# ACTUARIAL STATEMENT

DECEMBER 31, 1984

#### DONALD F. CAMPBELL CONSULTING ACTUARIES 221 NORTH LA SALLE STREET SUITE 3117 CHICAGO, ILLINOIS 60601 TELEPHONE 782-1335

October 2, 1985

The Retirement Board of the Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago, Chicago, Illinois

Gentlemen:

This is to certify that the annual statement as of December 31, 1984 of the Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago is, to the best of our knowledge and belief, a true and correct statement of the affairs and conditions of said Fund for the calendar year 1984. This statement has been prepared from the books of the Fund as substantiated by our letters of recommendation to the Retirement Board.

The accounting procedure is outlined in Article 11 of the Illinois Pension Code.

The method of valuation, or method of financing the system, and the actuarial assumptions and methods used in the valuation are shown in a separate Exhibit. The attempt is made to give effect to realistic valuation factors affecting costs.

The following represents a summary of	1984 Laborers' Actua (Does not include Last Year	
INCOME: Investment	\$ 31,809,924	\$ 28,832,621
Employer	13,681,225	14,996,619
Employee Total	11,608,537 57,099,686	11,531,243 55,360,483
OUTGO: Refunds, Benefits, Expenses	17,406,849	20,473,249
EXCESS OF INCOME OVER OUTGO:	39,692,837	34,887,234
ACTIVE PARTICIPANTS	5,424	5,341
BENEFICIARIES: Employee Spouse	2,419 1,212	2,469 1,227
Disabilities	167	188
Children	112	96
Other - reversionary	2	3
ACTUARIAL:		
Assets (Total at book value)	\$321,404,078	\$356,809,111
Funded Ratio	72.27%	77.16%
Accrued Liability	\$444,711,069	\$462,455,964
Termination Liability	\$235,632,452	\$254,602,113
Excess Upon Termination	\$ 85,771,626	\$102,206,998
Unfunded Liability	\$123,306,991	\$105,646,853
Annual Actuarial Requirement (ER & EE)	\$ 25,818,914	\$ 26,200,791
Expected Net Annual Actuarial Excess (Deficiency)	\$ 358,812	(\$ 16,803)
Required Employer Multiple	1.54	1.58
Amortization Period (Statutory multiple 1.37)		
INVESTMENT:		
Yield (On Invested Assets including gains/losses)	11.64%	9.30%
Invested Assets (Book Value)	\$307,658,209	\$341,315,777
Invested Assets (Market Value)	\$323,011,706	\$353,113,438
MISCELLANEOUS:		
Salary Roll	\$131,355,840	\$131,327,856
Average Salary	\$ 24,218	\$ 24,589
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LABORERS' A & B FUND OF CHICAGO Assets, Unfunded Liability, Accrued Liability





LABORERS' A & B FUND OF CHICAGO

RG1/23

The graph of Assets, Unfunded Liability and Accrued Liability illustrates the Fund's position with respect to asset growth and accrued liability growth. Please note that the difference between the assets and the accrued liability is what is called unfunded liability.

The next graph illustrates the Income of the Fund - investment income plus employer contributions plus employee contributions - and the current payouts of the fund benefits, refunds and expenses. The excess of income over payouts goes to build reserves for future benefit payments.

#### ACTUARIAL ASSUMPTIONS:

Actuarial assumptions required by ERISA must take into consideration anticipated future experience as well as past experience. As a guide to our thinking, we have attempted to learn what interest and salary scale assumptions are being used to anticipate the future in other public and private pension fund valuations.

A comprehensive study made in 1982 of 130 private pension plans based on 1981 actuarial reports indicated that the average interest assumption used was 6.4% and that the average salary scale assumption was 4.6%. We have also made a study of large public employee pension plans and found that the actuarial assumptions used for the rate of interest and rate of salary increase were somewhat higher. These ranged from 7% to 8% for interest and from 5-1/2% to 7% for salary. The Greenwich Research Associates Report to Participants PUBLIC PENSION FUNDS 1984 surveys state and municipal pension plans. The average plan surveyed is .55.5% funded (based on projected pensions). The average actuarial interest rate of return assumption was 6.9% and the average salary increase assumption was 5.4%. The Greenwich report LARGE CORPORATE PENSIONS 1983 indicates an average interest assumption for funding of 7.1% and an average salary increase assumption of 5.5%. For final pay benefit formula plans, similar to this plan, the average assumptions for interest and salary were 7.2% and 5.8%. Based on these studies, it is our opinion that for the Laborers' Fund, having evaluated past experience of investment earnings and having given effect both to locked in interest rates and to generally expected future interest earnings, a 6.75% future interest assumption is a reasonable rate for valuation purposes, and a 6% per year salary scale assumption is reasonable considering the generally accepted views on future salary increases for our national economy. These two assumptions could be characterized as being middle of the road.

The liabilities and costs in this report were based in part on a 6.75% per year interest assumption and a 6% per year salary scale assumption. All other assumptions are the same as those used for the last report.

In our opinion, these actuarial assumptions in the aggregate are reasonable, taking into account fund experience and future expectations and, represent the best estimate of anticipated experience.

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#### ALTERNATIVE VALUATIONS:

We are making alternative valuations giving effect to different rates of salary increases and investment earnings to serve as a guide to the Retirement Board and ourselves in estimating the effects on costs of possible variations in future experience from the assumptions used. These will be submitted at a later time.

#### ACTUARIAL OBLIGATIONS OF THE FUND

The value of all future pension payments calculated using the actuarial assumptions contained in this report is the sum of two major groups of beneficiaries.

#### 1) Retired Lives

For those currently receiving known benefits - i.e., current retirees, widows and children - the value is determined based on estimated future longevity with the future benefit payments discounted to the present time at the assumed investment earnings rate.

Group	Number	Present Value of Future Benefits
Employee Annuity	2,469	\$ 96,168,478
Annuity Increase	2,050	17,522,931
Future Widow Benefit	1,421	9,278,075
Lump Sum Death Benefit	0	0
Health Insurance Supplement	0	0
Widow Annuity	1,228	19,742,028
Widow Compensation	2	2,127
Total Retired Reserve		\$142,713,639

#### 2) Active Lives

The value of future payments for active employees who will receive benefits in the future is estimated, since the amount of pension is only known at the actual time of retirement. This estimate is made using various actuarial assumptions as to future salary increases, probable retirement age and chance of death, withdrawal or disablement before retirement. For active employees, the goal is to have enough assets on hand at retirement to pay for all future benefits promised. To provide for an orderly accumulation of these required assets, an actuarial funding method is used. Using the Entry Age Normal Funding Method, assets are allocated as a level amount (expressed as a percentage of salary) over the employee's working lifetime. These allocated costs are called Normal Costs and are sufficient if set aside each year for an employee newly hired to accumulate to the amount required to fully fund his benefits when and if he retires. For an

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employee half way completed with his working lifetime, roughly half of the required retirement assets should have been accumulated. The actuarial reserve (amount of assets needed now) is then the present value of future benefits less the value of future Normal Costs to be paid.

Group	Present Value of Benefits	Reserve
Employee Annuity	\$ 344,241,742	
Annuity Increase	73,682,566	
Future Widow Benefit	19,687,539	
Lump Sum Death Benefit	0	
Health Insurance Supplement	0	
Widow of Employees - Dying in service	13,001,029	
Widow Compensation - Duty Death	0	
Miscellaneous	76,398,178	
Total Active	\$ 527,011,054	
Total Active and Retired Present Value of Benefits	\$ 669,724,693	
	Less Present Value of Future Normal Costs	\$
	Net Active Reserve	319,742,325
	Net Active Reserve & Retired	462,455,964
	Less Present Assets	356,809,111
	Unfunded Liability	\$ 105,646,853

The difference between the sum of the actuarial reserve for active and retired lives (sometimes called the Accrued Actuarial Liability) and the present assets is called the Unfunded Liability. The Unfunded Liability depends upon the benefits, the characteristics of the covered group of employees and retirees, the actuarial assumptions and the actuarial funding method. The Unfunded Liability can be thought of as the amount of assets that will be needed in future years that when added to the future Normal Costs determined by the actuarial funding method, will provide for all future benefits payable.

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#### ACTUARIAL BALANCE

For the pension fund to be in actuarial balance, the present value of all benefits payable in the future must equal the sum of present assets plus present value of all contributions payable in the future.

The future contribution from the employee and employer must provide for the payment of normal costs for amortization of the unfunded liability on some reasonable basis.

Present Value of		<u>% of Total</u>
Present Assets Future Employee contributions Future Employer contributions Deficiency	\$ 356,809,111 122,317,123 160,871,481 29,726,978	53.3% 18.3 24.0 4.4
TOTAL	\$ 669,724,693	100%

<u>Present Value of</u>		Actuarial <u>Assets</u>	% of <u>Total</u>	Actuarial Liabilities	% of <u>Total</u>
Benefits Retired lives Active lives				\$ 142,713,639 527,011,054	21.3% 78.7%
Present Assets	\$	356,809,111	53.3%		·
Normal Costs		207,268,729	30.9%		
Unfunded Liability	<b>umat</b> ia	105,646,853	15.8%	 	
Total	\$	669,724,693	100%	\$ 669,724,693	100%

Following are pie charts illustrating:

Actuarial Liabilities Actuarial Assets Actuarial Cost Method



\$ In Millions \$ 142.7 - Retired 🗄 💲 111.9 - Contributions 🛛 \$ 179.8 – Vested RG2/23 \$ 235.3 - Future



In Millions \$ \$ 356.8 - Assets \$ 122.3 - PV Employee \$ 160.9 - PV Employer \$ 29.7 - Deficiency

RG3/23



\$ In Millions \$ 356.8 - Assets \$ 105.7 - Unfunded Liability \$ 207.2 - Normal Cost

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#### THREE METHODS OF FINANCING THE UNFUNDED LIABILITY:

1.) The method of valuation used for this report, is the same as for the last report. It is known as a <u>Normal Cost-plus-Interest Basis</u> and is intended to continue the current provisions of the Article governing the fund in full force and effect on a permanent basis - explained in detail under Actuarial Assumptions and Methods. The method is also referred to as a middle-of-the-road method of funding since the unfunded liability is recognized but not amortized.

The normal cost plus interest only method of funding is that recommended by the Illinois Public Employees Pension Laws Commission. It was also the minimum required for private pension plans for IRS qualification before ERISA.



2.) ERISA now requires that initial unfunded liability be amortized over a forty year period.

The normal cost plus interest method and the <u>Normal Cost Plus 40 Year</u> <u>Amortization method</u> both express the past service costs as a level annual dollar amount. Consequently, as the total payroll increases in the future, the level annual amount becomes a decreasing percent of the total payroll. Under both methods, level dollar amounts represent a greater percent of payroll initially and a decreasing percent of payrolls as future payrolls increase.



3.) An alternative method for funding that is receiving increased attention for public employee pension plans is a method which sets the funding standard cost objective as a Level Annual Percent Of Payroll rather than as a level annual amount. This method will result in increasingly greater dollar amounts each year as payrolls increase.



This constant percent of payroll method is not an acceptable method under ERISA. It may be more acceptable in view of the presumably permanent nature of public retirement systems, and the desire to place a relatively constant tax burden (as percentage of salary) on future generations of taxpayers. Please note that if this amount is recomputed each year with the same amortization period, the unfunded liability will never be amortized. For the Retirement Board's guidance, we have estimated the financial effects of different amortization methods. These 3 methods meet the requirements set forth in Illinois Revised Statutes, Chapter  $108\frac{1}{2}$ , Article 22-501.10. The results are given in the following table:

	Required 1985 Tax Levy	Ultimate Required <u>Multiple</u>	Unfunded Liability Will	Portion Required For Amortization Of Unfunded Liability*
1) Normal Cost + Interest Only	\$15,664,503	1.58	Remain constant at \$105,646,853	\$6,900,796
2) ERISA: Normal Cost + 40 Year Amortization	\$16,233,340	1.63	Decrease to \$0	\$7,446,879
3) Normal Cost + 40 Yr. Level % of Payroll Increasing 4% a Year (Inflation Only)	\$12,908,902	1.30	Increase to \$145,282,348 in 20 years and decrease thereafter	\$4,255,419 in 1985 increases to \$20,699,295 in 40 Years
4) Present Law (Includes Park)	\$15,647,000	1.37		

\* Assuming all valuation assumptions are realized and no future benefit liberalization.

The preceding comparative table indicates the need to take into consideration in the funding policy future annual costs expressed both as a level annual dollar amount and as a level annual percent of payroll.

The level annual percent of payroll method results in substantially increasing costs and contributions in future years, especially at the end of a funding period.

In determining funding policy it is essential to provide a margin of safety for unfavorable operating experience such as salaries over anticipated salaries, decreasing age of retirement, increasing longevity, declining fund membership.

#### **REQUIRED ACTUARIAL CONTRIBUTION:**

Based on the <u>Normal Cost-Plus-Interest-Method</u> of funding we find that the tax levy for 1985 should be \$15,664,503 which amount includes a 4% reserve for loss on collection. This amount is based on an annual payroll as of December 31, 1984 of \$131,327,856 and an active membership of 5,341 persons. The detail is as follows:

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#### Detail of Annual City Contribution:

Deve	the of mindul of by concernation.	Amount	Percent of Salary	Dollar <u>Per Active</u>
1.	Normal Cost - For Current Service	\$19,299,995	14.70%	\$3,614
2.	<u>6 3/4% Interest on Unfunded Liability</u>	\$ 6,900,796	5.25%	\$1,292
3.	Total Actuarial Requirement (1)+(2)	\$26,200,791	19.95%	\$4,906
4.	Employee Contributions	\$11,162,868	8.50%	\$2 <b>,0</b> 90
5.	Employer Requirement (3)-(4)	\$15,037,923	11.45%	\$2,816
6.	Expected Net Employer Contribution from 1985 Tax Levy of \$15,647,000 after a 4% loss	<u>\$15,021,120</u>	11.44%	\$2,812
7.	Expected Net Annual Deficiency	\$ 16,803	.01%	\$3
8.	Tax Levy Required (assume 4% loss)	\$15,664,503		•
9.	Increase in Tax Levy Required	\$ 17,503		
10.	Required Ultimate Multiple	1.58		
11.	Present Authorized Ultimate Multiple	1.37		
12.	Increase in Ultimate Multiple Needed	.21		

The Illinois Public Employees Pension Laws Commission Impact Statement - appended to this report - illustrates both the present financial position and the direction of the financial condition.

The above table indicates the need for additional contributions to maintain the fund on an actuarial basis.

The following bar chart illustrates the annual actuarial cost (composed of current service cost and past service cost) to be paid for by the employee and the employer. Since the annual cost is not being met, there is a deficiency. The employer portion is provided by tax levy. The last column represents the amount of tax levy required to meet the costs and therefore eliminate the deficiency.

LABORERS' A & B FUND OF CHICAGO Annual Actuarial Cost 1985 (Normal Cost plus Interest Only)



\$

RG5/23

Detail of I	Normal Cost (given above)	% Salary	<u>\$ Per Active</u>
Retiremen Post-Reti Spouse An Child's A Ordinary Duty Disa Refunds Widows Co Expense o	Disability	$7.71\% \\ 1.65 \\ .30 \\ .40 \\ .07 \\ .96 \\ .55 \\ 2.38 \\ 0 \\ .58 \\ .10$	\$1,895 406 73 97 17 236 136 585 0 144 25
CHANGE IN	THE UNFUNDED LIABILITY:	14.70%	\$3,614
	unfunded liability as of December 31, l, 1983, it was \$123,306,991.	, 1984 is \$105	,646,853. As of
<u>Detail of (</u>	Change in Unfunded Liability:		
1. Increas	se in Salaries under 6% Assumed	(\$13,8	93,652) Decrease
2. Investm	nent Yield over 6.75% Assumed	( 6,9	15,903) Decrease
1984 T Less E Tax	in Annual Contribution: Total Actuarial Requirement\$25,81 Employer Net to Fund 1984 Levy	6,619	08,948) Decrease
4. Miscell	aneous Actuarial Changes	3,8	58,364 Increase
Net Change	in Unfunded Liability	(\$17,6	60,138) Decrease

#### FUNDED RATIO:

The ratio of assets to liabilities is 77.16% as of December 31, 1984 - and was 72.27% as of December 31, 1983. This ratio represents the extent to which present and future benefit promises are secured by present assets. The funded ratio increased because assets increased 11.0% while the liabilities increased 4.0%.

#### RATIO OF ACTIVE EMPLOYEES TO ANNUITANTS & BENEFICIARIES:

The ratio of active employees to annuitants and beneficiaries is 1.34 as of December 31, 1984 and was 1.39 as of December 31, 1983. This ratio illustrates the relationship between the contributors and the beneficiaries.

#### TERMINATION LIABILITY:

A measure of Plan funding is to compare the assets to liabilities for present annuitants and the amount of contributions of active and inactive employees. This amount would be a minimum measure of what it would cost to terminate the Plan as of the valuation date.

	Last Year	This Year
Liability for retired annuitants, widows & spouses of annuitants	\$128,901,825	\$142,713,639
Salary Deductions Contributed by Active Fund Members	<u>\$106,730,627</u>	\$111,888,574
Total Assets at Book Value	\$235,632,452 \$321,404,078	\$254,602,113 \$356,809,111
Excess Upon Termination	\$ 85,771,626	\$102,206,998
Available Assets For Actives (with retired lives 100% funded)	\$192,502,253	\$214,096,472
Available Per Active Employee	\$ 35,491	\$ 40,085
Refundable per Active Employee	\$ 19,677	\$ 20,949
Ratio of Available to Refundable	180%	191%

The following chart illustrates the remaining assets after terminating the plan.



#### VESTED LIABILITY

We have computed the value of vested benefits for active employees. That is, an employee who is eligible to retire, either with an immediate or deferred retirement annuity, is assumed to retire and is valued at the estimated amount of annuity for the employee's life. The value of estimated post-retirement annuity increase and estimated spouse annuity is added. No death or disability benefits for those dying or becoming disabled in the future are included. Active employees not currently eligible for a retirement benefit are valued at the amount of their refundable accumulated salary deductions with statutory interest. Retired lives are entirely vested. The total vested liability computed using the actuarial assumptions of interest and mortality in this report is greater than the Termination Liability used in previous reports. This is because the value of a retirement annuity for an eligible employee is greater than the amount of his accumulated salary deductions.

	Last Year	<u>This Year</u>
Liability For Retired Annuitants, Widows and Spouses of Annuitants	\$128,901,825	\$142,713,639
Value of Active Employees Eligible To Retire Accumulated Salary Deductions of Active	\$226,975,458	\$229,492,171
Employees Eligible for Refund And not Annuity	\$ 58,102,306	\$ 62,190,440
Active Vested Liability	\$285,077,764	\$291,682,611
Total Vested Liability	\$413,979,589	\$434,396,250
Assets at Book Value	\$321,404,078	\$356,809,111
Unfunded Vested Liability	\$ 92,575,411	\$ 77,587,139

The average amount of assets required per active employee to provide for vested benefits as of the valuation date is \$54,612. This should be compared to the average amount of assets required per active employee to fully fund the present amount required to provide for future projected retirement annuity assuming future service and salary increments - using the Entry Age Normal funding method described in the actuarial assumptions and methods. This amount per active employee is \$59,866.

#### THE FUTURE

As in the past - a continuous review of the Fund's operating experience is needed. The rates of salary increases, rates of retirement and investment earnings are of critical importance in cost estimates. Costs will need to be adjusted as these factors vary.

For example, for every \$1.00 in salary increase over the 6% increases assumed in the salary scale the unfunded liability will be increased by about \$2.44. This will be in addition to the additional current annual service cost for every dollar in salary over the 6% salary scale assumed.

These additional costs will be reduced to some extent by the annual amount of investment income earned over the assumed 6.75% used for valuation purposes. The extent of the reduction will depend on the relative amounts of these two items.

The alternative funding methods indicate the imperative need to monitor Fund income if future Fund obligations are to be met.

The disadvantage of funding methods that use the level percent of payroll funding of past service is that the unfunded liability will continually increase if salaries continue at the predicted rates. Subject, however, to projections of contributions and disbursements for potential cost flow problems the level percent of payroll method would appear to provide a long range level funding method on a minimum funding basis whether for interest only or over 40 year period.

Respectfully submitted,

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Donald F. Campbell, F.C.A., M.A.A.A. Enrolled Actuary # 1248

Donald P. Campbell, F.S.AJ, M.C.A., M.A.A.A. Enrolled Actuary #1498

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#### ACTUARIAL BALANCE SHEET

AS OF

DECEMBER 31, 1984

<u>ASSETS</u>

AND

LIAB ILITIES

# LIABILITIES AND FUND BALANCES

## ACTUARIAL BALANCE SHEET AS OF DECEMBER 31, 1984

ANNUITY PAYMENT FUND ACCOUNT: (Based on 4% Amer. Exp. & 3% Comb.) Employee Annuitants Employee Annuities Fixed Spouse Annuitants Spouses' Annuities Fixed Total Annuity Payment Fund	\$43,511,838.00 1,680,675.12 16,875,441.76 9,231,365.76	\$ 71,299,320.64
SALARY DEDUCTION FUND ACCOUNT: Employees Spouses of Employees Total Salary Deduction Fund	\$80,313,067.85 17,967,771.89	\$ 98,280,839.74
CITY CONTRIBUTION FUND ACCOUNT: Employees Spouses of Employees Supplemental Annuities Total City Contribution Fund	\$75,495,665.12 24,754,548.03 3,549.78	\$100,253,762.93
OTHER RESERVES: Supplementary Payment Reserve Annuity Payment Fund Account Total Other Reserves	\$ 70,232.43 10,694,898.10	\$ 10,765,130.53
PRIOR SERVICE FUND ACCOUNT: (Based on 4% Amer. Exp. & 3% Comb.) Employee Annuitants Employee Annuities Fixed Spouse Annuitants Spouses' Annuities Fixed Salary Deductions 3% Annuity Increase Estimated Excess Liability (Note 1) Total Prior Service Account	\$74,117,424.72 9,716,846.28 3,243,145.92 5,964,256.01 7,770,456.75 81,044,780.41	\$181,856,910.09
TOTAL LIABILITIES		\$462,455,963.93
Obligations of Fund for Prior Service Liabil	ities (Note 1)	(\$105,646,852.82)
TOTAL NET LIABILITIES AND FUND BALANCES		\$356,809,111.11

Note 1 - The letter of transmittal attached hereto sets forth the manner in which this liability was determined.

INCOME

YEAR 1984

INCOME

AND

EXPENDITURES

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LABORERS' AND RETIREMENT BOARD EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO

## **EXPENDITURES FOR YEAR 1984**

#### TOTAL INCOME FORWARDED

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\$55,360,482.73

ANNUITIES AND BENEFITS PAID: Employees' Annuities Spouses' Annuities Compensation Annuities Children's Annuities Ordinary Disability Duty Disability Supplementary Payments	\$12,236,436.44 2,229,432.40 00 91,720.00 1,257,938.44 726,190.21 47,458.32	· ·
Total Benefits Paid Reciprocal Act Re-	\$16,589,175.81	
imbursements	( 6,865.88)	
Net Benefits Paid	\$16,582,309.93	
EXPENSE OF ADMINISTRATION: Salaries: Regular Employees Blue Cross & Blue Shield Services: Legal Expense Medical Expense Actuarial & Data Processing Auditing Investment Office Supplies and Equipment Printing and Stationery Postage Rent & Electricity Office Equip. Repair Telephone & Telegraph Conference & Association Exp. Insurance Premiums Petty Cash Fund Miscellaneous	$\begin{array}{c} 129,498.50\\ 13,196.00\\ 17,333.14\\ 14,526.41\\ 203,179.24\\ 22,500.00\\ 266,000.00\\ 12,271.50\\ 14,185.93\\ 14,000.00\\ 46,093.80\\ 0.00\\ 1,217.65\\ 7,388.40\\ 476.60\\ 100.00\\ 4,517.81\\ \end{array}$	
Total Expenses	\$ 766,484.98	
REFUNDS	3,124,454.08	
TOTAL EXPENDITURES		\$20,473,248.99
EXCESS INCOME OVER EXPENDITURES		\$34,887,233.74
Net Change in Reserve for Loss or and Taxes Receivable for Prior		517,798.86
INCREASE IN NET ASSETS FOR YEAR		\$35,405,032.60
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#### COMPARATIVE ANALYSIS

## YEAR 1984

ASSETS

AND

LIAB ILITIES

# COMPARATIVE ANALYSIS

## LIABILITIES AND FUND BALANCES

			_
			Increase
LIABILITY RESERVES:	01/01/1984	12/31/1984	(Decrease)
ANNUITY PAYMENT FUND:			
Employee Annuitants	\$ 39,169,219	\$ 43,511,838	\$ 4,342,619
Emp. Annuities Fixed	2,217,732	1,680,675	( 537,057)
Spouse Annuitants	15,542,916	16,875,442	1,332,526
Spouses' Annuities Fixed	8,018,680	9,231,366	
spouses Annutures liked	0,010,000	9,231,300	1,212,686
Total	\$ 64,948,547	\$ 71,299,321	6,350,774
		•	
SALARY DEDUCTION FUND ACCOUNT:			
Employees	\$ 76,378,344	\$ 80,313,068	\$ 3,934,724
Spouses of Employees	16,980,666	17,967,772	987,106
77 - 4 - 1	¢ 00 050 010	* ***	<b>* * 0</b> 01 000
Total	\$ 93,359,010	\$ 98,280,840	\$ 4,921,829
CITY CONT. FUND ACCOUNT:			
Employees	\$ 72,001,319	\$ 75,495,665	\$ 3,494,346
Spouses of Employees	23,520,596	24,754,548	1,233,952
Supplemental Annuities	13,204	3,550	( 9,655)
Total	\$ 95,535,119	\$100,253,763	¢ / 710 6//
Ισται	\$ 30,000,113	\$100,200,700	\$ 4,718,644
OTHER RESERVES:			
Supplemental Pymt. Res.	\$ 37,691	\$ 70,232	\$ 32,542
Annuity Fund Account	9,763,423	10,694,898	931,474
Total	\$ 9,801,114	\$ 10,765,131	\$ 964,016
10001	Ψ 230013114	ψ 1037003101	ψ 504,010
PRIOR SERVICE FUND ACCOUNT:			
Employee Annuitants	\$ 59,938,262	\$ 74,117,425	\$14,179,163
Emp. Annuities Fixed	8,942,253	9,716,846	774,594
Spouse Annuitants	3,008,636	3,243,146	234,510
Spouses' Annuities Fixed	5,208,342	5,964,256	755,914
Sal. Ded. 2% Annuity	7,358,910	7,770,457	411,546
Estimated Excess Liability	96,610,876	81,044,780	( 15,566,096)
			4 <b>7</b> 00 000
Total	\$181,067,279	\$181,856,910	\$ 789,631
TOTAL LIABILITIES	¢111 711 060	¢162 155 061	\$17,744,894
IVIAL LIADILITIES	\$444,711,069	\$462,455,964	\$11,144,054
UNFUNDED OBLIGATIONS	(\$123,306,991)	(\$105,646,853)	\$17,660,138
on one operantiono	(#12030003001)	(410030103000)	421 5000 3100
TOTAL NET LIABILITIES	\$321 404 079	\$356,809,111	\$35,405,033
INING WEI FIUNTETITES	\$321,404,079	φ000,000,111	ψυυ,τυυ,υυυ

#### TAXES RECEIVABLE

#### DECEMBER 31, 1984

Year	Uncollected Taxes 12-31-84	Estimate for Loss 12-31-83	Additional Est. Setup 12-31-84	Total Est. for loss 12-31-84	Taxes Collectible 12-31-84
CITY	¢ ,	•			
1980 1981 1982 1983 1984	\$ 431,263.24 452,139.79 343,435.18 622,953.05 13,277,000.00 \$15,126,791.26		\$ 14,247.76 45,817.00 214,493.00 115,465.00 (663,850.00) (\$273,827.24)	(\$ 431,263.24) ( 445,565.00) ( 321,740.00) ( 461,860.00) ( 663,850.00) (\$2,324,278.24)	6,574.79 21,695.18 161,093.05
1984	<u>\$ 2,329,000.00</u> \$17,455,791.26	Replacement tax	due from State	2	<u>\$ 2,329,000.00</u> \$15,131,513.02
PARK	DISTRICT:				
1980 1981 1982 1983 1984	\$ 0.00 1,167.88 1,113.18 1,983.62 32,000.00	\$ 0.00 ( 1,266.83) ( 1,350.00) ( 1,450.00)	\$ 0.00 98.95 236.82 0.00 ( 1,600.00)	\$ 0.00 ( 1,167.88) ( 1,113.18) ( 1,450.00) ( 1,600.00)	0 00 533.62
	\$ 36,264.68	(\$ 4,066.83)	(\$ 1,264,23)	(\$ 5,331.06)	\$ 30,933.62

TOTAL:

<u>\$17,492,055.94</u> (\$2,054,517.83) (\$275,091.47) (\$2,329,609.30) \$15,162,446.64

Note: The loss on the 1984 tax levy was 5%. Due to the 100% collection of the personal property replacement tax, the <u>overall</u> loss is 4%. The statutory requirement of \$15,638,000.00 is the sum of \$15,606,000.00 plus \$32,000.00.

## MEMBERSHIP STATISTICS

# <u>YEAR 1984</u>

		Number at Beginning of Year	Increases	Decreases	Number At End of Year
A.	Changes in Active Participants				
	Male	4,983	590	644	4,929
	Female	441	_57_	86	412
	Total	5,424	<u>647</u>	730	5,341
Β.	Changes In Annuitants & Beneficiari	es			
	Employee Annuitants	2,342	216	172	2,386
	Spouse Annuitants	1,196	78	64	1,210
	Children's Annuities	112	19	35	96
	Ordinary Disability Benefits	110	47	46	111
	Duty Disability Benefits	57	675	655	77
	Reversionary (Beneficiaries)	2	1	0	3
	Reciprocal: Employee Spouse	77 13	7 2	1 0	83 15
	Widow Compensation Annuities	3	1	2	2
	Total	3,912	407	336	3,983
С.	Ratio of Active Participants to Annuitants & Beneficiaries	<u>1.39</u>			<u>1.34</u>

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## SALARY AND AGE STATISTICS

## YEAR 1984

### Ages and Salaries as of December 31, 1984

## Male

Ages	Number	Annual Salaries	Average Annual <u>Salaries</u>
Under 20 20 - 24 25 - 29 30 - 34 35 - 39 40 - 44 45 - 49 50 - 54 55 - 59 60 - 64 65 - 69 70 & Over Without Record Total	2 254 622 675 500 457 484 504 650 489 173 71 48 48 4929	\$ 56,784 6,170,400 15,814,584 17,450,208 13,105,176 12,030,312 12,716,496 12,691,560 16,736,304 12,347,304 4,380,432 1,833,192 1,137,600 \$126,470,352	\$28,392 24,293 25,425 25,852 26,210 26,325 26,274 25,182 25,748 25,250 25,320 25,820 23,700 \$25,658
	Female	·	
20 - 24 25 - 29 30 - 34 35 - 39 40 - 44 45 - 49 50 - 54 55 - 59 60 - 64 65 - 69 70 & 0ver Total	$ \begin{array}{r} 4 \\ 10 \\ 5 \\ 6 \\ 8 \\ 25 \\ 48 \\ 98 \\ 143 \\ 61 \\ - 4 \\ - 412 \\ \end{array} $	\$ 48,984 190,752 104,856 119,808 145,296 364,488 617,424 1,133,736 1,494,792 588,576 48,792 \$ 4,857,504	\$12,246 19,075 20,971 19,968 18,162 14,580 12,863 11,569 10,453 9,649 12,198 \$11,790
TOTAL MALE AND FEMALE	5341	<u>\$131,327,856</u>	<u>\$24,589</u>

## SALARY AND AGE STATISTICS

# YEAR 1984

### Ages at Entrance

### MALE

## FEMALE

		Annua 1		Annua 1
	Number	Salaries	Number	<u>Salaries</u>
Under 25	1,680	\$ 44,407,872	16	\$ 245,784
25 - 29	1,003	25,876,464	36	549,816
30 - 34	677	16,993,152	58	771,408
35 - 39	472	11,988,984	108	1,212,480
40 - 44	440	10,913,088	124	1,349,208
45 - 49	310	7,824,000	56	556,896
50 - 54	169	4,080,000	8	108,624
55 - 59	102	2,550,096	4	44,568
60 & Over	28	699,096	2	18,720
W/O record	48	1,137,600		
Totals	4,929	\$126,470,352	412	\$4,857,504
	•			
Average Annual Salary		\$25,658		\$11,790
Average Attained Age		44.0		57.4
Average Service		13.1		19.0
Average Age at Entrance	1	30.9	· .	38.4

#### AGE AND SERVICE DISTRIBUTION

# YEAR 1984

Average Salaries by Age And Service Grouping (Showing The Number of Members and The Average Salaries of Male and Female Combined)

Ages	<u>Under 1</u>			Year	rs of Se	ervice				_
. 0.0. 20	Under 1 1	$\frac{1-4}{1}$	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	25-29	<u>30-34</u>	<u>35+</u>	<u>Total</u> 2
00-20	28392	28392								28392
20-24	15	196	47							258
20-24	15 21330	24082	25095							24106
25-29	25	225	344	38						632
	26055	24543	25592	27055			•			25325
30-34	17	173	302	174	14					680
	24584	24472	25648	27447	27288					25816
35-39	14							•		506
	22437	24849	25846	26711	27624	34608				26136
40-44	10	81	114	_84	82	87	7			465
	27341	24358	24528	26610	27203	28250	29911			26184
45-49	2 25092	50 22064	116	82	119	99 26422	39 20110	2		509
· · · · · · · · · · · · · · · · · · ·										
50-54	4 27078	45 24.638	89 <sup>.</sup> 24141	87 24485	85 23171	101	85 24486	56 272 79		552 24110
55-59	3 24040	30 23538	84 24604	87 24662	112 21240	123 20209	97 23375	170 26513	42 29529	748 23890
				-						
60-64					120 19752					
65-69		Λ	20	20	44	E0	27	20	10	224
05-09		23172	23401	23829	20572	59 16964	24019	22765	21858	21235 21235
70+		1	3	Q	11	14	11	17	a	75
,	,	29736	20680	26869	24663	24014	25999	26893	21971	25093
W/0	1	15	15	12		2	1	2		48
	13008	22765	23104	26248		27528	13656	26436		23700
No.	92	954	1349	819	673	634	351	363	106	5341
Sal.	24443	24346	25188	26061	23675	21709	24202	26032	27253	24589 45.1
Age Servic	е									13.6

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## ANNUITANTS CLASSIFIED BY AGE AS OF DECEMBER 31, 1984

Ages	Mal Numb		Average Annual <u>Payments</u>	Female Number	Annual Payments	Average Annual Payments
25 - 29 30 - 34 35 - 39	1	\$ 600.00 1,200.00	\$ 600.00 1,200.00		\$	\$
40 - 44 45 - 49	1	1,200.00	1,200.00			
50 - 54	4	6,393.72	1,598.43	~		
55 - 59	42	235,278.48	5,601.87	5	7,096.08	1,419.22
60 - 64 .	207	1,969,327.44	9,513.66	49	162,702.24	3,320.45
65 - 69	429	3,378,973.80	7,876.40	191	674,535.24	3,531.60
70 - 74	401	2,754,279.00	6,868.53	256	711,029.88	2,777.46
75 - 79	248	1,440,007.44	5,806.48	200	435,117.72	2,175.59
80 - 84	141	619,297.68	4,392.18	113	242,493.48	2,145.96
85 - 89	58	234,577.44	4,044.44	63	113,054.52	1,794.52
90 - 94	31	90,058.68	2,905.12	20	29,958.00	1,497.90
95 - 99	5	12,279.48	2,455.90	1	1,778.64	1,778.64
100-105	1	341.76	341.76	1	2,278.80	2,278.80
Totals	1570	\$10,743,814.92	\$6,843.19	899	\$2,380,044.60	\$2,647.44
Average Ag	je		72			<u>74</u>

#### Retirement Annuities

Spouses Annuities (Not Including Compensation)

Ages	Male <u>Numbe</u> r	Annual Payments	Average Annual Payments	Female Number		Average Annual Payments
20 - 24		\$	\$		\$	\$
25 - 29 30 - 34				4	4,800.00	1,200.00
35 - 39				7	11,223.60	1,603.37
40 - 44				15	25,214.76	1,680.98
45 - 49				22	38,063.52	1,730.16
50 - 54	· 1	1,200.00	1,200.00	42	75,444.96	1,796.31
55 - 59	1	2,380.80	2,380.80	104	241,197.48	2,319.21
60 - 64				174	397,636.80	2,285.27
65 - 69	4	5,124.12	1,281.03	249	507,796.80	2,039.34
70 - 74	4	4,800.00	1,200.00	213	419,377.80	1,968.91
75 - 79				187	320,444.64	1,713.61
80 - 84		. <b>.</b> .		105	137,434.32	1,308.90
85 - 89				68	88,388.88	1,299.84
90 - 94		۹		19	14,712.72	774.35
95 - 99				6	5,196.84	866.14
100-105	· <u> </u>		·	3	4,555.80	1,518.60
Totals	10	<u>\$ 13,504.92</u>	\$1,350.49	1,218	\$2,291,488.92	\$1,881.35
Average Ag	le		67		· · · · · · · · · · · · · · · · · · ·	69
			China the second se			

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### NEW ANNUITIES GRANTED

## DURING 1984

	Male Annuitants		Female Annuitants		Widows of Deceased _Employees		Ē	Widows of Deceased Innuitants
Number Retired Average Attained Age		169 65.6		54 66.7		24 55.2		56 68.6
Average Length of Service		26.2		22.5	*	21.3		N/A
Average Annual Salary (4 out of 10)	\$	20,232	\$	10,368		N/A		N/A
Average Annual Final Salary	\$	23,772	\$	11,592		22 <b>,</b> 704		N/A
Total Annual Annuity	\$	1,822,366	\$	235,198	\$	91 <b>,</b> 836	\$	159,121
Average Annual Annuity	\$	10,783	\$	4,356	\$	3,827	\$	2,841
Total Liability (6.75% UP-1984)	\$2	0,163,027	\$2	,729,934	\$	995 <b>,</b> 975	\$1	,343,040
Average Liability	\$	119,307	\$	50,554	\$	41,499	\$	23,982
Total Cost For Income Tax Purposes	\$	3,137,364	\$	426,389	\$	386 <b>,</b> 604		N/A
Average Cost	\$	18,564	\$	7,896	\$	16,109		N/A
Expected Future lifetime (yrs.)		14.69		17.42		26.04		16.02
Payback Period (yrs.)		1.72		1.81		4.21		N/A
Replacement ratio		45.4%		37.6%		N/A		N/A
Liability divided by Salary		5.02		4.36		N/A		N/A
## HISTORY 1965 to 1984

### AVERAGE ANNUAL SALARIES ENTIRE FUND

Year End	Total Members In Ser- vice(1)	Percentage Increase Of Preceding Year	Total Salaries	Percentage Increase Of Preceding Year	Average Annual Salaries	Percentage Increase Of Preceding Year
1965	7,936	0.9%	\$ 45,872,832	3.2%	\$ 5,780	2.3%
1966	7,995	0.7	47,598,552	3.8	5,954	3.0
1967	8,102	1.3	52,268,304	9.8	6,451	8.3
1968	7,891	(2.6)	56,165,136	7.5	7,118	10.3
1969	7,777	(1.4)	60,523,296	7.8	7,782	9.3
1970	7,220	(7.2)	62,916,768	4.0	8,714	12.0
1971	6,864	(4.9)	66,142,320	5.1	9,636	10.5
1972	6,971	1.6	69,950,692	5.8	10,035	4.1
1973	6,752	*(3.1)	73,108,848	4.5	10,828	7.9
1974	6,638	(1.7)	78,526,728	7.4	11,830	9.3
1975	7,032	5.9	89,276,280	13.7	12,696	7.3
1976	6,811	(3.1)	90,487,008	1.4	13,285	4.6
1977	6,752	(0.9)	98,029,296	8.3	14,519	9.3
1978	6,613	(2.1)	103,399,152	5.5	15,636	7.7
1979	6,175	(6.6)	105,825,264	2.3	17,138	9.6
1980	5,847	(5.3)	108,854,496	2.9	18,617	8.6
1981	5,765	(1.4)	118,054,512	8.5	20,478	10.0
1982	5,970	3.6	134,293,920	13.8	22,495	9.8
1983	5,424	(9.1)	131,355,840	(2.2)	24,218	7.7
1984	5,341	(1.5)	131,327,856	(0)	24,589	1.5

Average Increase (Decrease) for the last 5 years

(2.7)%

4.6%

7.5%

(1) Includes those members who were on disability.

(2) Average annual increase in salary 1965 - 1984 about 7.92% compounded.

# HISTORY OF TOTAL ANNUITIES

# Employee Annuitants (Male & Female)

Year	Number Of	Total	Average
End	<u>Annuitants</u>	<u>Annuities</u>	<u>Annuities</u>
1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1978 1979 1980 1981 1982	1,593 1,651 1,675 1,724 1,777 1,831 1,907 2,009 2,009 2,087 2,188 2,227 2,379 2,420 2,419	\$2,495,396 2,779,061 2,927,594 3,373,308 3,781,854 4,331,609 4,887,747 5,633,971 6,287,310 7,162,866 7,976,776 8,958,700 9,950,080 10,725,716	\$1,566 1,683 1,748 1,957 2,128 2,366 2,563 2,804 3,013 3,274 3,582 3,766 4,112 4,434
1983	2,419	11,550,456	4,775
1984	2,469	13,123,860	5,315

# <u>Spouse Annuitants</u> (Not Including Compensation)

1969	909	\$ 640,079	\$ 704
1970	928	673,352	726
1971	921	711,618	77 3
1972	932	775,469	832
1973	967	860,410	890
1974	997	959,632	963
1975	1,022	1,053,816	1,031
1976	1,041	1,142,064	1,097
1977	1,059	1,267,194	1,197
1978	1,075	1,381,263	1,285
1979	1,111	1,523,370	1,371
1980	1,154	1,689,076	1,464
1981	1,153	1,768,868	1,534
1982	1,174	1,927,743	1,642
1983	1,211	2,128,737	1,758
1984	1,228	2,304,994	1,877

HISTORY OF INVESTMENT YIELDS

	Nonrecurring	Gains and Losses are Excluded from	n Income		
Year End		Investment Yield on Total Assets	Investment Yield on Invested Assets		
1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983		4.75% 5.47 5.76 6.58 7.25 7.23 7.01 6.61 7.38 7.69 8.46 9.88 9.37 (9.30)*	4.99% 5.70 6.03 6.98 7.73 7.65 7.35 6.97 7.82 8.20 9.11 10.47 9.79 (9.72)*		
1984		9.67 (9.58)*	10.12(10.03)*		
Average of I	.ast 5⁵Years	9.01%	9.54%		
	Nonrecurring Gains and Losses are Included in Income				
Year End		Investment Yield on Total Assets	Investment Yield on Invested Assets		

End	on Total Assets	Invested Assets
1971	3.95%	4.14%
1972	4.79	5.00
1973	3.60	- 3.77
1974	3.55	3.76
1975	6.17	6.58
1976	6.98	7.39
1977	7.00	7.35
1978	5.34	5.62
1979	6.61	7.00
1980	5.66	6.03
1981	3.99	4.29
1982	7.64	8.09
1983	11.14 (11.07)*	11.64 (11.57)*
1984	8.88 ( 8.79)*	9.30 ( 9.21)*

Average of Last 5 Years

7.46%

7.87%

Notes: \*Investment Income is net of investment expenses.

Yield = Investment Income  $\frac{1}{2}$  (Assets at beginning + end) -  $\frac{1}{2}$  Investment Income

Bonds valued at amortized value, stocks at cost. Market values are not considered.

## Exhibit "M"

# LABORERS' AND RETIREMENT BOARD EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO

# HISTORY OF RECOMMENDED EMPLOYER MULTIPLES

Year of <u>Report</u>	Statutory <u>Multiple</u>	Normal Cost Plus <u>Interest</u>	Normal Cost Plus 40 Year Amortization	Normal Cost Plus 40 Year % of Salary Amortization
1974	1.235	1.48		~ = _
1975	1.280	1.33	57 van <sub>666</sub>	
1976A	1.325	1.54	1.62	1.24
1977	1.370	1.53	1.62	1.24
1978A	1.370	1.69	1.78	1.38
1979 ·	1.370	1.62	1.71	1.34
1980	1.370	1.96	2.04	1.67
1981	1.370	1.59	1.67	1.30
1982A	1.370	1.34	1.40	1.03
<b>1983</b> B	1.370	1.54	1.60	1.21
1984	1.370	1.58	1.63	1.30

A = Change in actuarial assumptions B = Change in benéfits

0017A/6C

### Exhibit "N"

### LABORERS' AND RETIREMENT BOARD EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO

### HISTORY OF FINANCIAL INFORMATION

Year End	Employee Contribution		loyer butions(2)	Investment Income (3)	<u>Total Income</u>
71	\$ 5,254,92	28 \$ <u>4</u>	241,819	\$ 4,145,156	\$13,641,903
72	5,928,38		793,135	5,391,547	16,113,068
73	6,269,10		463,149	4,394,426	16,126,679
74	6,597,01		103,125	4,646,080	17,346,217
75	7,375,22		699,000	8,665,212	22,739,434
- 76	7,887,17		287,000	10,785,585	25,959,764
77	8,568,24		470,000	11,993,200	29,031,448
78	9,077,82		477,125	10,112,216	28,667,166
79	9,571,76		108,298	13,547,589	34,227,651
80	9,729,91		791,330	12,626,861	34,148,103
81	10,522,38		392,694	9,631,793	32,546,876
82	11,546,28		589,417	19,729,269	43,864,972
83	11,608,53		681,225	31,809,924	57,099,686
84	11,531,24		996,619	28,832,621	55,360,483
04	11,001,027	13 17,	990,019	20,002,021	22,200,402
	. G	Income			
Year	. •	Less	Pay Outs	Income	Pay Outs
End	Pay Outs(4)	Pay Outs(5)	To Assets	To Assets	To Income
71	\$ 6,829,674	\$ 6,812,229	6.2%	12.4%	50.1%
72	6,425,129	9,687,939	5.4	13.4	39.9
73	7,125,454	9,001,225	5.5	12.5	44.2
74	7,999,287	9,346,930	5.8	12.6	46.1
75	8,690,763	14,048,671	5.7	15.0	38.2
76	9,482,736	16,477,028	5.6	15.4	36.5
77	10,819,180	18,212,268	5.8	15.6	37.3
78	12,454,451	16,212,715	6.1	14.1	43.4
79	14,055,673	20,171,977	6.4	15.5	41.1
80	16,796,949	17,351,154	7.1	14.3	49.2
81	16,596,246	15,950,630	6.5	12.8	51.0

Statistical material suggested by the Municipal Finance Officers Association in the disclosure guidelines for security offerings by the State and Local Government.

5.8

5.4

5.7

15.6

17.8

15.5

37.2

30.5

37.0

- (1) Includes Deductions In Lieu for Disability.
- (2) Net Tax Levy and Miscellaneous Income.

16,338,842

17,406,849

20,473,249

(3) Includes Realized Net Loss on Sale and Exchange of Bonds.

27,526,130

39,692,837

34,887,234

- (4) Includes Pensions, Benefits, Refunds and Administrative Expenses.
- (5) Does Not Include Prior Year Adjustments.

82

83

84

D

9.36% 9.67

10.74

11.14

11.38

10.66

10.19

11.42

11.44

E

9.47%

9.26

9.26

9.19

9.67

9.78

8.64

8.78

8.50

Expressed as a Percentage of Salary Beginning of Year

## LABORERS' AND RETIREMENT BOARD EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO

## HISTORY OF FINANCIAL INFORMATION

## ANNUAL ACTUARIAL REQUIREMENTS

Actuarial Recommended Contribution (Employer and Employee) Normal Cost Plus Various Amortization Methods.

----

	A	B	<u>c</u>	<u>A</u>	B	<u>C</u>
Year	NC Plus Interest	NC Plus ERISA 40 Year Amortization	NC Plus Increasing % of Salary	Percen	ressed tage of ning of	Salary
77A 78 79A 80 81 82 83A 84B 85	\$17,063,326 18,468,103 20,575,276 21,699,408 25,019,195 23,885,754 24,484,651 25,818,914 26,200,791	19,054,056 21,211,686 22,362,086 25,711,368 24,620,727 25,070,322 26,456,281	\$15,240,172 16,504,353 18,442,428 19,478,525 22,699,461 21,422,580 21,442,931 22,731,331 23,555,414	18.86% 18.84 19.90 20.50 22.98 20.23 18.23 19.66 19.95	19.46% 19.44 20.51 21.13 23.62 20.86 18.67 20.14 20.37	16.84% 16.84 17.84 18.41 20.85 18.15 15.97 17.31 17.94

## ACTUAL EMPLOYER AND EMPLOYEE CONTRIBUTION

**n** 

YearEmployerEmployee77A\$ 8,470,000\$ 8,568,248789,477,1259,077,82579A11,108,2989,571,7648011,791,3309,729,9128112,392,69410,522,3898212,589,41711,546,28683A13,681,22511,608,53784B14,996,61911,531,24385EST15,021,12011,162,867		<u>D</u>	Ē
789,477,1259,077,82579A11,108,2989,571,7648011,791,3309,729,9128112,392,69410,522,3898212,589,41711,546,28683A13,681,22511,608,53784B14,996,61911,531,243	Year	Employer	Employee
	78 79A 80 81 82	9,477,125 11,108,298 11,791,330 12,392,694 12,589,417	9,077,825 9,571,764 9,729,912 10,522,389 11,546,286

## DEFICIENCY (EXCESS) IN ANNUAL CONTRIBUTION

	<u>F</u> <u>G</u>	H	<u>F G H</u>
	NC Plus ERISA	NC Plus	Expressed as a
	NC Plus 40 Year	Increasing %	Percentage of Salary
Year	Interest Amortization	of Salary	<u>Beginning of Year</u>
77A	\$ 25,078 \$ 569,080 (	\$1,798,076)	.03% .63% (1.99)%
78	( 86,847) 499,106 (	2,050,597)	(.09) .51 (2.09)
79A	( 104,786) 531,624 (	2,237,634)	(.10) .51 $(2.16)$
80	178,166 840,844 (	2,042,717)	.17 .79 (1.93)
81	2,104,112 2,796,285 (	215,622)	1.93 2.57 (.20)
82	( 249,949) 485,024 (	2,713,123)	(.21) .41 (2.30)
83A	( 805,111) ( 219,440) (	3,846,831)	(.60) (.16) (2.86)
84B	(708,948) (71,581) (	3,796,531)	(.54) (.05) (2.89)
<b>8</b> 5 EST	16,803 562,886 (	2,628,574)	.01 .43 (2.00)
A Change	in actuarial assumptions		

A Change in actuarial assumptions B Change in benefits 0017A/6C

# HISTORY OF FINANCIAL INFORMATION

# ACCRUED AND UNFUNDED LIABILITIES

Year End	Accrued Liability	Assets At Book Value	Funded Ratio	Unfunded Accrued Liability		Unfunded Accrued % Payroll
71A	\$158,815,569	\$110,423,040	69.5%	\$ 48,392,529	\$ 66,142,320	73%
72	172,160,657	120,072,655	69.7	52,088,002	69,950,692	
73	197,782,050	128,624,035	65.0	69,158,015	73,108,848	
74	215,636,093	137,709,821	63.9	77,926,272	78,526,728	99
75	242,216,859	151,749,085	62.7	90,467,774	89,276,280	
76A	252,410,689	168,219,982	66.6	84,190,707	90,487,008	93
77	277,111,671	186,428,465	67.3	90,683,205	98,029,296	93
78A	301,135,468	202,643,520	67.3	98,491,948	103,399,152	95
79	323,368,034	220,810,778	68.3	102,557,256	105,825,264	97
80	345,364,820	238,242,772	69.0	107,122,048	108,854,496	98
81	367,980,498	254,234,605	69.1	113,745,893	118,054,512	96
82 A	391,353,993	281,708,565	72.0	109,645,428	134,293,920	82
83B	444,711,069	321,404,078	72.3	123,306,991	131,355,840	94
84	462,455,964	356,809,111	77.2	105,646,853	131,327,856	80

## SOLVENCY (TERMINATION) TEST

	Retired Liability	Active Membe Salary Deductions	er Total Term. Liab.	Assets At Book Value	Termination Cost (Excess)	Quick Ratio Assets to Term. Liab.
75	\$56,403,573	\$63,162,106	\$119,565,679	\$151,749,085	\$( 32,183,40	6) 127%
76A	61,271,047	68,189,205	129,460,252	168,219,982	( 38,759,73	0) 130
77	67,977,467	73,608,310	141,585,777	186,428,466	(44,842,68	9) 132
78A	77,603,101	78,072,062	155,675,163	202,643,520	(46,968,35	7) 130
79	86,918,802	83,057,007	169,975,809	220,810,778	( 50,834,96	9) 130
80	97,598,923	85,989,360	183,588,283	238,242,772	( 54,654,48	9) 130
81	107,291,048	88,378,748	195,669,796	254,234,605	( 58,564,80	9) 130
82 A	113,743,284	94,516,563	208,259,847	281,708,565	(73,448,71	8) 135
<b>83</b> B	128,901,825	106,730,627	235,632,452	321,404,078	( 85,771,62	
84	142,713,639	111,888,574	254,602,113	356,809,111	(102,206,99	8) 140

A Change in valuation assumptions B Change in benefits

Quick ratio is defined as assets divided by the termination liability

### SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

Method: The actuarial funding method used is the ENTRY AGE NORMAL METHOD.

This cost method assigns to each year of employment a constant percentage of an employees salary, called the CURRENT SERVICE COST (sometimes referred to as NORMAL COST), sufficient to accumulate the necessary funds to provide for the full prospective costs of the employee's projected retirement pension. The amount of pension must be estimated using various assumptions as to future compensation levels, employee turnover, mortality and pension fund earnings, since the actual pension can only be known at the time of retirement. These are called actuarial assumptions.

It should be emphasized that the actuarial assumptions do not directly affect the cost of the pension plan. Benefits are fixed by statute and will become payable as various members and their dependents satisfy the contingencies covered. The actual cost of the plan can only be determined after all benefits have been paid, and is equal to the total benefits paid, plus total administrative expenses minus total investment income.

The ACCRUED LIABILITY of the fund at any point in time is the accumulated value of all CURRENT SERVICE COSTS which should have been paid at that time for active employees plus the full prospective cost of pensions for all retired employees. The extent that the actual plan ASSETS are less than the ACCRUED LIABILITY is called the UNFUNDED LIABILITY.

An amount of money is required each year to keep the UNFUNDED LIABILITY from increasing if all assumptions are realized. This amount is called INTEREST ONLY on the UNFUNDED LIABILITY.

The total actuarial contribution required to the fund is equal to the CURRENT SERVICE COSTS plus INTEREST ONLY on the UNFUNDED LIABILITY. This is the funding policy. This minimum method of funding, often referred to as middle-of-the-road method, is the method the fund has tried to follow in the past. It has evolved over the years and seeks to give effect to all interested groups including opinions often expressed by the Civic Federation. No funds are provided for amortization of the UNFUNDED LIABILITY.

Reserves for employee retirement annuities, spouses retirement annuities and death benefit annuities are valued on the entry age normal method. Grouped ages of entry, 22, 27, 32, 37, 42, 47, 52, 57, 62 and over, are used.

The costs for the following items are valued on an annual cost basis. No reserves are set up as these items tend to stabilize on a cash basis.

### SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

- 1) Duty Disability Benefits
- 2) Ordinary Disability Benefits
- 3) Children's Annuities
- 4) Refunds including refunds for no wife
- 5) Expense of administration

Reserves are set up for duty, and ordinary disability recipients as if they were in active service.

### Actuarial Assumptions:

#### Mortality:

Active Members, Present and Future Retired Members and Spouses: UP-1984 MORTALITY TABLE, male and female.

Interest: 6.75% a year, compounded annually. An exhibit details the investment yields the Fund actually realized over the past few years.

Interest earnings over the assumed rate can be used to reduce losses which may result from variations in other cost factors - such as increased costs resulting from salary increases greater than the assumed rate.

It must be realized that the interest assumption is a long range assumption it must cover a period as long as perhaps 50 years - which would be the period of time, say, that the youngest employee in the fund will work, then retire on pension for the rest of his life. There is no guarantee that the current high interest rates will continue over this period.

<u>Salary Increase</u>: 6% a year, compounded annually. An exhibit details the annual increase in the average salary over the past years which averages greater than 6%.

It should be remembered that pensions are based directly upon salary. If it is believed that the recent pattern will continue in the long range future, the salary scale assumption will need to be increased.

Increased costs would necessarily result with the extent of the increase in cost depending on the extent of the increase in salary over the assumed long range.

## SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

<u>Rate of Retirement</u>: The rates of retirement used in this valuation are shown in an Exhibit for each age of entrance group into the service and are based on 1973, 1974 and 1975 experience of the Fund adjusted to 1978.

These rates were modified to assume all employees retire by age 70.

<u>Rate of Termination</u>: These rates are shown in an Exhibit and are based on the experience of the Fund for the years 1973, 1974 and 1975 adjusted to 1978.

Proportion Married: The scale is shown in an Exhibit.

Active Membership: It is assumed that the future active membership of the Fund will remain at the present level and that the average age at entrance into the service will be about the same in the future as it has been. The actuarial costs are based on the present group. If future entrants to the Fund are older than the present group, then costs will tend to increase. Conversely, if new entrants are younger, then costs will tend to decrease.

<u>Age of Spouse</u>: Of a male employee - the spouse is assumed four years younger; of a female employee - the spouse is assumed four years older.

<u>Asset Value</u>: Bonds are amortized value; stocks are at cost, real estate separate accounts at adjusted cost.

Reciprocal Benefits: Active life normal costs and reserves are loaded 1%.

Loss on Tax Levy: 4% overall is assumed for all future years.

# SERVICE TABLE FUNCTIONS

# Rates of Retirement

l Age	e at Ent	rance						
22	27	32	37	42	47	52	<u>5</u> 7	62
		.010			-			
		.016						
					.011			
.229	.160	.150	۵46ء	.033	.015	.021	.017	
		.193	.074	.055	.022	.037	.028	
.240	.210	.211	.115	.097	.044	.084	.042	
.245	.321	.225	.140	.116	.106	.134	.064	.125
.255	.336	.249	.216	.136	.174	.162	.081	.145
		.334	.319	.152	.200			.167
	.350	.348	.348	.166	.217			.201
	.354							<b>,227</b>
								.275
								.290
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
			<u> </u>					
								.070
								.090
								.153
								.163
	.236			.183				.168
.184	.246	.238	.228	.200	.204	.184	.194	.171
			.237	.214	.214	.188		.174
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	22 .065 .135 .187 .205 .219 .229 .236 .240 .245 .255 .324 .354 .363 .370 .374 1.000 .028 .036 .044 .057 .068 .080 .097 .110 .120 .136 .154 .168 .176 .184 .189	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					

<u>Mal e</u>

# Exhibit "P"

LABORERS' AND RETIREMENT BOARD EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO

# SERVICE TABLE FUNCTIONS

# Rates of Termination

Attained Age	Age 22	at Entra 	ance _ <u>32</u>	37	42	47	52	57	62
22 27 32 37 42 47 52 57 62 67	.223 .116 .050 .021 .012 .005	.262 .100 .046 .025 .012 .005	.219 .098 .022 .010 .005	.221 .088 .034 .017	.176 .080 .028	.142 .076	.120 .046	.112	.148
Female 22 27 32 37 42 47 52 57 62 67	.140 .108 .052 .022 .008	.174 .085 .038 .022 .013 .005	.108 .062 .033 .017 .009	.074 .051 .028 .015	.054 .033 .020	.063 .033	.054 .036	.056	.027

Attained Age	Male Death Rate UP-1984 Per 1,000	Female Death Rate UP-1984 Per 1,000	Proportion Married <u>%</u>
22	1.167	1.385	81
27	1.058	1.167	81
32	1.208	1.058	81
37	1.792	1.208	80
42	2.818	1.792	83
47	4.635	2.818	83
52	7.543	4.635	84
57	11.863	7.543	82
62	18.685	11.863	82 80
67	29.634	18.685	78
70	37.667	24.847	74

Male

# ILLINOIS PUBLIC EMPLOYEES PENSION LAWS COMMISSION IMPACT STATEMENT

Name of Retirement System:	5	·	•	<b>`</b>	•				
Total Annual Payroll: \$131,327,856			Bill No						
Total Number of Active Employees: 5, PRESENT FINANCIAL CONDITION AS OF		1							
Valuation Date 12-31-84	PRESENT	F PLAN	PRGPOSED LE	EGISLATION	PLAN IF PROPOSED LE	GISLATION ENACTED			
(1) Accrued Pension Liability	\$462,455,9	64	-						
(2) Present Assets	\$356,809,1	11		· · · · · · · · · · · · · · · · · · ·					
(3) Unfunded Liability = (1)-(2)	\$105,646,8	53							
(4) Funded Ratio = (2) ÷ (1)	77.1	.6%	1						
DIRECTION OF FINANCIAL CONDITION:	FOR YEAR BEGINNING O	N VALUATION DA	TE						
	PRESENT PLAN	PER % OF ACTIVE SALAR	PROPOSED LEGISLATION	PER % O ACTIVE SALA	RY PLAN IF PROPOSED	PER % OF ACTIVE SALAR			

•	PRESENT PLAN	PER	% OF SALARY	PROPOSED LEGISLATION	 PER	% OF SALARY	PLAN IF PROPOSED LEGISLATION ENACTED	PER	% OF
(5) Minimum Recommended Annual Contribution	\$26,200,791	\$4,906	20				¢		
(6) Estimated Annual Employer Contribution	\$15,021,120	\$2,812	11.4		 	- 			
(7) Estimated Annual Employee Contribution	\$11,162,867	\$2,090	8.5						
(8) Deficiency in Annual Contributions = (5)-(6)-(7)	\$ 16,803	\$3	.01						

(9) Source of Funding Revenues:

(10) Remarks

IS THE ANNUAL COST FOR PROPOSED LEGISLATION

#### PLAN SUMMARY

#### PARTICIPANT:

Person employed by the City in a position classified by the Civil Service Commission of the employer as labor service of the employer; any person employed by the Board; any person employed by the Retirement Board of any other Annuity and Benefit Fund which is in operation for the employer.

### SERVICE:

For all purposes except formula minimum annuity and ordinary disability credit, service in four months in any calendar year constitutes one year of service credit.

For minimum annuity, one-half year credit is given for one completed month of service, a full year credit is given for one complete month of service plus service in at least 5 other months. For O.D. credit, the exact number of days, months and years are used.

#### **RETIREMENT ANNUITY:**

<u>Money Purchase Formula</u>: Maximum is 60% of final salary. Applies in cases where an employee is age 55 or more and has over 10 years of service. If employee is age 55 - 60 with service less than 20 years, the annuity is based on all employee deductions plus 1/10 city contributions for each year over 10. In case of withdrawal before age 55, application after age 55, the annuity is based on employee deductions plus 1/10 city contributions for each year over 10, with interest to date of application or age 55, whichever is later. The age factor for age 55 is used.

The annuity is based on all employee deductions and city contributions in cases where the employee is: (a) age 55 - 60 with 20 or more years of service; (b) age 60 - 70; (c) resigning at the time of disability expiration. Money purchase can be calculated only to age 70.

Minimum Annuity Formula: Maximum is 75% of final average salary. (a) An employee age 55 or older with at least 20 years of service, is qualified for an annuity equal to 1.67% of each of the first 10 years of service plus 1.90% for each of the next 10 years plus 2.1% for each of the next 10 years and 2.3% for each year of service over 30 years, of the final average salary during the four highest consecutive years within the last 10 years of service prior to retirement. This annuity is discounted 1/2 of 1% for each month the employee is younger than 60 to age 55. (b) An employee who is at least age 65 with 15 or more years of service is qualified for an annuity equal to 1% for each year of service multiplied by the final average salary added to the sum of \$25.00 for each year of service.

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## PLAN SUMMARY

<u>Reversionary Annuity</u>: An employee may elect to reduce his annuity by an amount less than or equal to \$200 to provide a reversionary annuity to begin upon the employee's death for a spouse, parent, child, brother or sister. The election must be made before retirement and have been in effect 2 years prior to death. The death of the employee before retirement voids the election. The reversionary annuity cannot exceed 80% of the employee's reduced annuity. If the employee resigns after June 30, 1983, the 3% automatic annual increase in annuity will be computed on the original, not the reduced annuity and if the beneficiary dies before the employee annuitant, the full annuity is restored. For annuities elected after June 30, 1983, the amount of the monthly reversionary annuity is determined by multiplying the amount of the monthly reduction in the employee's annuity by a factor based on the age of the reversionary annuitant at the starting date of the employee's annuity.

<u>Reciprocal Annuity</u>: Under reciprocal retirement an employee can receive annuity based on continued service credits in two or more governmental units in Illinois to whose pension fund he has contributed for at least one year.

<u>Automatic Increase in Annuity</u>: An employee who is age 60 or more is entitled to receive 2% of the original annuity, such increase to begin in January of the year immediately following the year of the first anniversary of retirement. Beginning with January of the year 1984 such increases are at the rate of 3% of the original annuity. An employee who retires prior to age 60 will receive such increase beginning in January of the year following the year he attained age 60.

SPOUSE'S ANNUITY: (Payable until remarriage)

<u>Money Purchase Formula</u>: When an employee is 65, or retires prior to age 65, the spouse's annuity is fixed, based on employee deductions and city contributions made for spouses' annuity purposes and a joint life age factor. (If the employee is a female these are deductions accumulated since October, 1974). In the case of the spouse of an employee over 65, the money purchase annuity is the amount fixed at employee age 65, and all deductions after that time are refunded if the employee dies in service.

If the employee dies in service under 65 the spouse's annuity is based on all sums accumulated to their credit. This annuity cannot exceed the amount spouse would have been fixed at if employee had continued to work to age 65.

For 3% annuities fixed on or after August 1, 1983, the "Combined Annuity Mortality Table" shall continue to be used; however, widow's single life annuities and reversionary annuities shall be computed using the best factor (the factor producing the highest annuity) not depending upon sex.

0017A/6C

### PLAN SUMMARY

## SPOUSE'S ANNUITY:

<u>Spouses' Minimum Annuity Formula</u>: If the employee is at least age 60 and has 20 or more years of service, the spouse's annuity is equal to 1/2 of the amount of annuity the employee was entitled to at the time of death if death occured before retirement, or was entitled to receive on the date of retirement if the employee died after retirement. This annuity is subject to a maximum of \$400 (\$500 if retirement or death before retirement occurs on or after January 1, 1984) and must be then discounted 1/2 of 1% for each month that the spouse is under age 60 at the time the annuity is fixed.

In the case of a spouse, the female employee must have made contributions for her spouse for at least 20 years to qualify for the minimum annuity formula. Current female employees may elect to pay spouse contributions for their service before October, 1974.

### CHILDREN'S ANNUITY:

Child's annuity is payable upon the death of city employee, either active or retired, if the child is unmarried, under age 18, born before participant is age 65 and before his separation from city service or legally adopted at least one year before child's annuity becomes payable and prior to the attainment of age 55 by the adopting employee parent. Annuity is \$80.00 per month while spouse of deceased employee is alive and \$120.00 per month if no spouse is alive. Except for duty death deceased employee must have had 4 years of service or at least 2 years from latest re-entrance if he had previously resigned from service.

### FAMILY MAXIMUM:

Non-duty death: 60% of final monthly salary: Duty death: 70% of final monthly salary.

### DISABILITIES:

Duty Disability Benefits: Any employee who becomes disabled as the result of injury incurred in the performance of any act of duty, shall

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#### PLAN SUMMARY

have a right to receive duty disability benefit in the amount of 75% of salary at date of injury plus \$10.00 a month for each unmarried child (the issue of the employee) less than age 18. Child's duty disability benefit is limited to 15% of the employee's salary as of date of injury. Duty disability benefits begin one day after the later of the last day worked and the last day paid.

If the disability has resulted from any mental disorder, physical defect or disease which existed at the time such injury was sustained, the duty disability benefit shall be 50% of salary at date of injury. Disablement because of heart attacks, strokes, or any disablement due to heart disease shall not be considered to be the result of an accident suffered in the performance of duty.

Duty disability benefit is payable to age 65 if disability begins before age 60. For an employee who begins disability on or after age 60, disability will continue for 5 years or to age 70 whichever occurs first. The City contributes salary deductions for annuity purposes. Such amounts contributed by the city after December 31, 1983, while the employee is receiving duty disability benefits are not refundable to the employee and will be used for annuity purposes only.

Ordinary Disability Benefit: Disability other than in performance of an act of duty...50% of salary less the sum ordinarily deducted from salary for annuity purposes, as of last day worked payable until age 65 and limited to a maximum of 1/4 of employee's total service or 5 years, whichever is earlier if disability begins before age 60. For an employee who begins disability on or after age 60, disability will continue for a period not greater than 1/4 of employee's total service, but no more than 5 years or age 70 whichever is earlier.

### **REFUNDS:**

<u>To Employee</u>: Upon separation from service employee is entitled to all his salary deductions plus interest if employee is under age 55. If over age 55 employee is eligible for refund if he has less than 10 years of service or would be eligible for temporary rather than life annuity. Effective September 17, 1983, employee may choose a refund in lieu of annuity if annuity would be less than \$200.00 per month.

Spouse's annuity deductions are payable to employee if not married when he retires or attains age 65.

To Spouse: In lieu of annuity if annuity would be temporary rather than life and spouse so chooses. Effective September 17, 1983, spouse may choose a refund in lieu of annuity if annuity would be less than \$200.00 per month.

<u>Remaining Amounts</u>: Amounts contributed by employee excluding 1/2% deductions for annuity increase, which have yet not been paid out as annuity, are refundable to his estate with interest to his retirement or death if he died in service.

### PLAN SUMMARY

## DEDUCTIONS AND CONTRIBUTIONS:

	Deductions	<u>Contributions</u> *
Employee	6-1/2%	6%
Spouse	1-1/2% **	2% **
Annuity Increase	<u>1/2%</u>	-
Total:	<u>8-1/2%</u>	<u>8%</u>

**\*\*** Only to employee age 65.

## FINANCING: \*

The City shall levy a tax annually equal to the total amount of contributions in the 2 years prior multiplied by 1.370 for 1978 and each year thereafter.

### TAX SHELTER OF EMPLOYEE SALARY DEDUCTIONS:

Beginning January 1, 1982, the City employee salary deductions were designated for income tax purposes to be made by the employer. The W2 salary is therefore reduced by the amount of contribution. For pension purposes the salary remains unchanged. Income tax will be paid when a refund or annuity is granted. For the purposes of benefits, refunds, or financing, these contributions are treated as employee contributions. Beginning September 19, 1981 Board of Education employee contributions were paid by the employer.