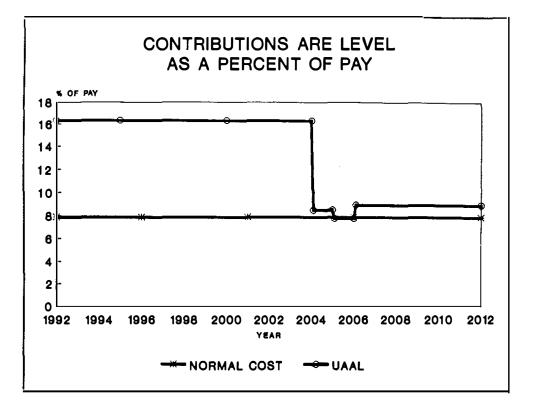
As of June 30, 1992, the System had assets equal to 80% of the present value of benefits accrued to that date, as calculated under GASB No. 5. When compared to the present value of all benefits expected to be paid by the System (including benefits expected to be earned in the future), assets equal 58% of llabilities. This remaining unfunded liability is to be funded by future City and Member contributions to the System.

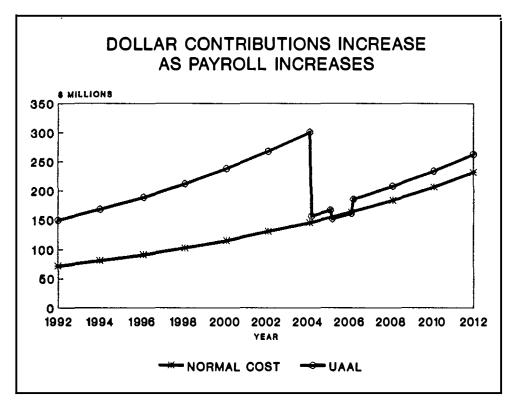
The City contributions are made up of two parts:

- Normal Cost Contributions: These contributions are determined as the cost of the System benefits accruing each year. If all assumptions are realized and there are no gains or losses, this amount will remain unchanged as a percent of pay unless the average age of the population increases. In this case, contributions as a percent of pay will increase. The contributions will also increase as a dollar amount as total covered payroll increases.
- Funding of Unfunded Actuarial Accrued Llability (UAAL): The UAAL represents liabilities accrued to date, that have not been funded by prior years' normal costs. Most of the UAAL is funded as a level percent of payroll until the year 2004. Increases in the UAAL due to assumption changes are amortized over 30 years and gains and losses are amortized over 15 years, both as a level percent of pay. Plan amendments are amortized over 30 years as a level percent of pay, unless the characteristics of the amendment dictate a shorter amortization period. If in the future all assumptions are realized and if there are no future gains or losses, the current contribution percentage will not change until the pleces that make up the UAAL are fully amortized. However, it will increase as a dollar amount as the total covered payroll increases. Smaller pleces of the UAAL are amortized as level dollar amounts. These amounts will remain constant, and are not affected by gains and losses.

The total contribution will be the sum of the Normal Cost and UAAL contributions.

The following graphs are an illustration of expected future contribution levels. These contribution levels are based on the current Charter provisions and assume no future gains or losses. They are also based on our assumption of 6.0% annual increase in total System payroll, and a population with the same average age and service characteristics as the current population. If actual experience differs from this these contribution levels will change.





Valuation Detail

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System Membership

Computer tapes containing data on System membership as of June 30, 1992 were supplied to us by the Retirement Office. On the following schedules we present a summary of System membership at June 30, 1992 and June 30, 1991. Salary information as of June 30, 1991 does not include the pay increases that were effective on July 1, 1991. Pension amounts shown on the following schedule do not include the cost-of-living adjustments that were effective on July 1, 1992. All July 1 increases were reflected in our valuation calculations.

It was necessary to make assumptions for less than 0.1% of the data records where the information given to us was unreasonable or incomplete. These assumptions did not materially affect the results of our valuation.

The number of total active Members decreased 0.7% since the last valuation. The total number of retired Members and their beneficiaries increased 4.6%, while the average retirement benefit amount increased 4.6%. The following schedule contains a more detailed breakdown of these figures.

in the data, there were records for approximately 350 terminated participants who had not yet received a refund of contributions. The total amount of contributions to be refunded was approximately \$945,000. We included the amount of these future refunds in our pensioner liability.

More detail on System membership, including breakdowns by age and service categories, can be found in Exhibits XI, XII, and XIII of this report.

SYSTEM MEMBERSHIP				
	June 30, 1992	June 30, 1991	Percent Change	
I. Active Members				
 a. Number b. Average Age c. Average Years of Service d. Salary Total Annual Salary Average Monthly Salary II. Pensioners and Beneficiaries 	23,399 42.1 10.6 \$915,343,121 \$3,259	23,572 41.6 10.1 \$833,128,768 \$2,945	-0.7% +1.2% +5.0% +9.9% +10.7%	
a. Number b. Average Age c. Allowance i) Total Annual Allowance li) Average Monthly Amount	11,359 71.6 \$168,472,288 \$1,236	10,862 70.3 \$154,100,546 \$1,182	+4.6% +1.8% +9.3% +4.6%	

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Applicable Assets At June 30, 1992

Assets available to pay pension benefits are determined by deducting certain reserves from the total actuarial value of assets amount.

	Book Value	Market Value	Actuarial Value
1. Total Value of Assets at June 30, 1992	\$3,180,731,000	\$3,416,697,000	\$3,298,714,000
 2. Less Reserves and Llabilities Established for: a. Family Death Benefit Insurance b. Retiree Health Subsidy c. Total 	16,776,525 <u>188,794,600</u> 205,571,125	18,021,110 202,800,533 220,821,643	17,398,817 <u>195,797,567</u> 213,196,384
3. Net Assets Available for Retirement Benefits at June 30, 1992 (Item 1 less item 2)	\$2,975,159,875	\$3,195,875,357	\$3,085,517,616

Actuarial Balance Sheet

The purpose of the Actuarial Balance Sheet is to compare System assets with System Ilabilities in order to define the portion of the liabilities which need to be funded by the City in the future. The Balance Sheet information in the next two pages represents assets and liabilities for retirement benefits only.

System llabilities equal the present value of all future benefits expected to be paid to current and future retirees and beneficiaries of the System.

For the purpose of the Actuarial Balance Sheet, system assets are equal to the sum of:

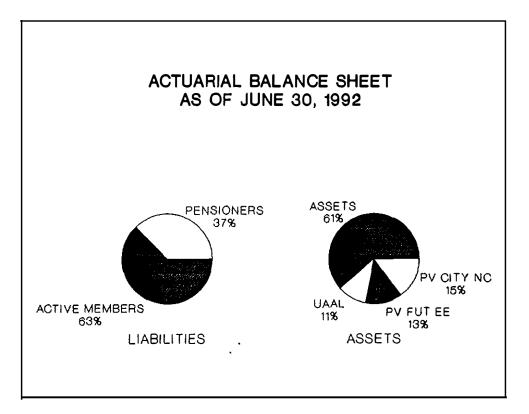
- the assets currently available to pay benefits,
- the present value of future contributions expected to be made by current System Members, and
- the present value of future contributions expected to be made by the City.

The last item, the present value of future City contributions, is made up of two parts:

- 1. The Present Value of Future City Normal Costs: Using the Projected Unit Credit Cost Method, the City budgets a certain percentage of payroll to fund benefits for System Members. The Normal Cost is the cost of benefits earned in each year. Normal Cost is funded from a member's date of employment to the average expected retirement date. An adjustment is made for the deductions which will be made from the salaries of System Members. For the 1992 fiscal year, the normal cost percentage is 6.85% of pay. This amount includes a cost of 0.87% of pay to fund certain administration expenses expected to be paid from System assets during 1993-1994. The present value of these future City Normal Cost contributions represents one piece of the value of future City contributions.
- 2. The Unfunded Actuarial Accrued Llability: The portion of the present value of future city contributions which will not be funded by the future Normal Cost contributions is the Unfunded Actuarial Accrued Liability (UAAL). The UAAL arises from prior contributions that were less than the current Normal Cost percentage. This usually results from benefit or assumption changes and the net effect of prior gains and losses. If the City had always contributed the current Normal Cost, if there were no prior benefit or assumption changes and if actual experience exactly matched the actuarial assumptions, the Normal Cost would be sufficient to fund all benefits and there would be no UAAL. This llability is funded based on the provisions of the City Charter.

The Actuarial Balance Sheet can be found on the following pages.

The following chart illustrates the breakdown of Balance Sheet assets and liabilities of the retirement benefits of the System. It shows that about 37% of the System's liabilities are for retired Members and their beneficiaries and 63% are for active Members. About 61% of the System's assets consist of currently available assets with 39% consisting of future contributions from the City and the Members.



Actuarial Balance Sheet As Of June 30, 1992

ASSETS	
1. Applicable Assets	\$3,085,517,616
2. Present Value of Future Member Contributions	\$674,440,163
3. Present Value of Future Contributions by the City For:	
 a. Basic Pensions Normal Costs Amortization of Certain Llabilities Total b. Cost-of-Living Pensions Normal Cost \$198,327,883 Amortization of Certain Liabilities 387,237,933 	\$704,938,516 \$585,565,816
4. Total Assets	\$5,050,462,111
	\$5,050,462,111
5. Present Value of Benefits Already Granted (Pensioners and Beneficiaries)	
a. Basic \$1,136,412,298 b. Cost-of-Living 730,174,603 o. Total	\$1,866,586,901
6. Present Value of Benefits to be Granted (Actives)	
a. Basic \$2,554,157,150 b. Cost-of-Living 629,718,060 o. Total	\$3,183,875,210
7. Total Llabilities	\$5,050,462,111

Budget And Recommended Contributions

Section 506 of the City Charter requires that an annual budget be prepared which sets forth the estimated cost of maintaining the retirement fund on a reserve basis.

The Charter defines the annual budget amount to be the sum of the Normal Cost plus an amount to amortize the Unfunded Actuarial Accrued Liability (UAAL). The Normal Cost and Actuarial Accrued Liability are currently calculated using the Projected Unit Credit Cost Method.

The Normal Cost is the cost of the System benefits earned each year. The Normal Cost consists of two parts: the first part, which is funded by Member contributions, is a specified percentage of the Member's pay; the second part, which is funded by the City, is the balance after deducting the Member paid portion from the total Normal Cost percentage.

The amortization of the UAAL is the payment stream required to fund the excess of System Llabilities over the sum of the System assets, future Member contributions, and future City Normal Cost contributions. (See section on the Actuarlal Balance Sheet.) The method of amortization is defined in the Charter.

The recommended retirement contributions increased for the following reasons:

- The active group aged about one-haif of a year on average since the last valuation. Under the Projected Unit Credit Funding Method, costs remain a level of percent of pay only if the group remains constant. An aging population, such as CERS had this past year, increases plan costs when determined as a percent of payroll.
- The normal cost includes an amount to fund certain administration expenses expected to be paid from System assets in 1993-1994. This cost was not included in the prior year amounts.

In our opinion, if the recommended contributions included in this report are adopted, the System will be maintained in compliance with the Charter of the City of Los Angeles and in accordance with the methods and assumptions underlying the calculations.

Recommended City Contributions For Fiscal Year 1993 - 1994			
	Percentage of Salary	plus	Fixed Dollar Amount
For Basic Retirement Benefits			
Normal Cost	5.36%		
Prior Service-Minimum Pensions (amortized as a level dollar amount until June 30, 1997)			\$ 927,955
Unfunded Actuarial Accrued Liability	2.13%		
Total Contributions for Basic Retirement Benefits	7.49%	plus	\$ 927,955
For Cost-of-Living Retirement Benefits			
Normal Cost	1.49%		
Increase due to 1967 Amendment (Amortized as a level dollar amount until June 30, 1997)			\$1,796,547
Unfunded Actuarial Accrued Liability	4.09%		
Total Contributions for Cost-of-Living Retirement Benefits	5.58%	plus	\$1,796,547
Total Basic and Cost-of-Living Contributions for Retirement Benefits	13.07%	plus	\$2,724,502

Detail of Amortization of Unfunded Actuarial Accrued Liability

Item	Remaining Years	Balance to be Amortized 06/30/92	Amortization Amount	Percentege of Salary
Basic Pensions				
1. Prior Service Pensions	5	\$3,705,055	\$927,955	N/A
2. Change in Asset Valuation Method at 06/30/89	27	(104,348,101)	(4,967,961)	(.54%)
3. Change in Assumptions at 06/30/89	27	(52,726,665)	(2,510,290)	(.27%)
4. Ad Hoc COLA increase at 12/01/89	13	21,333,097	1,665,639	.20%
5. Actuarial Loss at 06/30/90	13	14,997,125	1,311,681	.14%
6. Actuarial Loss at 06/30/91	14	14,039,687	1,150,503	.13%
7. Actuarial Gain at 06/30/92	15	(73,225,650)	(5,650,663)	(.62%)
6. Remaining UAAL	12	300,694,476	28,255,013	3.09%
Total		124,669,024	20,362,057	2.13%
Cost-of-Living Pensions				
1. increase Due to 1967 Amendments	5	\$7,173,092	\$1,796,547	N/A
2. Change in Assumptions at 06/30/89	27	(46,966,351)	(2,331,264)	(.25%)
3. Actuarial Gain at 06/30/90	13	(12,052,617)	(1,054,165)	(.12%)
4. Actuarial Gain at 06/30/91	14	(6,692,610)	(548,426)	(.06%)
5. Actuarial Loss at 06/30/92	15	38,066,657	2,939,066	.32%
6. Remaining UAAL	12	409,689,962	36,471,279	4.20%
Total		367,237,933	39,273,035	4.09%

Funded Status Of The System

The following table presents a breakdown of the funded status of the System into basic and cost-ofliving retirement pensions. This information is calculated using the guidelines of GASB No.5 (see page 5). These figures do not include assets or liabilities of the health subsidy.

	June 30, 1992	June 30, 1991	
Present Value of Benefits Earned to Valuation Date			
Basic Benefits	\$2,523,830,249	\$2,331,796,529	
Cost-of-Living Benefits	<u>1,073,594,324</u>	980,228,777	
Total .	\$3,597,424,573	\$3,312,025,306	
Actuarial Value of Assets Available for Retirement Benefits			
Basic Benefits	\$2,399,161,225	\$2,125,294,544	
Cost-of-Living Benefits	<u>_686,356,391</u>	<u>623,809,719</u>	
Total	\$3,085,517,616	\$2,749,104,263	
Funding Ratio			
Basic Benefits	95.1%	91.1%	
Cost-of-Living Benefits	63.9%	63.6%	
Total	85.8%	83.0%	

Member Contributions

Members contribute to the Retirement System based on schedules contained in the City Administrative Code. For Members commencing participation before February 1, 1983, different contribution rate schedules apply to different groups because of various collective bargaining agreements. For purposes of this valuation, we have assumed that the contribution rates for these Members correspond to those effective on July 1, 1981. These contribution rates can be found in Exhibit X.

If certain Members from this group contribute at a lower rate through a collective bargaining agreement, the City should contribute 76% of the amount that would have been contributed by Members without the bargaining agreements. This 76% amount reflects the fact that certain participants will terminate when only eligible for a return of their contributions. The City does not need to contribute the amounts that are expected to be refunded after the Members' termination. In the prior valuation report, it was recommended that 75% of the defrayed amount be contributed. This percent is increasing because the group affected by the defrayal is aging. The probability that these Members will terminate and get a refund of contributions is decreasing.

For Members commencing participation after February 1, 1983, the contribution rate is 6%.

As determined in the June 30, 1991 valuation, for participation in the Family Death Benefit Plan, we recommend that a contribution of \$2.90 per month be made by participating Members and the City.

Family Death Benefit Insurance Plan

Section 511.1 of the City Charter establishes the Family Death Benefit Insurance Plan. This plan provides protection for the families of Members who die before becoming eligible for service retirement. The benefits provided by the plan are similar to those provided to survivors under Social Security. members are eligible for dependent benefits after 18 months of participation in the Family Death Benefit Plan. They are eligible for surviving spouse benefits after ten years of participation in the plan.

Currently, the City and Members share the cost of the plan. Each contributes \$2.90 per month. This contribution rate is reviewed every two years to determine if the level of contributions is appropriate. We recommend that Members and the City each continue to contribute \$2.90 per month until the next scheduled review, June 30, 1993.

Introduction

Division 4, Chapter 11 of the Administrative code provides that a health insurance subsidy be paid to retired Members of the City Employees' Retirement System. This subsidy is a monthly payment which retirees apply to the cost of health insurance. Retirees can select among a variety of plans sponsored by the City. Members are eligible for subsidy at retirement after age 55 with 10 years of service, or compulsory retirement at age 70. Exhibit V summarizes the provisions of the Health insurance Premium Subsidy.

The System is building a reserve through the advance funding of the health insurance subsidy for current retirees and for active Members with sufficient service to receive a health subsidy (ten years). The actuarial value of the reserve available at June 30, 1992 is \$195,797,567. This amount was calculated by the City as part of the asset information provided to us. The City provides the book value of the health subsidy reserve, which we use along with estimates of the market value, to determine the actuarial value used in funding calculations.

This section of the report contains the results of the June 30, 1992 valuation of the retiree health insurance premium subsidy. In determining the budget amounts for the fiscal year beginning July 1, 1993, we have used the same funding method and methods of amortization used in the funding of the retirement benefits. We have also used the same economic and demographic assumptions as those used in the retirement valuation. In addition, special medical trend assumptions were used. These trend rates have been updated since the last valuation. A summary of the economic assumptions follows:

- 8.0% annual interest
- graded medical cost rates of 14.0% in 1992-1993, decreasing gradually to 7.0% in 2004 and beyond for benefits paid before age 65 and rates of 12.0% in 1992-1993 decreasing to 7.0% in 2002 and beyond for benefits paid after age 65.
- graded dental rates of 12.0% in 1992-1993 decreasing to 7.0% in 2002 and beyond.

We believe these assumptions are appropriate for use in the valuation of health subsidy llabilities of the City Employees' Retirement System at June 30, 1992. These assumptions are described in more detail in Exhibit VII.

Actuarial Balance Sheet

The purpose of the Actuarial Balance Sheet is to compare System assets with System Ilabilities in order to define the portion of the Ilabilities which need to be funded by the City in the future. The Balance Sheet information in the next two pages represents assets and liabilities for health subsidy benefits only.

System llabilities equal the present value of all future benefits expected to be paid to current and future retirees and beneficiaries of the System.

For the purpose of the Actuarial Balance Sheet for health subsidy benefits, System assets are equal to the sum of:

- the assets currently available to pay benefits,
- the present value of future contributions expected to be made by the City.

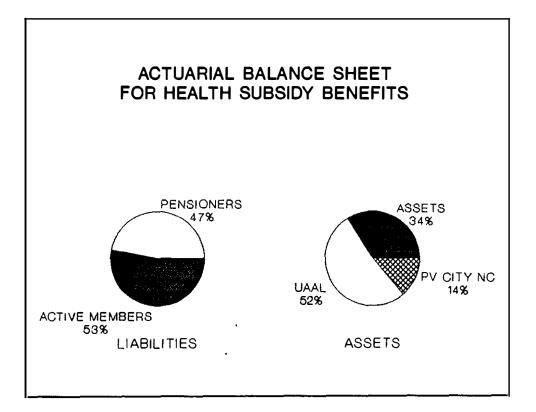
No member contribuitons are required for heaith subsidy benefits.

The last item, the present value of future City contributions, is made up of two parts:

- The Present Value of Future City Normal Costs: Using the Projected Unit Credit Cost Method, the City budgets a certain percentage of payroll to fund benefits for System Members. The Normal Cost is the cost of benefits earned in each year. Normal Cost is funded from a member's date of employment to the average expected retirement date. For the 1992 fiscal year, the normal cost percentage for heaith subsidy benefits is 1.05% of pay. The present value of these future City Normal Cost contributions represents one piece of the value of future City contributions.
- 2. The Unfunded Actuarial Accrued Liability: The portion of the present value of future City contributions which will not be funded by the future Normal Cost contributions is the Unfunded Actuarial Accrued Liability (UAAL). The UAAL arises from prior contributions that were less than the current Normal Cost percentage. This usually results from benefit or assumption changes and the net effect of prior gains and losses. If the City had always contributed the current Normal Cost, if there were no prior benefit or assumption changes and if actual experience exactly matched the actuarial assumptions, the Normal Cost would be sufficient to fund all health subsidy benefits and there would be no UAAL. This llability is funded based on the provisions of the City Charter.

The Actuarial Balance Sheet can be found on the following pages.

The following chart illustrates the breakdown of Balance Sheet assets and Ilabilities of the health subsidy benefits of the System. It shows that about 47% of the System's Ilabilities are for retired Members and their beneficiaries and 53% are for active Members with ten or more years of service. About 34% of the System's assets consist of currently available assets with 66% consisting of future contributions from the City.



Actuarial Balance Sheet As Of June 30, 1992

ASSETS	
1. Applicable Assets	\$195,797,567
2. Present Value of Future Member Contributions	0
3. Present Value of Future Contributions by the City:	
a. Normal Costs \$79,416,309 b. Amortization of Certain Liabilities 304,937,076 c. Total	\$384,353,385
4. Total Assets	\$580,150,952
LIABILITIES	
5. Present Value of Benefits Already Granted (Pensioners and Beneficiaries)	\$273,324,576
6. Present Value of Benefits to be Granted (Actives With Ten or More Years of Service)	306,826,376
7. Total Liabilities	\$560,150,952

Recommended City Contribution For Fiscal year 1993-1994

Under Division 4, Chapter 11 of the Administration Code, certain retired employees are eligible for a health insurance premium subsidy. This subsidy is to be funded entirely by the City Employees' Retirement System.

The City is currently building reserves for, or advance funding, the Retiree Health Insurance Subsidy for current retirees and for active Members with sufficient service to receive a health subsidy (10 years). The actuarial value of the reserve available at June 30, 1992 is \$195,797,567. This reserve amount was calculated by the City as part of the asset information provided to us. The City provides the book value of the health subsidy reserve, which we use along with estimates of the market value, to determine the actuarial value used in funding calculations.

Based on this reserve, we have calculated the required funding amount for the fiscal year beginning July 1, 1993. The dollar amounts shown on the next page are based on total payroll at July 1, 1992, for illustrative purposes.

The contribution for health subsidy benefits decreased from 3.46% of payroll for 1992-1993 to 3.26% of payroll for 1993-1994 for the following reasons:

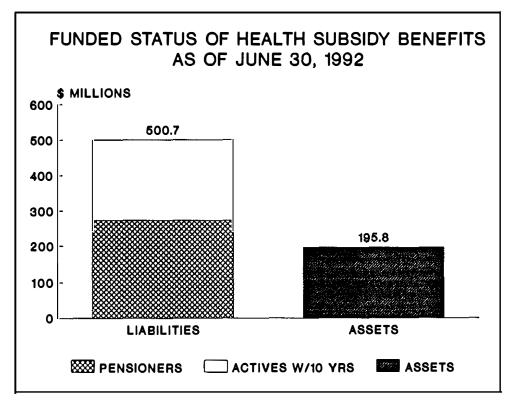
- Medical premiums did not increase on average from 1991-1992. Our assumptions were that medical premiums would increase about 13% over that period. Therefore, there was an actuarial gain caused by this difference, which decreased the required level of contributions.
- The UAAL is primarily amortized as a level percent of payroll. CERS payroll is assumed to increase 6% per year. in 1991-1992, total payroll increased about 9.9%. Therefore, the UAAL is being spread over a larger payroll base than expected, causing a decrease in the percent of pay required to fund the UAAL.
- Earnings on the health subsidy reserves exceeded the 8% assumed, resulting in an actuarial gain and a reduction in the required contribution.

Recommended City Contribution For Health Subsidy Benefits For Fiscal Year 1993-1994		
	Dollar Amount	Percent of Pay
1. Normal Cost at June 30, 1992	\$ 9,599,882	1.05%
2. Actuarlal Accrued Liability at June 30, 1992	500,734,643	-
3. Actuarlal Value of Assets Available for Heaith Subsidy Benefits at June 30, 1992	195,797,567	-
4. Unfunded Actuarlal Accrued Liability (UAAL) (2) - (3)	304,937,076	-
5. Amortization of UAAL		
 Initial Base as a Level Percent of Pay through June 30, 2004 	4,831,773	.53%
- 06/30/89 Change in Assumptions	1,017,890	.11%
- 06/30/89 Change in Funding	6,351,144	.69%
- Actuarial Loss from 1989 to 1990	4,656,068	.51%
- Actuarlal Loss from 1990 to 1991	4,953,879	.54%
- Actuarlal Gain from 1991 to 1992	(2,082,217)	(.23%)
- 06/30/92 Change in Assumptions	527,312	<u></u>
Total	20,255,849	2.21%
6. Recommended Contribution: (1) + (5)	29,855,731	3.26%

Funded Status of Health Subsidy Benefits At June 30, 1992

This information is calculated using the guidelines of GASB No. 5 (see page 6). These figures do not include assets or liabilities of the retirement benefits of the System.

Present Value of Heaith Subsidy Benefits Accrued to June 30, 1992	
- Retired members	\$273,324,576
- Active members with Ten Years of Service	_227,410,067
- Total	\$500,734,643
Actuarlal Value of Assets Available for Heaith Subsidy Benefits	\$195,797,567
Funded Ratio	39.1%



CITY OF LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM VALUATION OF HEALTH SUBSIDY BENEFITS

Assumptions And Methods

It is our understanding that the City is phasing in the process of advance funding for the Health insurance Premium Subsidy. A brief summary of this phase-in is as follows:

- The City began funding for these benefits when the health subsidy plan was first initiated, by commencing funding when a Member retired. However, this funding was limited below the actual cost, since the contributions were determined by recognizing only 3% annual increases in the subsidy due to medical trend.
- Beginning in 1987, the assumption for annual increases in the health insurance subsidy benefits was increased to 8% per year. Also, the City began advance funding for active Members who are eligible to retire.

Following the June 30, 1989 Study of Plan Experience, in order to fully reflect the cost of benefits due to expected inflation, the 8% medical trend rate assumption was changed to a series of medical trend rates that graded down from 15% in 1991 to 7% in 2002 and thereafter. The City also began advance funding for active members with sufficient service to receive a health subsidy (10 years).

Effective with the June 30, 1992 Study of Plan Experiences, the medical and dental trend rates were updated. Separate rates were used for pre- and post-age 65 benefits to reflect the differences in cost increases after Medicare eligibility. For detail on these new trend rates, refer to Exhibit VII.

In valuing the liabilities of the health subsidy, we projected future cash flows by applying medical trend rates to current subsidy amounts. The current average monthly claim rates we used as the starting point for our projections depend on the experience of the plan and plan provisions. These rates are summarized in Exhibit V. To determine the present value of future health insurance subsidy benefits, we discounted future cash flows to June 30, 1992 using a valuation rate of 8%.

For the purpose of determining contributions, we have used the Projected Unit Credit Funding Method. Our assumptions and methods are described further in Exhibit Vii.

Exhibits

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Exhibit I

System Assets (Book Value)				
	June 30, 1992	June 30, 1991		
ASSETS				
Cash	\$2,149,806	\$3,264,808		
Receivables Accrued Interest and Dividend Income Other Receivables Proceeds from Investment Total Receivables	35,810,646 4,106,528 <u>29,723,668</u> 69,640,842	36,345,650 3,463,790 <u>14,639,232</u> 54,448,672		
Investments Temporary, at Cost Bonds, at Amortized Cost Common Stocks, at Cost Real Estate Total Investments	270,689,022 1,447,131,451 1,306,440,099 <u>114,892,960</u> 3,139,153,532	472,895,204 1,434,034,643 818,639,366 <u>104,030,884</u> 2,829,600,097		
Total Assets	3,210,944,180	2,887,313,577		
LIABILITIES				
Accounts Payable and Accrued Expenses	(30,213,284)	(24,962,931)		
NET ASSETS AVAILABLE FOR PLAN BENEFITS	\$3,180,730,896	\$2,862,350,646		

Statement Of Reserve And Fund Balance Accounts			
	June 30, 1992	June 30, 1991	
ACTUARIAL			
Member Contributions	\$491,743,910	\$450,775,254	
Annuitles	326,584,680	312,086,025	
Basic Pensions	1,556,491,662	1,369,137,199	
Cost-of-Living	600,339,518	551,805,895	
Family Death Benefit Insurance	16,776,526	15,904,475	
Health Benefits	188,794,600	162,641,797	
Total Actuarial	\$3,180,730,896	\$2,862,350,645	
OTHER			
Undistributed Earnings	\$0	\$0	
Fund Balance	0	0	
Total Other	0	0	
TOTAL RESERVE AND FUND BALANCE	\$3,180,730,896	\$2,862,350,645	

Statement of Changes in Net Assets Available For Plan Benefits		
	Year Ended June 30, 1992	Year Ended June 30, 1991
REVENUES		
City Contributions	\$164,867,033	\$151,293,465
Members' Contributions	43,196,687	41,790,035
Income from Investments Interest Earned Dividends Real Estate Total	143,716,677 32,509,779 <u>5,969,809</u> 182,196,265	158,809,588 28,991,231 <u>5,767,670</u> 193,568,489
Total Revenues	\$390,259,985	\$386,651,989
EXPENDITURES		
Pensions Retirement Allowances Family Death Benefit Insurance Heaith Benefits Total	\$162,882,617 593,041 <u>20,893,244</u> 184,368,902	\$152,234,542 638,218 <u>17,403,673</u> 170,276,433
Refund of Members' Contributions	7,972,903	8,573,428
Administrative Expenses	8,737,198	8,238,339
Total Expenditures	\$201,079,003	\$187,088,200
NET REVENUES	\$189,180,982	\$199,563,789
CAPITAL GAIN ON INVESTMENTS SOLD	\$129,199,269	\$19,592,256
NET REVENUES PLUS CAPITAL GAIN	\$318,380,251	\$219,156,045
NET ASSETS AVAILABLE FOR PLAN BENEFITS, BEGINNING OF THE YEAR	\$2,862,350,645	\$2,643,194,600
NET ASSETS AVAILABLE FOR PLAN BENEFITS, END OF THE YEAR	\$3,180,730,896	\$2,862,350,645

Summary of Retirement Benefits

1.	Eligib	bility:	Members are eligible on their first day of City employment.
2.	Final	Compensation:	Highest 12-month average salary.
3.	Servi	ce Retirement:	
	A)	Eligibility:	Age 55 with 10 years of service, or any age with 30 years of service, or age 70.
	B)	Benefit:	
		Beta Formula:	. 2.16% of Final Compensation for each year of service.
		Prior Formula:	[•] 2% of Final Compensation for each year of service that Beta Formula does not apply.
	C)	Reduction for Early Retirement:	
		Beta Formula:	Unreduced for retirement after age 60, or after age 55 with at least 30 years of service. Reduction factors apply for earlier retirement.
		Prior Formula:	Unreduced for retirement after age 58-3/4. Reduction factors apply for earlier retirement.
	D)	Form of Payment:	Benefit payable for life with 50% continuance to eligible spouse if employee had that coverage at time of retirement. Larger continuances are available with actuarial reduction.

4. Disability Retirement:

A)	Eligibility:	Five years of continuous service and physically or mentally incapacitated so unable to perform duties of position.
B)	Benefit:	1/70 of Final Compensation per year of continuous service. If service is less than 23-1/3 years, then

- C) Form of Payment: Benefit payable for life with 50% continuance to eligible spouse if employee had this coverage at time of retirement.
- 5. Deferred Service Retirement:
 - A) Eligibility: Five years of service prior to termination of City service. Member must leave contributions on deposit and apply in writing within three years of termination.
 B) Benefit: Same as Service Retirement payable anytime after age 55, provided at least 10 years have elapsed from date of original membership (or anytime after age 70).
 - C) Form of Payment: Same as Service Retirement.
- 6. Pre-retirement Death Benefits:
 - A)
 Not Eligible for Disability

 or Service Retirement:
 Members receives (I),(II), and (III) where:

(i) = Accumulated contributions with interest.

(II) = Limited monthly pension equal to half the average monthly salary for the year before death. Benefit is payable to surviving spouse, minor children, or dependent parents, and is payable for a period of 2 months times the number of completed years of service, to a maximum of 12 months.

service is projected to retirement, with a maximum

(III) = Family Death Benefit Insurance Plan benefit, if a qualified Member.

 B) Eligible for Disability Retirement or Duty-Related 	Member receives (i) and (il) where:	
Death:		(i) = 60% of the benefit the Member would have received if he or she had been granted a disability benefit on the day before death, payable for the lifetime of the Member's spouse.
		 (ii) = Family Death Benefit Insurance Plan benefit, if a qualified Member.
C)	Eligible for Service Retirement:	Surviving spouse receives a lifetime benefit equal to 100% of the benefit the Member would have been entitled to if he or she had been granted an Option 1 (Joint and 100%) actuarlaily reduced Service Retirement benefit on the day before death.
		Benefits under the Family Death Benefit Insurance Plan are not available.
		Surviving spouse may elect A or B In Ileu of C.
Post-retirement Death Benefits:		Members receives (i), (il), and (iii), where:
Denends.	ແຮ.	(I) = 50% continuance to surviving eligible spouse, if covered under the plan.
	. ·	 (II) = Return of unused contributions and interest (provided normal cash refund annuity was selected) and any accrued but unpaid retirement allowance.

8. Post-retirement Cost-of-Living Benefits:

7.

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(iii) = \$500 death benefit allowance for burial expenses.

Each July 1, the benefits are increased by the percentage increase in CPI (to a maximum of 3%). Increases in CPI above 3% are "banked" to apply in years when CPI increase is less than 3%.

If benefit has been paid less than 12 months, the 3% Increase is proportionately decreased.

9. Employee Contributions: Pre-February, 1983 participants:

Members are assumed to contribute per the schedule effective July 1, 1981. To the extent that Members contribute less than the full rates, the City should contribute 76% of the amounts otherwise paid by the Member.

Post-January, 1983 participants:

Members contribute 6% of pay.

- 10. Family Death Benefit Insurance Plan:
 - A) Eligibility: Employee may elect coverage after 18 months of City retirement service.
 B) Benefits: Benefits similar to those provided by Social Security Survivors' Insurance are payable if Member dies In active service after 18 months of Family Death Benefit Plan membership.
 C) Cost: It is recommended that the Member and City each contribute \$2.90 per month.

Summary of Health Subsidy Benefits

Eligibility: Members who retire with ten years of service. Subsidy begins at age 55. Subsidy: Medical For retired Members under age 65 or 65 and over with only Medicare Part B: A percentage of the Maximum Subsidy, or the actual premium paid to a City approved health carrier, if less. The percentage is 4% for each year of service, up to a maximum of 100% after 25 years. Maximum Subsidy: The maximum is the rate currently paid for active City employees. As of July 1, 1992, this amount is \$458 per month. For retired Members age 65 and over with Medicare Parts A and B: A percentage of the premium paid to a City approved health carrier. The percentage is 75% with 10 - 14 years of service, 90% for 15-19 years of service and 100% for 20 years of service or more. Medicare Part B premiums are also paid. Dental

4% per year of service to a maximum of \$28.66 for Connecticut General and \$9.64 for Safeguard.

Summary of Actuarial Assumptions And Methods Used For Valuation Of Retirement Benefits

Interest Rate:	8.0% per year.
Salary Increases:	Salaries for individuals and the total System payroll are assumed to increase 6.0% per year.
Cost-of-Living:	3.0% per year.
Mortality:	A. For Pensioners on Service Retirement and Beneficiarles

1971 Group Annuity Mortality Table, with a one year setback for males and a five year setback for females

Sample Rates

	Deaths per 1,000			
Age	Males	Females		
45	2.6	1.6		
50	4.7	2.9		
55	7.8	5.3		
60	11.9	8.5		
65	19.2	13.1		
70	32.4	21.3		
75	51.2	36.1		

B. For Pensioners on Disability Retirement:

1981 Disability Mortality Table

Sample Rates

Age Deaths per 1,00	
45	20.8
50	24.4
55	28.4
60	33.0
65	37.9
70	43.7
75	55.3

Rehire for Former Employees:

Proportion of Members with Spouses at Retirement:

Asset Valuation Method:

Funding Method:

Dependents:

ŝ.

Where no other information is available, Members are assumed to have two children with a three year difference in age. The eldest is assumed to reach age 21 when the participant reaches age 45.

All former employees are assumed not to be rehired.

75% of male employees and 55% of female employees are assumed married at retirement. Wives are assumed four years younger than husbands.

For retirement benefits: The Projected Unit Credit Cost Method.

For the Family Death Benefit Insurance Plan: One year term cost funding method.

An asset value equal to the average of book and market values was used in determining annual funding requirements.

Exhibit VII

CITY OF LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

Summary Of Actuarial Assumptions And Methods Used For Valuation Of Health Subsidy Benefits

Methods:

Future cash flows were projected by applying medical trend rate factors to current annual claim rates. The prefunding of these cash flows is determined using the Projected Unit Credit Funding Method.

Discount on Projected Cash Flows:

8% per year.

Medical Trend Rates:

	Medical Inflation		Dental Inflation
Year	Pre-65	Post-65	
1992-1993	14.0%	12.0%	12.0%
1993-1994	13.0%	11.5%	11.5%
1994-1995	12.0%	11.0%	11.0%
1995-19 96	11.5%	10.5%	10.5%
1996-1997	11.0%	10.0%	10.0%
1997-1998	10.5%	9.5%	9.5%
1998-1999	10.0%	9.0%	9.0%
1999-2000	9.5%	8.5%	8.5%
2000-2001	9.0%	8.0%	8.0%
2001-2002	8.5%	7.5%	7.5%
2002-2003	8.0%	7.0%	7.0%
2003-2004	7.5%	7.0%	7.0%
2004+	7.0%	7.0%	7.0%

Medicare Premium Inflation Rate:

Year	Increase
1992-1993	9.00%
1993-1994	8.75%
1994-1995	8.50%
1995-1996	8.25%
1996-1997	8.00%
1997-1998	7.75%
1998+	7.50%

When actual premium amounts are know in advance due to legislation, those amounts are used in the valuation.

1971 Group Annuity Mortality Table, with a one year age setback for males and a five year age setback for females. Same rates as used in valuation of retirement benefits. See retirement report for details.

80% of all retirees are assumed to receive a subsidy for a City approved heaith carrier.

90% of male and 65% of female retirees who receive a subsidy are assumed to be married and elect dependent coverage.

85% of retirees are assumed to elect Medicare Parts A & B.

65% of retirees are assumed to elect dental coverage.

Projected Unit Credit Cost Method.

An asset value equal to the average of book and market values was used in determining annual funding requirements.

Mortality:

Probability of Termination of Employment:

City Medical Plan Coverage:

Spouses and Dependent:

Medicare Coverage:

Dental Coverage:

Funding Method:

Asset Valuation Method:

Average Monthly S For Health Subsid	•
	Premium Per Month Per Year of Service (Maximum 25 Years)
Medical	
Less Than Age 65 or Age 65 and Over Witho	ut Medicare Parte A & B
Married Male	\$13.23
Single Male	10.35
Married Female	12.58
Single Female	11.49
Age 65 and Over with Medicare Parte A & B	
Married Male	8.16
Single Male	7.35
Married Female	7.44
Single Female	6.71
Dental	0.96

Rates Of Separation From Active Service

A schedule of the probabilities of termination of employment due to the following causes can be found on the following pages:

1.	Ordinary Withdrawal:	Member terminates and elects a refund of Member contributions.
2.	Service Retirement:	Member retires after meeting age and service requirements for reasons other than disability.
3.	Ordinary Disability:	Member receives disability retirement; disability is not service related.
4.	Service Disability:	None assumed.
5.	Ordinary Death:	Member dies before eligibility for retirement; death is not service related.
6.	Service Death:	None assumed.
7.	Death While Eligible for Service Retirement:	Member dies before retirement but after meeting age and service requirements for service retirement.

Each rate represents the probability that a Member will separate from service at each age due to the particular cause. For example, a rate of 0.0020 for a Member's service retirement at age 50 means we assume that, on average, 2 out of 1,000 Members who are age 50 will retire at that age.

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EXHIBIT IX PAGE 2 OF 2

RATES OF SEPARATION FROM ACTIVE SERVICE

	ORDINARY		SERVICE	RETIREMENT	ORDINARY	DISABILITY	ORDINAR	Y DEATH	DEATH ELIG FOR
AGE	MALES	FEMALES	MALES	FEMALES	MALES	FEMALES	MALES	FEMALES	SVC RET
20	0.2900	0.1500	0.0000	0.0000	0.0000	0.0000	0.0003	0.0002	0.0000
21	0.2549	0.1440	0.0000	0.0000	0.0000	0.0000	0.0003	0.0002	0.0000
22	0.2240	0.1382	0.0000	0.0000	0.0000	0.0000	0.0003	0.0002	0.0000
23	0. 1969	0.1327	0.0000	0.0000	0.0000	0.0000	0.0003	0.0002	0.0000
24	0.1731	0.1274	0.0000	0.0000	0.0000	0.0000	0.0003	0.0002	0.0000
25	0.1521	0.1223	0.0000	0.0000	0.0002	0.0000	0.0004	0.0003	0.0000
26	0.1404	0.1159	0.0000	0.0000	0.0002	0.0000	0.0004	0.0003	0.0000
27	0.1296	0.1098	0.0000	0.0000	0.0003	0.0000	0.0005	0.0004	0.0000
28	0.1197	0.1040	0.0000	0.0000	0.0004	0.0000	0.0005	0.0004	0.0000
29	0.1105	0.0986	0.0000	0.0000	0.0005	0.0000	0.0006	0.0005	0.0000
30	0.1020	0.0934	0.0000	0.0000	0.0006	0.0001	0.0006	0.0005	0.0000
31	0.0946	0.0879	0.0000	0.0000	0.0008	0.0001	0.0006	0.0006	0.0000
32	0.0877	0.0827	0.0000	0.0000	0.0009	0.0001	0.0007	0.0006	0.0000
33	0.0813	0.0779	0.0000	0.0000	0.0010	0.0001	0.0007	0.0006	0.0000
34	0.0754	0.0733	0.0000	0.0000	0.0011	0.0001	0.0008	0.0007	0.0000
35	0.0699	0.0690	0.0000	0.0000	0.0013	0.0002	0.0008	0.0007	
36	0.0654	0.0671	0.0000	0.0000	0.0014	0.0002	0.0009	0.0008	0.0000
37	0.0611	0.0652	0.0000	0.0000	0.0015	0.0002			0.0000
38	0.0572	0.0634	0.0000	0.0000	0.0016	0.0003	0.0010	0.0008	0.000
	0.0535	0.0617	0.0000	0.0000			0.0010	0.0009	0.0000
39 40		0.0600			0.0017	0.0003	0.0011	0.0010	0.0000
	0.0500		0.0000	0.0000	0.0018	0.0004	0.0012	0.0010	0.0000
41	0.0480	0.0580	0.0000	0.0000	0.0018	0.0005	0.0014	0.0011	0.0000
42	0.0450	0.0560	0.0000	0.0000	0.0019	0.0006	0.0014	0.0012	0.0000
43	0.0430	0.0540	0.0000	0.0000	0.0019	0.0008	0.0015	0.0012	0.0000
44	0.0400	0.0520	0.0000	0.0000	0.0020	0.0010	0.0016	0.0013	0.0000
45	0.0380	0.0500	0.0000	0.0000	0.0020	0.0012	0.0017	0.0014	0.0000
46	0.0360	0.0480	0.0000	0.0000	0.0021	0.0014	0.0018	0.0014	0.0000
47	0.0340	0.0460	0.0000	0.0000	0.0021	0.0014	0.0019	0.0015	0.0000
48	0.0320	0.0440	0.0000	0.0000	0.0022	0.0016	0.0021	0.0016	0.0000
49	0.0300	0.0420	0.0000	0.0000	0.0022	0.0018	0.0022	0.0017	0.0000
50	0.0280	0.0400	0.0020	0.0010	0.0023	0.0020	0.0023	0.0018	0.0000
51	0.0270	0.0380	0.0030	0.0022	0.0023	0.0024	0.0025	0.0019	0.0000
52	0.0250	0.0360	0.0040	0.0040	0.0023	0.0028	0.0027	0.0021	0.0000
53	0.0240	0.0340	0.0055	0.0067	0.0023	0.0032	0.0028	0.0022	0.0000
54	0.0220	0.0330	0.0235	0.0134	0.0023	0.0036	0.0030	0.0024	0.0000
55	0.0210	0.0320	0.0945	0.0635	0.0024	0.0040	0.0032	0.0026	0.0021
56	0.0205	0.0320	0.0675	0.0286	0.0024	0.0040	0.0034	0.0029	0.0024
57	0.0205	0.0320	0.0785	0.0313	0.0024	0.0040	0.0036	0.0031	0.0026
58	0.0205	0.0320	0.0900	0.0358	0.0024	0.0040	0.0039	0.0034	0.0029
59	0.0205	0.0320	0.1000	0.0581	0.0024	0.0040	0.0041	0.0038	0.0032
60	0.0210	0.0325	0.1935	0.1654	0.0024	0.0000	0.0044	0.0042	0.0035
61	0.0210	0.0325	0.1400	0.0984	0.0024	0.0000	0.0050	0.0046	0.0039
62	0.0225	0.0330	0.1500	0.1118	0.0025	0.0000	0.0055	0.0052	0.0043
63	0.0230	0.0335	0.1680	0.1207	0.0025	0.0000	0.0061	0.0058	0.0048
64	0.0240	0.0340	0.2125	0.1341	0.0025	0.0000	0.0067	0.0065	0.0053
65	0. 00 00	0.000	0.3500	0.2240	0.0000	0.0000	0.0074	0.0073	0.0059
66	0.0000	0.0000	0.2240	0.1520	0.0000	0.0000	0.0082	0.0084	0.0065
67	0.0000	0.0000	0.2240	0.1650	0.0000	0.0000	0.0090	0.0097	0.0072
68	0.0000	0.0000	0.2240	0.1920	0.0000	0.0000	0.0098	0.0111	0.0078
69	0.0000	0.0000	0.2500	0.2500	0.0000	0.0000	0.0106	0.0127	0.0086
70	0.0000	0.0000	1.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Contribution Rates Assumed For Members Participating Before February 1, 1983

Age	Normal	Survivor	Total	Age	Normal	Survivor	Tota
				40	10.19%	0.91%	11.10
16	8.00%	0.22%	8.22%	41	10.29	0.92	11.21
17	8.04	0.28	8.32	42	10,41	0.93	11.34
18	8.08	0.33	8.41	43	10.52	0.94	11.46
19	8.14	0.39	8.53	44	10.64	0.95	11.59
20	8.20	0.44	8.64	45	10.76	0.97	11.73
21	8.27	0.48	8.75	46	10.89	0.98	11.87
22	8.34	0.53	8.87	47	11.01	0.99	12.00
23	8.42	0.56	8.98	48	11.12	1.00	12.12
24	8.50	0.60	9.10	49	11.24	1.01	12.25
25	8.58	0.63	9.21	50	11.34	1.03	12.37
26	8.66	0.66	9.32	51	11.44	1.05	12.49
27	8.75	0.68	9.43	52	11.55	1.06	12.61
28	8.86	0.70	9.56	53	11.65	1.07	12.72
29	8.96	0.72	9.68	54	11.75	1.08	12.83
30	9.06	0.75	9.81	55	11.85	1.09	12.94
31	9.17	0.77	9.94	56	11.94	1.10	13.04
32	9.28	0.79	10.07	57	12.03	1.12	13.15
33	9.40	0.81	10.21	58	12.13	1.13	13.24
34	9.50	0.82	10.32	59 - Over	12.19	1.14	13.33
35	9.61	0.83	10.44				
36	9.73	0.85	10.58				
37	9.84	0.86	10.70				
38	9.96	0.87	10.83				
39	10.07	0.90	10.97				

Total is applicable only to employees whose Normal and Survivor Rates are assigned by the same age.

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EXHIBIT XI

AGE/SERVICE/SALARY DISTRIBUTION BY ATTAINED AGE FOR ACTIVE MEMBERS AS OF JUNE 30, 1992

	SERVICE												
ATTAINED AGE	<u>0 - 1</u>	<u>1 - 2</u>	<u>2 - 3</u>	<u>3 - 4</u>	<u>4 - 5</u>	<u>5 - 9</u>	<u>10 - 14</u>	<u>15 - 19</u>	<u>20 - 24</u>	<u>25 - 29</u>	<u>30 - 34</u>	<u>OVER 34</u>	TOTAL
UNDER 25	193	157	170	132	48	29	0	0	0	0	0	0	729
AVERAGE SALARY	23,984	25,166	27,437	28,956	28,198	30,693	0	0	0	0	0	0	26,488
25 - 29	276	290	541	574	286	706	33	0	0	0	0	0	2706
Average Salary	28,968	31,166	32,665	33,974	33,904	33,933	32,650	0	0	0	0	0	32,866
30 - 34	184	229	476	511	307	1407	466	5	0	0	0	0	3585
Average salary	30,301	31,391	34,318	35,231	37,177	39,600	. 36,161	30,367	0	0	0	0	36,607
35 - 39	174	173	344	414	262	1186	784	354	32	0	0	0	3723
Average salary	32,528	33,210	35,476	36,395	39,010	41,048	40,148	38,097	41,555	0	0	0	38,644
40 - 44	121	136	224	249	184	883	675	719	518	10	0	0	3719
Average Salary	35,064	32,734	34,811	36,095	39,322	40,518	42,890	43,223	43,734	42,169	0	0	40,763
45 - 49	80	103	151	185	125	564	478	484	803	258	15	0	3246
Average Salary	30,898	33,072	33,674	36,020	37,981	40,632	43,551	48,250	48,870	50,569	40,908	0	43,858
50 - 54	47	71	120	111	58	370	294	293	499	442	162	10	2477
Average Salary	30,789	27,0 72	32,060	39,605	39,681	38,959	41,774	42,358	44,540	49,969	49,900	42,502	42,730
55 - 59	19	43	57	57	47	218	168	207	331	298	188	44	1677
Average Salary	25,091	23,988	29,343	34,216	40 ,79 0	40,400	41,378	42,765	41,621	47,636	52,234	51,773	42,772
60 - 64	10	35	36	28	35	124	106	115	167	123	91	51	921
Average Salary	25,918	16,454	20,641	32,803	39,703	39,994	40,523	40,146	41, 197	45,518	54,622	49,920	40,991
OVER 64	12	42	29	14	10	77		94	111	61	34	52	616
Average Salary	11,788	9,140	14,529	28,252	32,393	34,571		40,204	40,709	42,197	44, 174	53,545	36,822
TOTAL	1116	1279		22 7 5	1362	5564	3084	2271	2461	1192	490	157	23399
AVERAGE SALARY	29,479	29,472		35,035	37,150	39,321	40,823	43,033	44,952	48,593	51,000	51,168	39,118

AVERAGE AGE: 42.1 10.6 AVERAGE SERVICE:

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EXHIBIT XII

DISTRIBUTION OF PENSIONERS BY PLAN YEAR OF RETIREMENT AND BY ATTAINED AGE AS OF JUNE 30, 1992

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TOTAL FOR ALL PENSIONERS

ATTAINED	Retirements in Plan Year Beginning in D PRE AVER/														AVERAGE		
	<u>1978</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>total</u>	AVERAGE
0 - 39	5	0	2	4	1	2	1	1	5	6	3	6	12	15	31	94	8,644
40 - 44	5	ʻ 4	9	9	7	7	8	9	5	10	8	10	6	11	12	120	9,268
45 - 49	24	10	6	11	6	10	6	4	11	7	7	7	6	9	10	134	9,316
50 - 54	40	17	18	10	11	7	10	11	7	14	8	23	22	7	21	226	9,132
55 - 59	48	14	19	18	15	12	19	15	19	12	68	121	141	145	155	821	19, 142
60 - 64	100	25	21	33	44	84	122	140	124	179	166	141	167	134	121	1601	18,892
65 - 69	238	150	122	126	138	263	223	17 ⁸	149	183	145	162	114	89	97	2377	17,930
70 - 74	684	212	186	192	208	183	160	150	80	98	83	50	45	33	19	2383	15,159
75 - 79	984	154	126	94	98	69	44	46	28	27	12	9	3	5	4	1703	12,545
80 - 84	939	43	28	19	22	15	7	3	5	1	3	4	5	2	0	1096	9,579
85 - 89	558	1	0	1	0	0	2	0	1	1	0	0	0	1	0	565	8,591
90 - 94	236	2	0	0	0	0	0	0	0	1	0	0	0	0	0	239	7,571
OVER 95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	3861	632	537	517	550	652	602	557	434	539	503	533	521	451	470	11359	
AVERAGE BENEFIT AMOUNT	9,731 13	3,510 ·	13,558 1	13,253 1	4,953 1	18,244 1	17,783 1	7,992	17,481	18,53 <u>0</u>	19,329	19,289 2	0,125 2	0,708 2	1,225		

AVERAGE BENEFIT AMOUNT: \$14,832 TOTAL ANNUAL BENEFITS: \$168,472,288

EXHIBIT XIII

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DISTRIBUTION OF PENSIONERS BY PLAN YEAR OF RETIREMENT AND BY ATTAINED AGE AS OF JUNE 30, 1992

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TOTAL FOR ALL PENSIONERS

ATTAINED AGE	PRE <u>1978</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	Retiro <u>1982</u>	ements <u>1983</u>	in Plan <u>1984</u>	Year Be <u>1985</u>	eginning <u>1986</u>	; in <u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>TOTAL</u>	MONTHLY AVERAGE HEALTH SUBSIDY
0 - 39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40 - 44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45 - 49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50 - 54	0	0	0	0	0	.0	0	1	0	0	0	0	0	0	1	2	347
55 - 59	8	4	1	6	3	3	4	2	. 5	0	42	9 0	120	119	116	523	334
60 - 64	18	7	3	13	15	48	86	113	97	141	140	114	144	120	105	1164	328
65 - 69	66	82	76	84	91	206	176	149	117	158	120	136	92	70	74	1697	204
70 - 74	331	153	122	139	159	145	124	116	67	87	71	36	31	26	12	1619	173
75 - 79	547	108	97	68	77	54	36	36	19	20	9	8	2	2	4	1087	163
80 - 84	480	29	17	10	17	9	3	1	3	1	3	4	3	1	0	581	172
85 - 89	260	1	0	0	0	0	0	0	0	0	0	0	0	0	0	261	180
90 - 94	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	101	161
OVER 95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1811	384	316	320	362	465	429	418	308	407	385	388	392	338	312	7035	
MONTHLY AVERAGE HEALTH SUBSIDY	179	179	173	185	184	212	218	232	230	238	250	263	280	279	293		
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AVERAGE MONTHLY HEALTH SUBSIDY:\$217TOTAL MONTHLY HEALTH SUBSIDY:\$1,526,904

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