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CITY OF SAN JOSE
POLICE AND FIRE DEPARTMENT RETIREMENT PLAN

Actuarial Valuation
as of July 1, 1985

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November 19, 1985

Board of Administration
Police and Fire Department
Retirement Plan
San Jose, California

Board Members:

This report presents the results of our Actuarial Valuation of the San Jose Police and Fire Department Retirement Plan as of July 1, 1985. The report gives our determinations of: (a) contribution requirements for members and the City, and (b) the actuarial present values of vested and non-vested accumulated plan benefits.

The actuarial content of the report was prepared by me in accordance with generally accepted actuarial principles.

We thank the Secretary to the Board and his staff for provision of excellent data and their assistance with our questions.

Our report is presented in the following sections:

I. CONTRIBUTION REQUIREMENTS

II. FUNDING RATIO

III. ASSETS AND INVESTMENT YIELD

IV. PARTICIPANT DATA

V. ACTUARIAL METHODS AND ASSUMPTIONS

VI. SUMMARY OF PLAN PROVISIONS

We look forward to a discussion of our findings at your next meeting.

Sincerely,

Steven T. Itelson

Steven T. Itelson, F.S.A.,
Associate Actuary

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I. CONTRIBUTION REQUIREMENTS

A. Retirement Income Benefits

The City Code requires periodic actuarial valuation of the Police and Fire Department Retirement Plan, including determination of contribution requirements on a specified basis. The normal cost is the amount required to provide benefits (including cost-of-living) for new entrants, spread over their anticipated working lifetimes. The normal cost is divided in a three to eight ratio between the employees and the City, respectively.

These normal cost contributions do not meet the actuarial requirements of the plan. The supplemental present value* represents the discounted value of all future benefits in excess of the value of future normal costs. The supplemental present value of $287.2 million exceeds the actuarial asset value by $41.3 million. This Unfunded Supplemental Present Value (USPV) must be funded for the Plan to be in actuarial balance.

The Board adopted a funding period of 40 years in 1977; accordingly, the USPV is amortized over the 32 years remaining on that schedule. The amortization is as a level percentage of increasing payroll, using only the inflation component of 5.00% per annum. This is the same as amortization using dollars of constant value, assuming five percent inflation.

The resulting contribution requirements are as follows:

	Percentage of Compensation		
	Basic Benefits	Cost of Living	Total
Employee contributions	6.23%	2.33%	8.56%
City contributions			
Normal Cost	16.62%	6.22%	22.84%
Payment on USPV	.44	2.80	3.24
Total City	17.06%	9.02%	26.08%
Total contributions	23.29%	11.35%	34.64%

Derivation of these contribution rates is shown in Table 1. In addition to these rates, the City pays for permanent cost-of-living benefits on a pay-as-you-go basis. As of July 1, 1985, the rate of such payments was $138,000 per annum. Contribution requirements to support retiree health insurance benefits are discussed in Subsection B.

*Also referred to as actuarial accrued liability, and past service liability.

The employee contribution rate of 8.56% of compensation is slightly lower than the current rate of 8.64%. This represents a relative reduction of 1%. The City's rate has decreased by a relative 5%, from 27.40% of payroll to 26.08%. The employer rate reduction reflects the City's share of reduced normal costs, as well as the reduction in USPV. The reduction in USPV came from the following sources of favorable experience:

(1) Investment income exceeded the rate assumed.

(2) Contributions were greater than expected, because the reduced rates developed in the 1983 valuation were not implemented until 1984.

(3) Disability incidence was less than assumed.

The Unfunded Supplemental Present Value decreased from $50,093,000 to $41,314,000 due to favorable experience. The contribution rate to amortize the USPV decreased from 4.37% of payroll to 3.24% due to growth in payroll as well as the decrease in outstanding balance.

The actuarial assumptions used in the retirement income calculations are the same as were used as of July 1, 1983. They are described in Section V. These assumptions represent a reasonable basis for determining contribution requirements and liabilities of the Plan.

B. Health Insurance Benefits

The Retirement Plan commenced payment of retiree health insurance premiums in September, 1984. The Plan pays the same amount for pensioners and beneficiaries as is paid for active employees. Eligibility for this benefit is either 15 years of service or a 37.5% of salary benefit.

When this improvement was adopted, the contribution rate was set at .75% of salary for employees, plus .75% for the City, for a total of 1.50% of compensation. We recommend continuation of these rates without change.

If the health insurance benefits were priced on the same basis as in 1984, the required contribution would be slightly reduced to 1.42% of covered wages. We recommend, however, that the assumed rate of increase in premiums for Kaiser and Lifeguard be raised and that the rate of growth in covered payroll be reduced from 8% per year to 7%. On this basis, the contributions required amount to 1.49% of payroll. The derivation of this ten-year, level funding contribution rate is shown in Table 2.

If these rates for retirement income and retiree health benefits are approved, the total new contribution rates will be 9.31% of pay for employees, and 26.83% for the City, compared to current rates of 9.39% and 28.15%, respectively. The total contribution rate recommended of 36.14% of wages represents a decrease of 3.7% from the current total of 37.54% of payroll.

Table 1

Actuarial Cost Results
Retirement Income Benefits

	Basic Benefits	Cost-of-Living Benefits	Total
1. Present Value of all Future Benefits			
a. Active Members	$306,872,000	$110,911,000	$417,783,000
b. Vested Terminated	1,357,000	582,000	1,939,000
c. Pensioners and Beneficiaries	48,288,000	26,996,000	75,284,000
d. Totals	$356,517,000	$138,489,000	$495,006,000
2. Normal Cost Contribution Rates as % of Compensation			
a. Employee	6.23%	2.33%	8.56%
b. City of San Jose	16.62	6.22	22.84
c. Totals	22.85%	8.55%	31.40%
3. Present Value of Future Salaries	$661,959,000	$661,959,000	$661,959,000
4. Present Value of Future Normal Costs (Total) = (2) x (3)	$151,258,000	$ 56,597,000	$207,855,000
5. Supplemental Present Value (1) - (4)	$205,259,000	$ 81,892,000	$287,151,000
6. Actuarial Asset Value	$199,602,000	$ 46,235,000	$245,837,000
7. Unfunded Supplemental Present Value (5) - (6)	$ 5,657,000	$ 35,657,000	$ 41,314,000
8. Amortization of (7) over 32 Years, Payments Increasing 5% Per Annum*	$ 275,000	$ 1,733,000	$ 2,008,000
9. Covered Payroll	$ 62,012,000	$ 62,012,000	$ 62,012,000
10. Amortization as % of Payroll* (8) ÷ (9)	.44%	2.80%	3.24%
11. Total Contribution Rates as % of Payroll*			
a. Employee	6.23%	2.33%	8.56%
b. City of San Jose	17.06	9.02	26.08
c. Totals	23.29%	11.35%	34.64%

*Payable periodically during the year.

Table 2

Retiree Health Insurance Funding Calculations

Year	(1) Projected Annual Cost Per Retiree	(2) Estimated Number of Insured Retirees	(3) Estimated Annual Cost = (1) x (2)	(4) Projected Covered Payroll (000 Omitted)	(5) Cost as Percentage of Payroll = (3) ÷ (4)
1985-86	1,698	393	$ 667,300	$ 62,012	1.08%
1986-87	1,896	408	773,600	66,353	1.17
1987-88	2,118	424	898,000	70,998	1.26
1988-89	2,365	441	1,043,000	75,967	1.37
1989-90	2,641	459	1,212,200	81,285	1.49
1990-91	2,950	478	1,410,100	86,975	1.62
1991-92	3,178	498	1,582,600	93,063	1.70
1992-93	3,423	518	1,773,100	99,578	1.78
1993-94	3,686	539	1,986,800	106,548	1.86
1994-95	3,971	560	2,223,800	114,007	1.95

Level Cost Calculation Over Ten Years

(1) Present Value of Future Benefits = $8,708,000

(2) Actuarial Value of Assets = $162,000

(3) Net Present Value to be Funded = (1) - (2) = $8,546,000

(4) Present Value of Future Salaries = $572,452,000

(5) Level Contribution Rate = (3) ÷ (4) = 1.49% of payroll, payable periodically during the year.

Notes:
(1) See Section V for actuarial assumptions.
(2) Projected annual cost per retiree assumes continuation of current mix of plans and coverage. Average current monthly premiums are $145.40 for Blue Cross, $124.56 for Kaiser, and $107,70 for Lifeguard. The Kaiser rate increase effective August 1, 1985 has been included for 11 months in the current average.
(3) As of July 1, 1985, 386 retirees and beneficiaries had health insurance paid by the Plan. This included 315 with Blue Cross (81.61%), 69 with Kaiser (17.87%) and 2 with Lifeguard (.52%).

II. FUNDING RATIO

Financial Accounting Standards Board Opinion No. 35 requires calculation of the actuarial present values of vested and non-vested accumulated plan benefits. Although compliance by local government is not required, we present our determinations of such values as of July 1, 1985.

Pensioners and beneficiaries	$ 75,284,000
Vested terminated members	1,939,000
Vested benefits, active members	115,500,000
Total vested benefits	$192,723,000
Non-vested accrued benefits	75,657,000
Total accrued benefits	$268,380,000

The ratio of assets (assigned the value used in this valuation process) to this present value of accrued benefits is one measure of the plan's funding progress. The ratio, as of July 1, 1985 and July 1, 1983, is as follows:

	7/1/85	7/1/83
1. Assets	$245,837,000	$172,953,000
2. Present value of accumulated benefits	268,380,000	211,619,000
Funding ratio (1 ÷ 2)	91.60%	81.73%

The Plan was amended after publication of the 1983 actuarial report to provide unreduced service pensions to members retiring with 30 or more years of credit. Calculated as of July 1, 1985, that improvement increased the present value of accumulated plan benefits by $7,319,000 to the amount shown above. The value of retiree health benefits has been excluded from these calculations.

The progress in the funding ratio is the result of the same favorable factors as affected the contribution rate. In addition, funding rates normally increase as the Fund matures.

The amounts shown above have been calculated in accordance with Interpretations 1 and 2 promulgated by the American Academy of Actuaries for calculating such values. The actuarial assumptions used are as shown in Section V.

Although this measure is used by the Controller of the State of California and by many other systems as a basis for comparing funding progress of various plans, we believe that the more important measures of a system's funding status are the appropriateness of the actuarial assumptions, the method by which the unfunded liabilities are being funded and the pattern of annual contribution requirements.

III. ASSETS AND INVESTMENT YIELD

The audit report as of June 30, 1985 shows net assets of $249,723,000 for the combined Retirement and Cost-of-Living Funds. That amount includes fixed income investments at amortized cost, equities at original cost, and adjustments for amounts payable and receivable. The market value for the combined Funds was $255,790,000.

A different basis has been adopted for actuarial valuations. Realized and unrealized appreciation and depreciation are spread over five years, beginning with the fiscal year in which they occur. This basis is used for such gain and loss after June 30, 1983. In Table 3 we present the determination of the actuarial value of investments.

During the 1983-84 fiscal year, there were net losses of $15,284,000, of which 40% is recognized and 60% deferred as of June 30, 1985. In the year 1984-85, total appreciation amounted to $23,904,000, of which 20% is recognized and 80% will be included in the future. The result is an actuarial value of investments of $243,392,000 for Retirement and Cost-of-Living Funds combined.

Table 4 presents the assets of the combined Funds on the actuarial basis. The Funds have increased to a total of $245,837,000, an increase of over 18% from a year earlier. This asset value has increased 42% since the July 1, 1983 actuarial valuation.

Table 5 presents a summary of income and disbursements on the actuarial basis over the past two years. Contributions decreased to $22.0 million in 1984-85, compared to $25.3 million the prior year due to the reduction in rates. Benefit payments in the year 1984-85 were almost $6.7 million, including $575,000 paid for retiree health insurance premiums. This represents a 20% increase over the benefits paid for the prior year.

Net investment income on the actuarial value basis includes interest and dividends. It also includes 20% of each year's total appreciation (or depreciation) which has not been fully recognized. Net of expenses, investment income was $23,164,000 for the year 1984-85, and $14,729,000 the prior year. These represent net yields of 10.77% and 8.06%, respectively. There is $9.95 million of appreciation since June, 1983 that will be recognized in future years.

On the market value basis, investment income includes unrealized appreciation or depreciation instead of the actuarial write-up. Net of all expenses, the 1984-85 investment income was $45,344,000, giving a net yield of 22.36%. The corresponding results the prior year were $2,502,000 of net income, and a yield of 1.37%. The average net yield over the two years was 12.41% at market value.

Table 3

Determination of Actuarial Value of Investments
(All Amounts in Thousands of Dollars)

Year Ending	Market Value	Book Value	Unrealized Appreciation to Date	Unrealized Appreciation in Year	Realized Appreciation in Year	Total Appreciation	Deferred Appreciation Percentage	Deferred Appreciation Amount
6/30/83	$182,181	$181,712	$ 469	N/A	N/A	N/A	N/A	N/A
6/30/84	185,543	201,843	(16,300)	$(16,769)	$1,485	$(15,284)	60%	$(9,170)
6/30/85	253,345	247,278	6,067	22,367	1,537	23,904	80%	19,123
						$ 8,620		$ 9,953

Market Value of Investments	$253,345
Less: Deferred Appreciation	9,953
Actuarial Value of Investments	$243,392

San Jose Police and Fire

Table 4

Assets of the Fund as of June 30, 1985 and 1984
Actuarial Value Basis
(All Amounts in Thousands of Dollars)

	6/30/85		6/30/84	
Investments		$243,392		$200,770*
Cash		372		304
Accounts Receivable:				
Employee Contributions	$ 212		$ 228	
City Contributions	633		743	
Accrued Interest	4,043		4,420	
Other	17		1,207	
Total Receivables		4,905		6,598
Total Assets		$248,669		$207,672
Accounts Payable		2,832		303
Net Assets Available for Plan Benefits		$245,837		$207,369

*Includes securities purchased under agreements to resell.

Table 5

Summary Statement of Income and Disbursements for
Plan Years Ending June 30, 1985 and 1984, Actuarial Value Basis
(All Amounts in Thousands of Dollars)

	1985		1984	
Contribution Income:				
Employee Contributions	$ 5,440		$ 5,925	
City Contributions	16,545		19,349	
Total		$ 21,985		$ 25,274
Investment Income:				
Interest	$20,023		$16,641	
Dividends	1,703		1,353	
Write-up(down)*	1,724		(3,057)	
Less: Professional Fees & Expenses	286		208	
Net Total		23,164		$ 14,729
Benefit Payments:				
Account Refunds	$ 278		$ 261	
Health Insurance Premiums	575		-	
Retirement Benefits	5,828		5,319	
Total		6,681		5,580
Net Increase in Assets		$ 38,468		$ 34,423
Assets, Beginning of Year		207,369		172,946
Assets, End of Year		$245,837		$207,369

*Represents that portion of realized and unrealized appreciation (depreciation) recognized for the year under the asset valuation method.

IV. PARTICIPANT DATA

Detailed information on active, retired, survivor and vested terminated members was provided on computer tape by the Secretary to the Board. Because we received censuses as of both July 1, 1985 and 1983, we were able to compare experience to that which was anticipated by the actuarial assumptions.

A. Active employees

The valuation as of July 1, 1983 included 1,582 active employees (924 police, 658 fire). During the 1983-85 period, 54 of those members terminated (5 retained vested rights), 37 retired on service-connected disability, three retired for non-service disability and four retired on service retirement. There were three active member deaths. We compared the July 1, 1985 compensation rates to those as of July 1, 1983 for the 1,481 employees active on both dates. The increase from $50.3 million to $57.9 million represents a compound annual increase of 7.26%, including scheduled increases averaging 5% for fire and 6% for police. The rate of increase was higher for younger employees than for older. This pattern is what is anticipated by the salary scale, but the magnitude of increases resulted in minor actuarial losses from salaries increasing slightly faster than assumed.

The number of disability retirements expected was 66 over the period, compared to the actual 40. Experience with respect to service-connected disability was especially favorable, as was the case for the 1981-83 period. We will continue to monitor the experience to see if assumption changes are appropriate. The non-service disability incidence was approximately what was assumed, and without statistical significance.

The 54 withdrawals produced an actuarial gain, since 40 were expected. Terminations of members hired after July 1, 1983 are not included. A complete analysis of withdrawal, which is beyond the scope of this report, would consider service as well as age, and would weight by actuarial cost factors.

New members (including transfers and re-hires) numbering 134 increased the active membership to 1,615 as of July 1, 1985, 2.1% higher than in 1983. Average salary increased from $33,945 to $38,397, or at the rate of 6.36% per annum. Distributions of these participants by age, service and average salary are shown in Tables 6-A, 6-B and 6-C. Table 7 gives a distribution by salary and department. Of the 1,615 active participants, 900 (56%) had met the service requirement for a vested benefit.

B. Vested Terminated Employees

There were 15 former employees retaining vested rights to deferred pensions as of July 1, 1983. After addition of 5 new vested terminations, there were 20 such participants as of July 1, 1985.

C. Retired Participants

There were 314 retired members as of July 1, 1983. During the succeeding two years, seventeen died and one returned to work. There were 49 new pensions awarded (42 service-connected and threenon-service disabilities and four service retirements). Hence there were 345 retired members as of July 1, 1985.

A distribution of these awards by type and benefit amount is shown in Table 8. The same awards are distributed by type and age in Table 9. The average benefit was $1,387 monthly, including $1,130 in Basic benefits. Average pensioner age was 59.

D. Survivors

Sixty-three beneficiaries of deceased retirees and actives were included in the July 1, 1983 census. Five of those members died, and four lost eligibility by attaining age 22. There were 16 new beneficiaries (including 9 children), resulting in 70 survivors in pay status as of July 1, 1985. These members are distributed by department and monthly pension in Table 10, and by age and department in Table 11. Nine of the beneficiaries were dependent children. The average survivor benefit was $665 per month.

The following summarizes membership data as of July 1, 1985 and 1983.

	7/1/85	7/1/83
Actives		
Number	1,615	1,582
Average Age	38	37
Average Service	11-1/2	10-1/2
Total Annual Salaries*	$62,012,000	$53,701,000
Average Annual Salary*	$ 38,398	$ 33,945
Retirees		
Number	345	314
Average Age	59	59
Average Monthly Pension	$1,387	$1,207
Survivors		
Number	70	63
Average Monthly Pension	$665	$635
Vested Terminated		
Number	20	15
Average Monthly Pension Payable at Age 55	$1,057	$945

*Including increases of 5% for fire and 6% for police scheduled for 1985-86.

Table 6-A

Census of Active Police Participants as of July 1, 1985
(figures in parentheses are average compensation)

Age	Total	Years of Service						
		1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 & Over
Total...	962 ($38,444)	281 ($33,784)	211 ($37,575)	163 ($39,484)	170 ($40,702)	90 ($44,138)	45 ($46,914)	2 ($61,569)
Under 25..	30 ($30,376)	30 ($30,376)	- -	- -	- -	- -	- -	- -
25 - 29..	167 ($34,141)	134 ($33,430)	32 ($37,077)	1 ($35,343)	- -	- -	- -	- -
30 - 34..	231 ($36,901)	84 ($35,107)	120 ($37,603)	27 ($39,365)	- -	- -	- -	- -
35 - 39..	234 ($38,899)	30 ($35,028)	52 ($37,822)	94 ($39,682)	58 ($40,599)	- -	- -	- -
40 - 45..	147 ($40,783)	3 ($34,167)	7 ($37,526)	33 ($38,916)	75 ($41,041)	29 ($43,710)	- -	- -
45 - 49..	99 ($43,690)	- -	- -	8 ($40,414)	30 ($40,702)	48 ($44,569)	13 ($49,354)	- -
50 - 54..	47 ($44,988)	- -	- -	- -	7 ($37,923)	13 ($43,499)	26 ($46,322)	1 ($79,108)
55 - 59..	6 ($44,195)	- -	- -	- -	- -	- -	6 ($44,195)	- -
60 - 64..	1 ($44,030)	- -	- -	- -	- -	- -	- -	1 ($44,030)
65 & Over	- -	- -	- -	- -	- -	- -	- -	- -

Table 6-B

Census of Active Fire Participants as of July 1, 1985
(figures in parentheses are average compensation)

Age	Total	Years of Service 1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 & Over
Total...	653 ($38,327)	86 ($32,779)	137 ($36,849)	139 ($37,754)	147 ($39,131)	87 ($43,094)	47 ($42,172)	10 ($42,907)
Under 25..	5 ($31,672)	5 ($31,672)	- -	- -	- -	- -	- -	- -
25 - 29..	47 ($32,647)	41 ($32,177)	6 ($35,861)	- -	- -	- -	- -	- -
30 - 34..	77 ($34,424)	31 ($32,436)	32 ($34,917)	14 ($37,697)	- -	- -	- -	- -
35 - 39..	156 ($37,385)	8 ($32,883)	45 ($36,847)	89 ($37,921)	14 ($38,278)	- -	- -	- -
40 - 45..	176 ($38,889)	- -	33 ($37,723)	35 ($37,463)	92 ($39,157)	16 ($42,877)	- -	- -
45 - 49..	120 ($41,384)	1 ($72,771)	16 ($38,348)	1 ($33,852)	41 ($39,365)	53 ($43,457)	8 ($41,095)	- -
50 - 54..	51 ($42,317)	- -	4 ($41,338)	- -	- -	18 ($42,218)	24 ($42,264)	5 ($43,711)
55 - 59..	19 ($41,809)	- -	1 ($33,852)	- -	- -	- -	15 ($42,600)	3 ($40,506)
60 - 64..	2 ($44,499)	- -	- -	- -	- -	- -	- -	2 ($44,499)
65 & Over	- -	- -	- -	- -	- -	- -	- -	- -

Table 6-C

Census of All Active Fire + Police Participants as of July 1, 1985
(figures in parentheses are average compensation)

Age	Total	Years of Service 1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 & Over
Total...	1,615 ($38,398)	367 ($33,548)	348 ($37,289)	302 ($38,687)	317 ($39,974)	177 ($43,625)	92 ($44,492)	12 ($45,017)
Under 25..	35 ($30,561)	35 ($30,561)	- -	- -	- -	- -	- -	- -
25 - 29..	214 ($33,813)	175 ($33,137)	38 ($36,885)	1 ($35,343)	- -	- -	- -	- -
30 - 34..	308 ($36,282)	115 ($34,387)	152 ($37,038)	41 ($38,795)	- -	- -	- -	- -
35 - 39..	390 ($38,293)	38 ($34,576)	97 ($37,370)	183 ($38,825)	72 ($40,148)	- -	- -	- -
40 - 45..	323 ($39,751)	3 ($34,167)	40 ($37,688)	68 ($38,168)	167 ($40,003)	45 ($43,414)	- -	- -
45 - 49..	219 ($42,426)	1 ($72,771)	16 ($38,348)	9 ($39,685)	71 ($39,930)	101 ($43,985)	21 ($46,207)	- -
50 - 54..	98 ($43,598)	- -	4 ($41,338)	- -	7 ($37,923)	31 ($42,755)	50 ($44,374)	6 ($49,610)
55 - 59..	25 ($42,381)	- -	1 ($33,852)	- -	- -	- -	21 ($43,055)	3 ($40,506)
60 - 64..	3 ($44,343)	- -	- -	- -	- -	- -	- -	3 ($43,343)
65 & Over	- -	- -	- -	- -	- -	- -	- -	- -

San Jose Police and Fire

Table 7

Distribution of Active Participants on July 1, 1985
by Annual Compensation

Annual Compensation	Number of Employees		
	Police	Fire	Total
Under $26,000	-	-	-
$26,000 - $27,999	-	1	1
$28,000 - $29,999	41	21	62
$30,000 - $31,999	32	18	50
$32,000 - $33,999	70	181	251
$34,000 - $35,999	80	1	81
$36,000 - $37,999	165	234	399
$38,000 - $39,999	360	17	377
$40,000 - $44,999	164	157	321
$45,000 - $49,999	12	2	14
$50,000 - $54,999	27	1	28
$55,000 - $59,999	7	15	22
$60,000 - $64,999	-	3	3
$65,000 & Over	4	2	6
Total	962	653	1,615

Note: "Compensation" is July 1, 1985 rate including increases scheduled for 1985-86.

Table 8

Distribution of Pensioners as of July 1, 1985
By Type and Total Monthly Pension

Monthly Benefit Amount	Police			Fire			Total		
	Service	Service Connected Disability	Non-Service Disability	Service	Service Connected Disability	Non-Service Disability	Service	Service Connected Disability	Non-Service Disability
Total............	30	119	13	20	148	15	50	267	28
Under $200.......	–	–	–	–	–	–	–	–	–
$ 200 – $ 399....	–	1	–	–	–	–	–	1	–
400 – 599....	3	1	–	1	–	1	4	1	1
600 – 799....	5	7	2	3	10	4	8	17	6
800 – 999....	4	11	2	5	19	1	9	30	3
1,000 – 1,199....	3	24	1	3	23	2	6	47	3
1,200 – 1,399....	1	15	4	2	25	3	3	40	7
1,400 – 1,599....	2	17	–	4	17	2	6	34	2
1,600 – 1,799....	3	14	3	–	18	1	3	32	4
1,800 – 1,999....	2	7	1	–	10	–	2	17	1
2,000 – 2,199....	1	8	–	1	12	–	2	20	–
2,200 – 2,399....	3	2	–	–	8	1	3	10	1
2,400 & Over......	3	12	–	1	6	–	4	18	–

San Jose Police and Fire

Table 9

Distribution of Pensioners as of July 1, 1985
By Type and Age

Monthly Benefit Amount	Police			Fire			Total		
	Service	Service Connected Disability	Non-Service Disability	Service	Service Connected Disability	Non-Service Disability	Service	Service Connected Disability	Non-Service Disability
Total............	30	119	13	20	148	15	50	267	28
Under 40.........	–	8	–	–	1	–	–	9	–
40 – 44.........	–	15	1	–	8	3	–	23	4
45 – 49.........	–	14	2	–	14	2	–	28	4
50 – 54.........	–	14	–	–	22	4	–	36	4
55 – 59.........	4	31	2	2	31	2	6	62	4
60 – 64.........	5	20	4	2	36	1	7	56	5
65 – 69.........	6	10	1	3	17	3	9	27	4
70 – 74.........	5	6	3	3	18	–	8	24	3
75 – 79.........	3	–	–	6	–	–	9	–	–
80 – 84.........	5	1	–	–	1	–	5	2	–
85 & Over.......	2	–	–	4	–	–	6	–	–

Table 10

Distribution of Beneficiaries by Monthly Pension and Department

Amount	Fire	Police	Total
Total............	29	39	68
Under $200.......	-	-	-
$ 200 - $ 299....	-	-	-
300 - 399....	2	1	3
400 - 499....	7	11	18
500 - 599....	3	3	6
600 - 699....	2	5	7
700 - 799....	8	3	11
800 - 899....	2	8	10
900 - 999....	3	1	4
1,000 - 1,099...	1	3	4
1,100 - 1,199...	-	1	1
1,200 & Over.......	1	3	4

San Jose Police and Fire

Table 11

Distribution of Beneficiaries
by Age and Department

Amount	Fire	Police	Total
Total............	29	39	68
Less than 40......	2	9	11
40 - 44..........	-	2	2
45 - 49..........	2	3	5
50 - 54..........	1	-	1
55 - 59..........	5	5	10
60 - 64..........	6	7	13
65 - 69..........	3	3	6
70 - 74..........	5	5	10
75 - 79..........	3	4	7
80 & Over........	2	1	3

V. ACTUARIAL METHODS AND ASSUMPTIONS

We have utilized an actuarial cost method known as the entry age normal cost method for funding both the basic and cost-of-living benefits. This method is required under the City Code and is used in situations where a cost is desired which will remain relatively level as a percentage of the participating payroll.

Under the entry age normal method, the total contribution requirement has two components: an annual normal cost and a payment with respect to the unfunded supplemental present value (USPV).

The annual normal cost is calculated as the level percentage of pay required over the average new employee's period of covered employment to fund the total expected benefits. The unfunded supplemental present value is amortized over 40 years beginning July 1, 1977 (32 years as of July 1, 1985) in amounts level in constant dollars assuming 5% inflation.

The actuarial assumptions are generally classed as economic (investment yield, salary scale, post-retirement cost-of-living), post-retirement mortality (beneficiary, healthy and disabled retirees), and pre-retirement decrements (service-connected and non-service death and disability, termination, and retirement). Each is projected from current status to latest possible retirement by application of these assumptions. Those used in the valuation as of July 1, 1985 are described below. Assumptions were changed to reflect the revised benefits as described below.

Investment Yield and Asset Valuation

The actuarial calculations are based on the assumption that the net effective yield on the assets will be 8.00% per year. Assets are carried at adjusted market value; gain and loss occurring after June 30, 1983 (realized or unrealized) is spread over five years.

Salary Projection

A salary projection is used in any actuarial valuation to estimate the salary progression of employees in the future. The salary projection used in the valuation is 6.50% per year before age 45, and 5.50% thereafter. Regardless of age, increases of 9.50% per year are assumed during the first four years after employment.

Post-Retirement Benefit Increases

Benefit increases are triggered by increases in the Consumer Price Index. We assume pensions will increase by 3% per year, the maximum allowed under the City Code.

Mortality Rates After Retirement

In estimating the amount of the reserve required to pay an employee's retirement benefits for the remainder of his and his spouse's lifetime, it is necessary to make an assumption with respect to expected mortality rates. For this purpose, we have used the 1971 Group Annuity Mortality Table for service retirement; we have set that table back five years for beneficiaries.

For disabled pensioners, the mortality rate used is a five-year forward adjustment of age from the healthy retiree table, with the age 55 mortality rate used below age 50. The schedule below shows the annual mortality rates and life expectancies these tables provide.

	Deaths Per 1,000 Lives			Life Expectancy (Years)		
Age	Retiree	Beneficiary	Disabled Retiree	Retiree	Beneficiary	Disabled Retiree
45	N/A	1.63	8.52	N/A	36.0	26.7
50	5.29	2.92	8.52	26.9	31.4	22.7
55	8.52	5.29	13.12	22.7	26.9	18.8
60	13.12	8.52	21.26	18.8	22.7	15.1
65	21.26	13.12	36.11	15.1	18.8	11.9
70	36.11	21.26	55.29	11.9	15.1	9.2
75	55.29	36.11	87.43	9.2	11.9	7.0

Termination Rates

The termination rates used in an actuarial valuation are intended to reflect all probable terminations of employment, including voluntary withdrawal from service, disability, retirement and death. These rates involve a forecast of the number of employees in various age brackets who will leave the coverage of the System prior to becoming eligible for a pension, as well as the number who will qualify for disability benefits. The non-vested employer contributions made on behalf of these employees who leave prior to attainment of pension eligibility become available for the payment of pensions to others. A complete set of these probabilities is shown in Table 12.

Members who are hired prior to age 25 are eligible for unreduced service retirement before age 55 (upon completion of 30 years of service). All such members are assumed to retire upon completion of the 30-year requirement if still actively employed at that time. This assumption was used in pricing the benefit improvement after the July 1, 1983 valuation was completed.

Retiree Health Insurance Benefits

Funding of these benefits is done on a ten-year level percentage of payroll basis, assuming covered payroll increases 7% per annum. Eligible retirees elect coverage under Blue Cross, or Health Maintenance Organizations (HMO's) Kaiser and Lifeguard. Depending on the coverage chosen, the retiree or survivor may pay part of the cost of these benefits.

The annual increases in premium are assumed as follows:

Fiscal Years Beginning	Blue Cross	HMO'S
7/1/85 to 7/1/89	12%	10%
thereafter	8%	6%

Growth in coverage rolls and investment income are assumed as for valuation of retirement income benefits. The mix of coverages is assumed to continue as now exists.

Administrative Expenses

We have made no allowance for administrative expenses. Professional fees paid from the Retirement Funds are principally investment expenses, and are treated as part of net yield.

Other Assumptions

We have also assumed that 75% of the participants will have a spouse at the time of retirement who is three years younger than the member.

Table 12

San Jose Police and Fire Department Retirement Plan
Probabilities of Separation Prior to Retirement

Age	Service-Connected Death	Non-Service Death	Service-Connected Disability	Non-Service Disability	Withdrawal	Service Retirement
20	.000085	.000445	.000506	.000000	.074340	.000000
21	.000090	.000445	.000506	.000000	.071460	.000000
22	.000100	.000445	.000506	.000000	.068580	.000000
23	.000110	.000450	.000506	.000000	.065700	.000000
24	.000125	.000455	.000506	.000000	.062820	.000000
25	.000140	.000460	.000562	.000000	.022511	.000000
26	.000160	.000465	.000817	.000000	.021465	.000000
27	.000180	.000475	.001264	.000031	.020419	.000000
28	.000205	.000485	.001942	.000062	.019373	.000000
29	.000230	.000495	.002840	.000094	.018326	.000000
30	.000260	.000505	.004077	.000125	.017280	.000000
31	.000290	.000520	.005315	.000156	.016234	.000000
32	.000325	.000535	.006552	.000188	.015188	.000000
33	.000360	.000550	.007790	.000219	.014141	.000000
34	.000400	.000570	.009027	.000281	.013095	.000000
35	.000440	.000590	.010264	.000343	.012049	.000000
36	.000485	.000610	.011502	.000407	.011002	.000000
37	.000530	.000635	.012740	.000469	.009956	.000000
38	.000580	.000665	.013977	.000656	.008910	.000000
39	.000630	.000700	.015215	.000781	.007864	.000000
40	.000685	.000740	.016452	.000969	.006818	.000000
41	.000740	.000785	.017692	.001157	.005771	.000000
42	.000800	.000835	.018929	.001344	.004725	.000000
43	.000860	.000890	.020167	.001593	.003881	.000000
44	.000925	.000950	.021404	.001844	.003206	.000000
45	.000980	.001015	.022642	.002156	.002700	.000000
46	.001060	.001085	.023879	.002532	.002025	.000000
47	.001130	.001160	.025117	.002968	.001350	.000000
48	.001205	.001240	.026354	.003532	.000675	.000000
49	.001280	.001325	.027592	.004219	.000338	.000000
50	.001360	.001420	.138375	.005032	.000169	.000000
51	.001440	.001525	.144315	.006031	.000086	.000000
52	.001525	.001640	.150255	.007219	.000045	.000000
53	.001610	.001775	.156195	.008656	.000023	.000000
54	.001700	.001930	.142830	.010343	.000011	.000000
55	.001790	.002105	.086310	.000000	.000000	.500000
56	.001880	.002310	.077400	.000000	.000000	.100000
57	.001975	.002545	.068490	.000000	.000000	.100000
58	.002075	.002810	.059580	.000000	.000000	.100000
59	.002180	.003115	.050670	.000000	.000000	.100000
60	.002290	.003470	.041760	.000000	.000000	.100000
61	.002410	.003885	.032850	.000000	.000000	.100000
62	.002540	.004370	.023940	.000000	.000000	.100000
63	.002680	.004935	.015030	.000000	.000000	.100000
64	.002830	.005590	.006120	.000000	.000000	.100000
65	.000000	.000000	.000000	.000000	.000000	1.000000

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VI. SUMMARY OF PLAN PROVISIONS

The principal features of the 1961 San Jose Police and Fire Department Retirement Plan are as follows:

1. Normal Service Retirement:

Age requirement:	55
Service requirement:	20 years (no requirement if age 65).
Pension amount:	2.50% of Final Compensation times years of service; maximum benefit is 75% of Final Compensation (for 30 years of service).

2. Unreduced Early Retirement:

Age requirement:	None
Service requirement:	30 years
Pension amount:	75% of Final Compensation.

3. Reduced Early Retirement:

Age requirement:	50
Service requirement:	20 years
Pension amount:	Service Retirement pension accrued reduced for interest from age 55. Reduction factors based on interest rates adopted by the Board as needed.

4. Vested Benefits:

Age requirement:	None
Service requirement:	10 years
Pension amount:	2.50% of Final Compensation times years of service; maximum benefit is 75% of Final Compensation (for 30 years of service). Benefits begin at later of age 55 and 20 years after employment date.

5. Non-Service Disability Retirement:

Age requirement:	None
Service requirement:	2 years

Pension amount:	32% of Final Compensation for the first 2 years of service, plus 1% for each year thereafter, up to 50% for 20 years of service. For retirement with more than 20 years of service, pension is 2.50% Final Compensation times years of service (maximum 30 years).

6. Service-Connected Disability Retirement:

Age requirement:	None
Service requirement:	None
Pension amount:	50% of Final Compensation or 2.50% of Final Compensation times years of service (maximum of 30 years), if greater.

7. Non-Service-Connected Death Benefit:

Age requirement:	None
Service requirement:	2 years
Pension amount:	24% of Final Compensation for the first 2 years of service, plus .75% for each year thereafter, to a maximum of 37.5% of Final Compensation. This amount is payable to a spouse. Benefits for dependent children are: 1 child: 25% of Final Compensation 2 children: 37.5% of Final Compensation 3 or more children: 50% of Final Compensation Maximum family benefit is 75% of Final Compensation. If no spouse or children, a lump sum equal to the greater of the employee's accumulated contributions or $1,000 is paid. These benefits paid for active employee death or death after non-service disability.

8. Service-Connected Death Benefit:

Age requirement: None

Service requirement: None

Pension amount: Annuity of 37.5% of member's Final Compensation payable to surviving spouse. Benefit amount for dependent children is 25% of Final Compensation per child. Maximum family benefit is 75% of Final Compensation.

These benefits paid for active employee death, and for death after service or service-connected disability retirement.

9. Post-Retirement Death Benefits, Vested Termination: Payable to a spouse: 1.875% of Final Compensation times years of service. For children, 1.25% (1.875% for two, or 2.50% for three children) times Final Compensation times years of service. Maximum of 20 years of service; family maximum benefit is 75% of Final Compensation.

10. Termination Benefit: In lieu of any other pension benefit, an employee may elect to receive, upon termination of employment, an amount equal to his employee contributions accumulated with 2% interest per annum.

11. Final Compensation: Average monthly compensation during the highest 12 consecutive months, but not more than 108% of compensation paid in 12 months preceding the last 12 months of service.

12. Service: Members shall receive credit for each year of full-time employment from date of hire until date of termination, including proportional credit for days.

13. Employee Contribution: Three-elevenths of the actuarial cost of the plan benefits for new entrants. The current rate is 8.64% of pay for income benefits plus .75% for retiree health insurance benefits, a total of 9.39% of compensation. This report recommends new employee contribution rates.

14. Eligible Beneficiaries: Spouse to whom member married at both retirement date and death for post-retirement annuities; spouse at time of active employee death; children under age 18 (age 22 for full-time students).

15. Cost-of-Living Adjustment: Retiree and survivor benefits are increased or decreased annually by the annual increase or decrease in the Consumer Price Index (maximum adjustment applied: 3%). The excess over 3% is accumulated and applied to future years when CPI change is less than 3%). Such adjustments are included in beneficiary annuities.

16. Retiree/Survivor Health Insurance Benefits:

Eligibility requirements: Either 15 years of service, or collecting a pension of 37.5% of Final Compensation.

Benefit amount: Retirement Fund pays same amount for coverage that the City pays for the corresponding active member. The member pays the balance (if any).